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IQTISODIY BILIMLARNI OSHIRISHDA ISHLAB CHIQRISH AMALIYOTINI TASHKIL ETISH METODIKASINI LOYIHALASHTIRISH

Аннотация. Мақола иqtisodiyot va xo'jalik yuritish hamda boshqarishning boshqa tarmoqlariga murakkab va doimiy ravishda o'zgarib turuvchi sharoitda yangi vazifalarni hal etishga qodir bo'lgan kadrlar talab qilinmoqda. Ayniqsa iqtisodiy mutaxassislikdagi: buxgalterlar, moliyachilar, soliqchilar tarzidagi malakali mutaxassislarga bo'lgan ehtiyojni alohida ta'kidlab o'tish lozimligi haqida tushuncha beradi.

***Kalit so'zlar:** o'quv amaliyoti, ishlab chiqarish amaliyoti va bitiruv oldi amaliyotlar, innovatsion, eksperimental metod, zamonaviy texnologiyalar, texnologik jarayonlar.*

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DEVELOPMENT OF A METHODOLOGY FOR ORGANIZING INDUSTRIAL PRACTICE AS A FACTOR IN ENHANCING ECONOMIC KNOWLEDGE

***Annotation.** The economy and other sectors of economy and management require personnel capable of solving new problems in complex and constantly changing conditions. It is especially necessary to emphasize the need for qualified specialists in the economic field: accountants, financiers, tax officers.*

***Keywords:** educational practice, production practice and graduation practice, innovative, experimental method, modern technologies, technological processes.*

Kirish. Bugungi kunda Respublikamizda bozor munosabatlarining shakllanishi ishlab chiqarish jarayonida raqobatning kuchayishi, malakali mutaxassislarga bo'lgan talabning tobora ortib borishi, mehnat faoliyatini to'g'ri tashkil etish ko'nikma va malakalarni shakllantirish va rivojlantirish zaruriyatini yuzaga keltirdi.

Real iqtisodiyot va xo'jalik yuritish hamda boshqarishning boshqa tarmoqlariga murakkab va doimiy ravishda o'zgarib turuvchi sharoitda yangi vazifalarni hal etishga qodir bo'lgan kadrlar talab qilinmoqda. Ayniqsa iqtisodiy mutaxassislikdagi: buxgalterlar, moliyachilar, soliqchilar tarzidagi malakali mutaxassislarga bo'lgan ehtiyojni alohida ta'kidlab o'tish lozim. Har bir shaxsning

ijodiy qobiliyatlarini rivojlantirishga, uning faolligini oshirishga, yangi sharoitlarga moslanuvchanlik qobiliyatini oshirishga yo'naltirilgan o'qitishning innovatsion va eksperimental metodlarining ahamiyati ortib bormoqda.

Axborot jamiyati shakllanayotganligi munosabati bilan o'qitish jarayonida o'quvchilarga ma'lum iqtisodiy axborotlarni berish muhim emas, balki ularda iqtisodiy bilim va ko'nikmalarini mustaqil oshirish malakasini shakllantirishda, butun umri davomida bilim olishga o'rgatish muhim sanaladi. Ana shundan kelib chiqqan holda ta'lim jarayonida ishlab chiqarish amaliyoti joriy etish uchun katta imkoniyatlar ochiladi.

Ishlab chiqarish amaliyoti - nazariy ta'lim jarayonida o'rganilgan umumkasbiy, maxsus bilimlar asosida ish usullari va operatsiyalarini amaliy bajarish bo'yicha ko'nikma hamda malakalarni shakllantirish maqsadida amalga oshiriladi. Ishlab chiqarish ta'limi o'quv amaliyoti, ishlab chiqarish amaliyoti va bitiruv oldi amaliyotlarini o'z ichiga oladi.

Ishlab chiqarish amaliyoti malakali ishchi kadrlar tayyorlash bo'yicha kasb tayyorgarligining asosiy tarkibiy qismi hisoblanadi.

Ishlab chiqarish amaliyotining vazifasi - hozirgi zamon ishlab chiqarish korxonalariga malakali kadrlarni tayyorlash, o'quvchilarning o'rganayotgan kasblari bo'yicha bilim, ko'nikmalarini mustahkamlash va takomillashtirishdan iboratdir.

Ishlab chiqarish amaliyoti boshlanishidan bir oy oldin universitet va ishlab chiqarish amaliyoti o'tkazilishi mo'ljallangan korxonalar (tashkilot, xo'jalik) bilan o'quvchilarning ishlab chiqarish amaliyotini o'tkazishlari to'g'risida shartnoma tuzishi lozim. Shartnomada kasblar bo'yicha ishlab chiqarish amaliyotiga yuborilayotgan o'quvchilar soni, uni o'tkazish muddati, sharoit va tartiblari, ishlab chiqarish texnologiyasi, sanitar-texnik tozalik va mehnat sharoiti va tomonlarning o'zaro majburiyatlari ko'rsatiladi.

Korxonaning mulkchilik shaklidan va yuborilayotgan talabalar sonidan qat'iy nazar, o'quvchilarni ishlab chiqarish amaliyotiga yuborayotgan o'quv muassasasi har bir korxonalar (tashkilot, xo'jalik) bilan alohida shartnoma tuzadi.

Ta'lim jarayonida ishlab chiqarish amaliyoti talabalarning kasbiy tayyorgarlik, mahorati, iqtisodiy bilimi, ko'nikma va malakalarini hamda aqliy qobiliyatini rivojlantirishda juda muhim sanaladi.

Mutaxassislik yo'nalishi bo'yicha amaliyot davrida har bir talaba yakka tartibdagi topshiriqlarni bajaradilar. Odatda, bunday topshiriqlar ikkita qismdan iborat bo'ladi:

- birinchi qismning mazmuniga korxonalar to'g'risida umumiy ma'lumotlarni olish kiradi;
- ikkinchi qismi esa alohida texnologik jarayonlarni tahlil qilishni o'z ichiga oladi.

Buxgalterlar uchun 3,4 haftaga mo'ljallangan mutaxassislik yo'nalishi bo'yicha talabalar amaliyotida korxonalar buxgalterlik hisobini tashkil etishda umumiy ma'lumotlarni to'plash va korxonaning keyingi yillar mobaynidagi moliyaviy faoliyati tahlilini o'tkazish kiradi. Bu amaliyotni tashkil etishda

buxgalterlik hujjatlari, amaliyot korxonasining hisobotlari bilan ishlash ko'nikmalarini tashkil etish nazarda tutiladi.

Ko'rsatilgan bilim va ko'nikmalarni amalga oshirish uchun amaliyotga beriladigan topshiriqlar o'quvchilarni izlanuvchan va diagnostik faoliyatni bajarishga yo'naltiriladi. Ularning qo'llash faoliyatning turli sharoitlarida, keng doiradagi masalalarni yechishda amalga oshirishga imkon beradi. Talabalarni amaliyotda izlanish, muammolarida hal etishga jalb qilish uning ishlab chiqarishdagi faoliyati mantiqini tubdan o'zgartiradi.

Bular hisobot mazmunida aks etadi, bu yerda u ma'lumotlar to'plami bayon qilinadi, ishlab chiqarish vaziyatining asosli tahlilini keltiradi va uni yechish yo'llarini taklif etishga majbur bo'ladi.

Amaliyotning asosiy vazifalari quyidagilar hisoblanadi:

- nazariy tayyorgarlik jarayonida va avvalgi amaliyotlarda olingan bilimlar va ko'nikmalarni umumlashtirish va chuqurlashtirish;
- zamonaviy texnologiyalar, iqtisodiyot, mehnatni tashkil etish, ishlab chiqarishni boshqarish tuzilmasi bilan tanishish;
- tashkilotchilik ko'nikmalarini egallash;
- hisobot uchun materiallar to'plash va tayyorlash.

Talabalarning kasbiy tayyorgarligini oshirishga qaratilgan ta'lim metodikasi ma'lum talablarga javob berishi kerak:

- ta'lim maqsadini, ya'ni nimaga va nima uchun o'qitish lozimligini aniq ta'riflash;
- ta'lim mazmunini tanlash, ya'ni nimaga o'rgatish lozimligini aniqlash;
- o'quv jarayonini tashkil etishga yordam berish, ya'ni qanday o'qitish kerakligini belgilab olish;
- o'qituvchilarning kasbiy malakasi darajasini hisobga olish, ya'ni kim o'qitishi kerakligini aniqlash;
- ta'limda erishilgan natijalarni baholash, ya'ni haqiqatdan ham ko'zlangan maqsadga erishilganligini aniqlash.

Yuqorida keltirib o'tilgan talablarni kompleks tarzda amalda qo'llash o'quv jarayoni va uning metodikasi mohiyatini belgilab beradi.

Pedagogik masalani qo'yish o'z ichiga quyidagilarni qamrab oladi:

- amaliy ta'lim maqsadlarini taxlili etish va ular asosida amaliyot mazmunini aniqlash;
- amaliyot mazmunini tuzilmalarga ajratish va uni o'quv elementlari tizimi ko'rinishida taqdim etish;
- o'quv elementlarini o'zlashtirish bo'yicha topshiriqlar;
- o'quvchilarning o'quv materialini qay darajada o'zlashtirganligini xarakterlovchi dastlabki bilimlarini cheklashlarni hisobga olish.

Ishlab chiqarish amaliyoti jarayonida o'quvchilarning nazariy bilimlari yanada mustahkamlanib, amaliy ko'nikmalarini rivojlantirilishi lozim.

Bu ishlarning real sharoitda maksimal darajada yaqinlashtirilgan holda tashkil etilishini e'tiborga olib, amaliyotchilar ish o'rinlariga joylashtiriladi.

Bunday amaliyotlar natijasida talabalar o'z mutaxassiliklari bo'yicha kasblarini mukammal o'zlashtiradilar.

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CITY OF TERMEZ – CENTER OF SCIENCE AND CULTURE OF SURKHAN REGION

Annotation. This article discusses issues related to the climate of the city of Termez, the name of the city in different historical periods, toponyms of the city as well as the economic and social development of the city during the years of independence.

Key words: climate of the Sahara, history of the city, toponomic name of the city, administrative center, economic and social development.

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TERMIZ SHAHRI – SURXON VOHASINING ILM- FAN VA MADANIYAT MARKAZI

Annotatsiya Ushbu maqolada Termiz shahrining iqlimi, shaharning turli tarixiy davrlarda toponomik nomlanishi, mustaqillik yillarida shaharning iqtisodiy-ijtimoiy rivojlanish masalalari yoritilgan.

Kalit so‘zlar: Sahar iqlimi, shahar tarixi, shaharning toponomik nomlanishi, ma‘muriy markaz, iqtisodiy - ijtimoiy rivojlanish.

Termiz shahri viloyatning ma‘muriy, iqtisodiy va madaniy markazi hisoblanadi. Shahar geografik nuqtai-nazardan respublikamizning eng janubiy qismi, Amudaryoning o‘ng sohilida joylashgan.

Termiz shahrining dengiz sathidan balandligi 302 metrni tashkil etadi. Shahar iqlimi yozi eng issiq (maksimal harorat 50 daraja). Yanvarning o‘rtacha harorati 2,8 daraja, iyulniki 31,4 darajani tashkil etadi. Yog‘in kam tushadi yog‘inga

nisbatan bug‘lanuvchanlik yuqori. Yiliga vaqti-vaqti bilan esib turuvchi “Afg‘on shamoli” shahar iqlimiga salbiy ta’sir ko‘rsatadi. Tarixiy arxeologik manbalarga ko‘ra Termiz qadimiy shahar hisoblanadi.

Termiz shahrining vujudga kelishi bilan bog‘liq bo‘lgan munozarali savollar hanuzgacha tarixchi olimlar o‘rtasida davom etmoqda.

Ko‘pgina tarixchilar shu paytgacha Termiz shahrining shakllanishi borasida ham ellin madaniyatining ta’siri mavjud deb hisoblaydi. Jumladan, Hofizi Abru Termizga Iskandar asos solgan desa, ayrim tarixchilar Termizning shakllanishini Yunon–Baqtriya podshosi Demitriyning nomi bilan bog‘laydilar. Bu ikkala fikr ham izohga muhtoj bo‘lib, Termiz shahrining shakllanishi juda qadimga borib taqaladi. Termiz shahrining bronza va temir davrlarida Shimoliy Baqtriyada shakllangan Jarqo‘rg‘on, Tallashqon, Jondavlat, Qizilcha va shunga o‘xshash shahar va qo‘rg‘onlarning shakllanishida Shimoliy Baqtriya urbanizatsiya jarayonlarining ta’siri katta. Demak, Termizning shakllanish jarayoni yunon-makedon istilosidan oldingi davrlarga borib taqaladi¹.

Qadimiy shahar yodgorliklari hozirgi Termiz shahridan 8-9 km shimoli-g‘arbda Amudaryoning o‘ng sohilida joylashgan. Shahar nomi turli tarixiy davrlarda turlicha atalib kelingan. Masalan, Taramastha (Baqtriya) “narigi sohildagi manzil” Taramata, Taramat, Tami, Tarmit, Tarmiz, Termiz kabi nomlar bilan atalgan. Bundan tashqari shahar nomi uning asoschisi podshoh Demitriy nomi bilan bog‘liq holda Demetriy, Dermita, Darmita nomlari bilan so‘ngra Tarmita, Termid nomlari bilan atalgan. 10-asrga kelib shahar Termiz deb atala boshlagan.

Ko‘plab tarixchi olimlarning fikricha Termiz shahri turli-tarixiy davrlarda gullab yashnagan obod va savdo-sotiq rivojlangan shahar sifatida e’tirof etishgan. Jumladan, 10-asrning 80-yillarida noma’lum muallif tomonidan yozilgan “Hudud ul-olam” (“Jahon mamlakatlarining chegaralari”) asarida Termiz “Jayxun bo‘yidagi ko‘rkam va obod shahar. Qal’asi daryo qirg‘og‘ida, ulkan bozori mashhur Xuttalon va Chag‘oniyon ahli shu yerda savdo qilishadi”, deyilgan².

Ko‘hna Termiz shahri qadimda juda ko‘plab bosqinchilik urushlarining guvohi bo‘lgan. Dastlab miloddan avval 329 yilda Iskandar Zulqarnayn, hamda milodning 689-704 yillarida arablarning bosqinchilik yurishlari davrida shahar vayronaga aylantirilgan. SHahar vaqti-vaqti bilan G‘aznaviylar, Qoraxoniylar, Qoraxitoylar, Saljuqiylar, Xorazmshohlar davlatlari tarkibida bo‘lgan.

1220 yilda shahar mo‘g‘ullar bosqini natijasida vayron qilingan. Shahar aholisining bosqinchilarga ko‘rsatgan qattiq qarshiligiga qaramay 11 kunlik jangdan so‘ng son jihatdan ustun bo‘lgan mug‘ullar shaharni zabt etadilar. Mo‘g‘ul bosqinchilariga qattiq qarshilik ko‘rsatgan Termiz tarixchi Sharofiddin Ali Yazdiyning “Zafarnoma” asarida “Madinat ur-rijol” (“Mardlar shahri”) deb tilga olinadi.

¹ С.Турсунов, Э.Қобилов, Т.Пардаев, Б.Муртазоев. “Сурхондарё тарих кўзгусида”. “Шарк” Тошкент-2001, 25-бет

² С.Турсунов, Э.Қобилов, Т.Пардаев, Б.Муртазоев. “Сурхондарё тарих кўзгусида”. “Шарк” Тошкент-2001.

1407 yili Mironshohning o‘g‘li Xalil Sulton (1384-1411) Termiz shahrini qayta qurdirgan. Buyuk arab sayyohi Ibn Battuta (1304-1372) o‘zining “Sayyohatnoma” asarida o‘sha davrda Termiz shahrida shunday ta’rif bergan.

“bu chiroyli imoratlari va bozorlari ko‘p bo‘lgan yirik shahardir, uni boshdan oyoq anhorlar kesib o‘tadi, bog‘lari ham juda ko‘p. Ayniqsa, uzum bilan behisi juda shirish, go‘sht, sut juda serob” sayyoh Xorazmda bo‘lganida, u yerga daryo orqali o‘n kun muddatda Termizdan bug‘doy va suli keltirilganiga guvoh bo‘ladi.³

Sohibqiron Amir Temur hukmronligi davrida Termiz har tomonlama taraqqiy topgan. Tarixiy manbalarda Termiz shahri Amir Temur saltanatining eng muhim strategik shahri bo‘lganligi haqida ma’lumotlar keltirilgan. Aynan sohibqiron Amir Temur qo‘shinlari Termiz kechuvchi orqali o‘tib Balx amiri Husayn ustidan g‘alaba qozongan.

O‘sha vaqtda sohibqiron saroyiga Kastiliya va Lion qirolari Genrix III nomidan elchi bo‘lib kelgan Rui Gonsales o‘zining “kundalik” larida Amudaryo va uning bo‘yida joylashgan Termiz shahriga shunday ta’rif bergan edi. “21 avgust payshanba kuni katta bir daryoga yetib keldik. Bu boshqa bir daryo bo‘lib, u tekislikdan oqadi, ammo uning oqimi hayron qolarli darajada tez va suvi loyqa. Qishda uning suvi kamayadi, chunki bu vaqtda tog‘da sovuq bo‘ladi va qor erimaydi, aprely kelishi bilan esa uning suvi ko‘payadi va bu hol to‘rt oy davom etadi. Daryo Boku dengiziga quyiladi va Samarqand xonligi yerlarini Xuroson yerlaridan ajratib turadi... shu payshanba kuni elchilar daryoni kechib o‘tib, Termiz deb nomlangan katta bir shaharga yetib keldilar...” Klavixoxu shu yerda daryoning ikki tomonidagi aholi ikki tilda gapirishini, ammo ular bir-birlarini yaxshi tushunishi haqida yozib o‘tgan.⁴

Temuriylar davrida Termiz shahri Markaziy Osiyoni Xitoy-Misr bilan bog‘lovchi buyuk Ipak yo‘lida joylashgan shahar sifatida ham tanilgan. Termiz shahrida shuningdek, buyuk mutaffakirlardan islom dini arbobi Hakim at-Termiziy Abu Abdulloh Muhammad ibn Ali Ibn Husayn (810-870), buyuk muhaddis Imom at-Termiziy Abu Iso Muhammad ibn Iso (824-892) va boshqa ko‘plab mashhur insonlar yashab ijod qilganlar. 18-asrning ikkinchi yarmiga kelib Termiz o‘zaro urushlar natijasida deyarli butunlay vayron bo‘lgan. 1894 yilga kelib Termiz xarobalaridan 8 km narida joylashgan Pattakesar qishlog‘ida CHor Rossiyasi qo‘shinlari harbiy qal’aa qurishgan. Mahalliy aholi uni keyinchalik “Tuproqqo‘rg‘on” deb ham yuritgan. Hozirgi Termiz shahri ana shu Tuproqqo‘rg‘on atrofida bunyod etilgan. XX-asrning boshlarida aniqrog‘i Chor Rossiyasi mustamlakasi davrida shahar rivojlanishdan ancha orqada bo‘lgan. Bu yerda 1913 yilda bitta kustar holdagi paxta tozalash zavodi va bir necha mayda ustaxonalar mavjud bo‘lgan. 1915 yilda Amudaryo (Samsonov stantsiyasi)dan Termizgacha temir yo‘l quriladi. Keyinchalik ushbu temir yo‘llar Sobiq Sho‘rolar davrida davom ettirildi. Mazkur temir yo‘l Termizdan 1926-1930 yillarda Dushanbegacha, 1974 yilda Qo‘rg‘ontepa (Tojikiston) shaharlarigacha yetkazildi.

³ С.Турсунов, Э.Қобилов, Т.Пардаев, Б.Муртазоев. “Сурхондарё тарих кўзгусида”. “Шарк” Тошкент-2001.

⁴ Гадоев К., Бердиева С, Жаҳонгашта географ сайёҳлар” Ўзбекистон” НМИУ 2012.85 бет.

O'tgan asrning 1970-80 yillarida Termiz yopiq harbiy shahar bo'lgan. Sobiq sho'ro davlatining cheklangan harbiy qo'shinlari Termiz shahri orqali Afg'onistonga jo'natilgan. 1991 yilda O'zbekiston Respublikasi davlat mustaqilligiga erishishi ko'plab shaharlar qatori Termiz shahrining iqtisodiy rivojlanishida yangi ufqlarni ochib berdi. Endilikda Termiz mamlakatimizning janubiy darvozasi bo'lishi bilan birgalikda, Yevropa va Osiyo mamlakatlari o'rtasida hamkorlik aloqalari yo'lga qo'yishda sanoat, transport va savdo aloqalari tugunida joylashgan muhim strategik shahar sifatida e'tirof etilmoqda.

Mustaqillik yillarida shahar har tomonlama rivojlanib bormoqda. Ayniqsa so'nggi besh yil davomida shahar qiyofasi tubdan o'zgarib bu yerda zamonaviy hashamatli aholi turar joy binolari, davlat va nodavlat muassasalari, aholi uchun bozorlar, savdo majmualari, sport inshootlari, ta'lim, tibbiyot muassasalari qurib ishga tushirilmoqda.

Mustaqillik yillarda ko'plab halqaro va respublika darajasidagi konferentsiya, tadbirlar va sport turnirlari o'tkazib kelinmoqda. Termiz shahrida 1999 yilda "Alpomish" dostoni yaratilganligining 1000 yilligi, 2002 yilda shaharning 2500 yilligi yubileyi, shuningdek, 2019 yilda "Xalqaro baxshichilik" festivali kabi qator tadbirlar ko'tarinki ruhda o'tkazildi. Bundan tashqari har ikki yilda muntazam ravishda Al.Hakim Termiziy xotirasiga bag'ishlanib ko'rash bo'yicha sport turniri yuqori saviyada o'tkazib kelinmoqda.

Termiz viloyatning ilm-fan markazi bo'lib, shaharda Termiz davlat universiteti, Termiz davlat pedagogika instituti, Islom Karimov nomidagi Toshkent texnika universitetining Termiz filiali, Toshkent tibbiyot akademiyasining Termiz filiallari kabi ta'lim muassasalari, shuningdek, o'rta maxsus o'quv yurtlari, umumiy o'rta ta'lim, maktabgacha ta'lim muassasalari faoliyat ko'rsatmoqda. Shuningdek, shaharda 1934 yilda tashkil etilgan Termiz hayvonot bog'i ishlab turibdi.

Termiz shahrining umumiy maydoni 0,03 ming km² ni tashkil etib, shahar umumiy maydoni viloyat maydonining 0,1 foizini tashkil etadi.

So'nggi yillarda shahar aholisi soni tez sur'atda o'sib bormoqda. SHahar aholisi 1990 yilda 100 ming, 1992 yilda 102,3 ming, 1993 yilda 104,4 kishi bo'lgan. Aholi soni 2017 yilda 143790 kishini tashkil etgan bo'lsa, 2018 yilda esa 145169 kishiga yetgan. 2022 yilda shahar aholisi 1990 yilga nisbatan 4.4 martaga o'sgan.

Termiz shahar aholisi viloyat jami shaharlar aholisining 19,2 foizini, jami viloyat aholisining 6,9 foizini tashkil etadi (2023 y.1-yanvar).

Termiz shahri aholisi soniga ko'ra respublikamizda aholi soni 50 ming kishi va undan ko'p bo'lgan 40 ta shaharlar orasida 13 o'rinni egallaydi.

Xulosa qilib aytganda, Termiz shahri qadimiy shahar bo'lib, uning eski shahar hududida aniqlangan arxeologik topilmalar va ashyolar shaharning qadimgi shahar ekanligini eslatib turadi. Mustaqillik yillarida bu yerdagi barcha tarixiy obidalar qayta ta'mirlanib, aholining ma'naviy ehtiyojini qondiradigan maskanlarga aylantirildi.

Yangi zamonaviy Termiz shahrida esa aholi ushun zamonaviy shinam turar joylar barpo etilib, so'ngi yillarda shahar qiyofasi tubdan o'zgardirdi. Shahar

respublikamizning janibiy darvozasi sifatida MDH va Markaziy Osiyo davlatlarini Janubiy Osiyo davlatlari bilan bog‘laydigan muhim transport tugunida joylashgan.

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SURXONDARYO VILOYATIDA POLIZ SABZAVOT EKINLARINI YETISHTIRISH MASALALARI

Annotatsiya: Ushbu maqolada Surxondaryo viloyatida poliz-sabzavot ekinlarini yetishtirish va mustaqillik yillarida mazkur sohalarni rivojlantirish masalalari yoritilgan.

Kalit so'zlar: Agroiqlim, yer va suv resurslari, vegetatsiya davri, ekin ekiladigan maydonlar, yalpi hosil, hosildorlik

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PROBLEMS OF CULTIVATION OF VEGETABLE CROPS IN SURKHANDARYA REGION

***Annotation:** This article covers the issues of cultivation of vegetable crops in Surkhandarya region and the development of these fields during the years of independence.*

***Key words:** Agroclimate, land and water resources, vegetation period, cultivated areas, gross yield, productivity.*

Aholining oziq-ovqat mahsulotlari orasida sabzavot va poliz ekinlari alohida ajralib turadi.

Surxondaryo viloyati Respublikamizning sabzavot va poliz mahsulotlarini yetishtiruvchi asosiy mintaqasi hisoblanadi. Mintaqada tabiiy sharoitning qulayligi, quyosh nurining ko'p tushishi, sovuq bo'lmaydigan kunlarning uzoqqa cho'zilishi, tuproq unumdorligining yuqoriligi ayniqsa sabzavot va poliz ekinlarini

yetishtirishga imkoniyat yaratgan. Bu yerda sabzavotlarning sabzi, piyoz, kartoshka, bodring, karam, pomidor, poliz mahsulotlaridan qovun, tarvuz va oshqovoqning hosildor navlari yetishtiriladi.

Sabzavotchilikda ekish muddatlarini to‘g‘ri belgilash katta ahamiyatga ega. Agar ekish muddatlari bir haftaga kechiktirilsa hosildorlik 20-25 % ga kamayib ketadi.

Sabzavot ekinlarini yetishtirishda almashlab ekishni to‘g‘ri yo‘lga qo‘yish mo‘l hosil olishning muhim garovi hisoblanadi.

Sabzavot ekinlarini ekishda yerni tanlash muhim ahamiyatga ega. Sabzavot ekinlari bo‘z, o‘tloq va o‘tloq-botqoq tuproqlarda (pomidor, shirin qalampir, baqlajon), qoramtir o‘tloq yerlarda (oq bosh karam), och bo‘z, qum va qumlik tuproqlarda (piyoz), o‘tloq-qumoq, yengil soz bo‘z tuproqli yerlarda (sabzi) yaxshi o‘sadi va yuqori hosil beradi.

1-jadval

Surxondaryo viloyatida sabzavot, poliz ekin maydonlari.
(ming gektar hisobida)

Qishloq xo‘jaligi ekinlari	Yillar									2021yil da 1991 yilga nis. o‘sish %da
	1991	2010	2011	2014	2015	2016	2017	2018	2021	
Jami ekin maydonlari	77,9	64,9	71,1	74,4	75,8	75,3	57,5	59,8	48,8	85,9
Sabzavot	3,6	13,2	14,4	13,3	13,3	15,1	14,6	31,8*	18,3	5
Poliz	3,2	3,1	2,9	3,0	3,1	3,4	2,8	1,8*	3,8	118

Izoh:-* sabzavot, poliz ekinlari birgalikda berilgan.

Jadval O‘zbekiston Respublikasi Prezidenti huzuridagi Statistika agentligining “stat.uz” hamda Surxondaryo viloyati statistika boshqarmasining “Surxanstat.uz” rasmiy veb-saytlari ma’lumotlari asosida tuzilgan.

Sabzavot ekinlari viloyatda faqat bahor, yoz oylarida yetishtirilgan bo‘lsa, hozirgi vaqtda issiqxonalarda yil bo‘yi turli tuman sabzavot ekinlari yetishtirilmoqda.

So‘nggi yillarda respublikamiz va viloyatimiz olimlari tomonidan shirin qalampir va baqlajonning mahalliy serhosil navlari yaratildi. Bularga shirin qalampirning mahalliy ertapishar “Nargiza”, “Tong”, “Jayxun”, o‘rtapishar “Zarya Vostoka”, “Darы Tashkenta”, kechpishar “Zumrad”, baqlajonning mahalliy “Avrora”, “Surxon go‘zali”, “Feruz”, “Zamin G» navlari yaratildi. Viloyatning dehqon (aholi) xo‘jaliklarida pomidor singari erta bahorda shirish qalampir va baqlajonni plyonka qoplamalari ostida yetishtirib yuqori hosil olinmoqda.

Mintaqada sabzavot ekinlari qatorida aholi shaxsiy tomorqalarda bodring va pomidor ham ko‘plab yetishtiriladi.

Viloyatimiz olimlari pomidorning mahalliy sharoitida yaratilgan Toshkent tongi, TMK-22, O‘zbekiston-178, Sharq yulduzi, Sitora, Avitsenna, Surxon-142, Do‘stlik, Doni-2000, Saxiy, chet davlatlarning Sulton, Benito, Beloroso, Bonake, Dili, Dual Erli, Indi navlarini, shuningdek, Surxondaryo ilmiy tajriba stantsiyasida

keyingi yillarda yaratilgan Zakovat, Sovg'a, Osiyo, L-94, L-46, L-45 kabi mevalari transportda tashishga qulay va turli kasalliklarga chidamli navlarini ekishni tavsiya etishmoqda.

Bodring suvga talabchanligi bilan sabzavot ekinlari orasida alohida ajralib turadi. Ayniqsa bodring naychalash va mevasi yetilgan davrda suvni ko'p talab qiladi. Viloyat sabzavotlari bodringning mahalliy "Ranniy-645", "O'zbekiston-740", "Zilo", "Navro'z", "Omad", "Talab" navlari, hamda chet mamlakatlardan keltirilgan F₁ duragaylaridan "Alibi", "Ayaks", "Regal", "Ayaks", "Superina" kabi navlarini ekib kelishilmoqda.

Sabzavot ekinlari orasida karam va piyoz mahsulotlariga ichki va tashqi bozorda ham ehtiyoj yuqori. Hozirgi vaqtda olimlar va mutxassislar oq bosh karamning chet el navlari "Lion", "Farao F₁", "Parel F₁", "Balbro F₁", "Burbon F₁", "Nazomi F₁", duragaylari va mahalliy o'rtapishar "Termiz 2500", "Toshkent-10", "Saratoni", kechpishar "Sharqiya-2", "O'zbekiston sudyasi" navlarini yuqori hosil olish mumkinligi haqida tavsiyalar berib kelmoqda. SHuningdek, piyozning mahalliy sharoitda yaratilgan ertapishar "Sumbula", "Oqdur", o'rtapishar "Istiqbol", "Zafar", chet mamlakatlardan keltirilgan "Sibir", "Manas", "Daytona", "Lion", "Universal" kabi navlarni ekib kelinmoqda. Bundan tashqari viloyatda sabzi, osh lavlagi, turp, sholg'om kabi ekinlar fermer xo'jaliklarida bug'doydan keyin takroriy ekin sifatida, hamda aholi shaxsiy tomorqa xo'jaliklarida yetishtirib kelinmoqda.

Viloyatda mustaqillik yillarida sabzavot ekiladigan maydonlar va undan olingan yalpi hosil miqdori ko'payib borgan. 1991-yilda viloyatda 3,6 ming gektar maydonga sabzavot ekinlari ekilgan bo'lsa, 2021-yilga kelib, sabzavot ekinlari maydoni 18,3 ming gektarga yetkazilgan. 2021-yilda sabzavot ekin maydonlari 1991-yilga nisbatan 14,7 ming gektarga kengaytirilib, ekin maydonlar 5 martaga o'sgan.

Viloyatda 1991-yilda sabzavot ekin ekin maydonlarining jami ekin maydonlaridagi ulushi 1,2 foizni tashkil etgan bo'lsa, 2021-yilda bu ko'rsatkich 7,2 foizga yetgan. Viloyatda 1991/2022-yillar davomida sabzavot ekinlaridan olingan yalpi hosil miqdori ham oshib borgan.

Viloyatda 1991-yilda sabzavot ekinlaridan 61,8 ming tonna, 2022 yilda esa 1143,8 ming tonna hosil olingan. 2022-yilda 1991-yilga nisbatan 1082 ming tonna ko'p hosil yetishtirilgan. O'sish esa 18,5 martani tashkil etgan.

Tadqiq etilayotgan yillarda sabzavot ekinlarining har bir gektaridan olingan hosildorlik o'sib borgan. Sabzavot ekinlari hosildorligi 1991-yilda 165,0 sentnerni tashkil etgan. Hosildorlik 2008-yildan 2011-yillargacha tez o'sib borgan. 2011 yildan 2016-yilgacha hosildorlik pasayib borgan bo'lsa, 2017, 2018-yillarda hosildorlik biroz o'sib borganligini kuzatishimiz mumkin.

**Surxondaryo viloyatida sabzavot, poliz ekinlari yalpi hosili
(ming tonna hisobida)**

Qishloq xo'jaligi ekinlari	1991	2010	2011	2014	2015	2016	2017	2018	2019	2021	2022	2022yilda 1991 yilga nisbatan o'sish %da
Sabzavot	61,8	486,4	540,2	807,0	896,5	966,8	1013,5	913,9	1380	1066,0	1143,8	18,5
Poliz	47,9	114,0	123,6	169,9	197,4	207,9	244,8	249,9	264,0	320,3	329,1	6,8

Jadval Surxondaryo viloyati statistika boshqarmasining "Surxanstat.uz" rasmiy veb sayti ma'lumotlari asosida tuzilgan.

2021-yilda sabzavot hosildorligi 282,8 sentnerni tashkil etgan. Viloyatda 2022-yilda yetishtirilgan sabzavotlarning asosiy qismi Sherobod (185782 tonna), Denov (184387 tonna), Qumqo'rg'on (106247 tonna), Angor (93928 tonna), Termiz (88113 tonna) tumanlari hissasiga to'g'ri keladi.

2022-yilda viloyatda yetishtirilgan sabzavot mahsulotlarining 68,7 foizi dehqon va tomorqa xo'jaliklari, 25,2 foizi fermer xo'jaliklari, 6,1 foizi, qishloq xo'jaligi faoliyatini amalga oshiruvchi tashkilotlari hissasiga to'g'ri kelgan

Surxondaryo viloyatida sabzavot ekinlari bilan bir qatorda poliz ekinlarini yetishtirish ham yo'lga qo'yilgan. Poliz ekin maydonlarining jami ekin maydonlari tarkibidagi chii unchalik katta emas. Mintaqada 1991-yilda 3,2 ming gektarga poliz ekinlari ekilgan bo'lib, poliz ekinlarining jami ekin maydonlaridagi chii 1,1 foizni tashkil etgan. Poliz ekin maydonlari 2021 yilda 3,8 ming gektarni tashkil etgan. Bu o'tgan 1991-yilga nisbatan 600 gektarga ko'paygan. Shuningdek, viloyatda poliz mahsulotlaridan olingan hosildorlik va yalpi hosil miqdori ortib borgan.

Viloyatda poliz mahsulotlari yalpi hosili 2021-yilda 1991-yilga nisbatan 272,4 ming tonnaga hosildorlik esa 105 sentnerga oshirilgan.

2022-yilda viloyatda 329,1 ming tonna poliz mahsulotlari yetishtirilgan.

2022-yilda viloyatning Sherobod (79931), Qumqo'rg'on (43437), Denov (42656 tonna), Muzrabot (36576 tonna), Jarqo'rg'on (28333) tumanlari poliz mahsulotlari yetishtirishda oldingi o'rinlarni egallagan. Mintaqada 2022-yilda poliz mahsulotlarining 59,4 foizi dehqon va tomorqa xo'jaliklari, 38,2 foizi fermer xo'jaliklari, 2,4 foizi qishloq xo'jaligi faoliyatini amalga oshiruvchi tashkilotlarida yetishtirilgan.

Xulosa qilib aytganda so'nggi yillarda jahonda yuzaga kelgan oziq-ovqat muammosi, ko'plab mamlakatlarda aholini oziq-ovqat mahsulotlari bilan ta'minlash kabi jiddiy vazifalarni hal etib borishni taqozo qilmoqda. Shu o'rinda keyingi 5-6 yil davomida respublikamizda ham o'sib borayotgan aholi ehtiyojini hamda jahon bozorida kundan-kunga oziq-ovqat mahsulotlarga bo'lgan talabning oshib borayotganligini inobatga olgan holda qishloq xo'jaligi sohasida chuqur tarkibiy o'zgarishlarni amalga oshirish paxta maydonlarni bosqichma-bosqich

kamaytirish qishloq xo‘jaligiga xorijiy investitsiyalarni jalb qilgan holda ilm-fan innovatsion yutuqlar keng joriy etish orqali sabzavot, poliz va kartoshka yetishtirishni ko‘paytirish evaziga aholi va tashqi bozor ehtiyojlarini qondirishda samarali ishlar amalga oshirilmoqda.

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BUXORO AMIRLIGINING DAVLAT TUZUMI VA IJTIMOY-IQTISODIY HAYOTI

***Annotatsiya:** Buxoro amirligi o'zining uzoq tarixiy davrida Markaziy Osiyoning eng muhim va ta'sirli davlatlaridan biri bo'lib, uning davlat tuzumi va ijtimoiy-iqtisodiy hayoti o'zgacha o'ringa ega edi. Xususan, Buxoro amirligi davlat tuzumi, monarxik boshqaruv tizimiga asoslangan bo'lib, Amir (hukmdor) davlatning oliy hokimi hisoblangan. Amirlikning hukumati o'z ichiga amirning o'rinbosarlari va vazirlarini olgan, shuningdek, harbiy va ma'muriy tizimlar ustidan nazorat o'rnatilgan edi. Buxoro amirligi xududida islom qonunlari asosida tartiblar belgilanib, shariat va davlat qonunlari bir-birini to'ldirgan.*

***Kalit so'zlar:** Buxoro, davlat, tuzum, amirlik, siyosat, tarix, islom dini.*

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STATE SYSTEM AND SOCIO-ECONOMIC LIFE OF THE BUKHARA EMIRATE

***Abstract:** Bukhara Emirate was one of the most important and influential states of Central Asia during its long history, and its state system and socio-economic life had a special place. In particular, the state structure of the Bukhara Emirate is based on the monarchical management system, and the Amir (ruler) is considered the supreme governor of the state. The government of the emirate included deputy emirs and ministers, as well as control over the military and administrative systems. In the territory of the Bukhara Emirate, procedures were established on the basis of Islamic laws, and Sharia and state laws complemented each other.*

***Key words:** Bukhara, state, system, emirate, politics, history, Islam.*

Buxoro amirligining ijtimoiy tuzumi sinflarga bo'lingan edi, unda amirning ma'muriy aparati, ruhoniylar, savdogarlar va dehqonlar kabi turli ijtimoiy qatlamlar mavjud edi. Eng yuqori sinf amirlar va ularning qarindoshlari, ruhoniylar esa islomiy bilimlarni o'rgatish, diniy faoliyatni boshqarish va shariat hukmlarini amalga oshirishda muhim rol o'ynagan. Shuningdek, Buxoro amirligida savdo, hunarmandchilik va dehqonchilik rivojlanib, iqtisodiy hayotda katta ahamiyat kasb etgan.

Buxoro amirligining iqtisodiy hayoti asosan qishloq xo'jaligi, dehqonchilik, savdo va qo'lyozma ishlari bilan bog'liq edi. Buxoro shahri o'rta asrlarda Markaziy Osiyoning yirik savdo markazi bo'lib, Buyuk Ipak yo'lining muhim nuqtalaridan

biri edi. Bu shaharda juda ko'p savdogarlar, hunarmandlar va ilm ahli yashagan, bu esa iqtisodiy va madaniy rivojlanishga xizmat qilgan. Buxoro amirligi boshqa davlatlar bilan ham savdo aloqalarini rivojlantirib, boy iqtisodiy tizimni shakllantirgan.

Shunday qilib, Buxoro amirligining davlat tuzumi va ijtimoiy-iqtisodiy hayoti bir-biri bilan chambarchas bog'liq bo'lib, o'sha davrda mamlakatning siyosiy va ijtimoiy barqarorligini saqlashda muhim rol o'ynagan.

Buxorolik hunarmandlarning kasb mahorati, an'analari, nozik san'ati avloddan-avlodga o'tib kelgan. Mahsulotning hajmi va sifati, ishlab chiqarish texnologiyasi bo'yicha batafsil qoidalar mavjud bo'lib, ularni buzish ustaxona va shahar ma'muriyati tomonidan jazolanadi. An'anaviy shakllarning yuqori sifati va o'zgarmasligini saqlab qolgan hunarmandchilikdagi ushbu tartib ishlab chiqarish rivojiga to'sqinlik qilgan. Diniy xurofotlar, cheklovlar har qanday yangiliklar kirib kelishiga to'sqinlik qilgan.

Buxoro Amirligi o'rta asrlarda Markaziy Osiyo mintaqasining eng muhim siyosiy va madaniy markazlaridan biri bo'lib, o'zining aniq tashkil etilgan davlat tuzumi bilan ajralib turardi. Buxoro Amirligining davlat tuzumi monarxik (imperial) tizimga asoslangan bo'lib, hukmdor — Amir — davlatning oliy hokimi hisoblangan. Amirlikda hukmdor o'z mamlakatini meros orqali boshqarardi, bu tizimda huquqiy va siyosiy qarorlar amir tomonidan qabul qilinardi. Shu bilan birga, amirning qarorlarini bajarishda uning yordamchilari, o'rinbosarlari, vazirlari va rahbarlari muhim rol o'ynagan.

Amir davlatning yuqori hokimi bo'lib, uning o'zi har tomonlama hokimiyatga ega edi. O'zi qarorlar qabul qilish va tashqi siyosatda o'z mamlakatining manfaatlarini himoya qilishda asosiy rol o'ynagan.

Amirning ma'muriy hokimiyati o'rinbosarlarni va maxsus vazirlarni o'z ichiga olgan. Ular ma'muriy, iqtisodiy va harbiy sohalarda boshqaruvni amalga oshirishgan. Ma'muriy tuzilma, shu bilan birga, Buxoro amirligida hukumat tizimini mustahkamlashga xizmat qilgan.

Buxoro Amirligida davlat va diniy hukumat o'rtasidagi chambarchas aloqalar mavjud edi. Islom shariati asosiy qonun bo'lib, Buxoro amirligi o'zining boshqaruvini shariat qoidalari asosida amalga oshirgan. Bundan tashqari, hukmdor va ma'muriyat, shariatni qo'llab-quvvatlashga va o'z davlati uchun amaliy qonunlar ishlab chiqishga harakat qilgan [1].

Buxoro Amirligining ijtimoiy tuzumi juda qat'iy va ierarxik bo'lib, ijtimoiy qatlamlar orasida katta farqlar mavjud edi. Buxoro jamiyatida yuqori tabaqa amirlar, ruhoniylar va zodagonlardan iborat edi, o'rtacha va past tabaqa esa dehqonlar, hunarmandlar, savdogarlar va boshqa ishlab chiqaruvchilarni o'z ichiga olgan.

Amir, zodagonlar va ruhoniylar (ularning oliy ruhoniy sinfi, masalan, ulamolar) ijtimoiy tuzumning yuqori qatlamida joylashgan. Ushbu sinf davlatni boshqarishda asosiy rol o'ynagan va ularning qo'lida siyosiy hokimiyat hamda diniy ta'sir bo'lgan.

Savdogarlar, hunarmandlar va ilmiynlar o'rtacha tabaqaga kirgan. Ular iqtisodiy faoliyatni rivojlantirgan, o'zlarini ijtimoiy hayotda sezilarli darajada namoyon etgan, lekin ular o'zlarini yuqori sinfga kiritolmagan.

Dehqonlar, qarzdorlar va boshqa past tabaqalar jamiyatning eng ko'p qismidan iborat edi. Ular asosan qishloq xo'jaligida ishlashgan, shuningdek, iqtisodiy resurslarni ishlab chiqarishda muhim rol o'ynagan.

Buxoro Amirligi iqtisodiy jihatdan asosan qishloq xo'jaligi va savdoga asoslangan bo'lib, bu jamiyatda juda muhim o'rin tutgan. Qishloq xo'jaligi, asosan dehqonchilikka tayanib, suvli yerlarda paxta, bug'doy, tariq va boshqa mahsulotlar yetishtirilgan. Qishloq xo'jaligi va uning mahsulotlari ko'plab jamoat resurslarini shakllantirgan, bu esa davlatning iqtisodiy qudratini oshirgan.

Buxoro shahri Buyuk Ipak yo'lining eng muhim savdo nuqtalaridan biri sifatida yuqori ahamiyatga ega bo'lgan. Buxoro orqali O'rta Osiyo, Hindiston, Xitoy va Yaqin Sharq o'rtasidagi savdo yo'llari o'tayotgan. Shuningdek, Buxoro amirligi hunarmandchilik sohasida ham rivojlangan bo'lib, ipak ishlab chiqarish, mis, temir va boshqa qo'shma mahsulotlar ishlab chiqarish bilan shug'ullangan.

Davlat daromadlari asosan soliqlardan olinardi. Buxoro amirligida soliqlar har bir hududning iqtisodiy sharoitlariga qarab farq qilardi. Buxoroliklar boy kishilardan ko'proq soliq olgan, kambag'al kishilardan esa minimal soliq undirilgan. Bunday soliq tizimi mahalliy iqtisodiy holatni saqlab turishga xizmat qilgan.

XX asr boshida Buxoro hunarmandchilikning ko'pgina sohalari taraqqiy etgan o'lka sifatida qayd etiladi. Shunisi ahamiyatliki, Buxoro amirligida ayniqsa ipakchilik va qog'oz ishlab chiqarish eng taraqqiy etgan sohalardan hisoblanadi. Mamlakatda hunarmandlarning ko'pchilik qismi sezilarli guruhi temirchilar, payvandchilar, misgar va zargarlar qaysiki, o'zlarining kasbiga ixtisoslashgan mahalla dahalarida istiqomat qiladi. Misgar va zargarlar, Buxoro shahrining markaziy hududlarida yashagan. Bunday hunarmandchilik sohalari Yevropa shahar sanoatchiligi tipida bo'lmay, qo'l mehnatiga asoslangan tizimni uzoq vaqtlardan buyon davom ettirib keladi. XX asr boshlariga kelib amirlikda paxta tozalash, jun, moy va press zavodlari tashkil qilina boshladi. Ayniqsa, amirlikning Yangi Buxoro, Chorjo'y, Qorako'l, Qiziltepa, Eski Buxoro, Ziyovuddin, Kerki, Termiz, G'ijduvon, Zirabuloq hududlarida yangi ishlab chiqarish sohasiga asoslangan zavodlar tashkil topa boshlaydi. Bu amirlik iqtisodiyotining endi jonlanayotganini ifodalaydi. Buxoroning sharqiy bekliklarida tog'li hududlar ko'p bo'lganligi va bekliklarni muhofaza qilish talabi natijasida qurol-yarog' ishlab chiqarishga bo'lgan ehtiyoj ortadi. Masalan Yurchi, Boysun, Sherobod bekliklarida temir, ko'mir rudalaridan foydalanilgan [2.56].

Buxoro Amirligining davlat tuzumi va ijtimoiy-iqtisodiy hayoti o'rta asrlar Osiyosining o'ziga xos yuksalgan va barqaror davlat tizimlaridan biri sifatida ajralib turdi. Buxoro amirligi ijtimoiy-siyosiy tuzilishi va iqtisodiy tizimi o'z vaqtida muvaffaqiyatli ishlagan va davlat barqarorligini ta'minlagan. Ammo, vaqt o'tgan sari davlatdagi siyosiy nizolar, iqtisodiy qiyinchiliklar va ichki isyonlar Buxoro

Amirligining zaiflashishiga olib keldi. Yana bir muhim jihat, Buxoro amirligi Oʻrta Osiyo madaniyati va ilm-fanining rivojlanishiga katta hissa qoʻshgan.

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THE ROLE OF BANKING SERVICES IN SHAPING THE DIGITAL ECONOMY

***Abstract:** The article examines the role of banking services in the context of the development of digital economy and financial technologies . Ways to implement the digital economy based on blockchain technologies were also seen. Management processes of "Electronic Government" are also expressed.*

***Keywords:** innovation, innovative economy, digital economy, blockchain, digital technology, intellectual property, e-government.*

As we all know, worldwide, digital technologies are becoming the most important end result of socio-economic development in all sectors and improving the standard and quality of life of the population. Formation of digital economy in our republic and improvement of the quality of banking services on this basis is defined as an important direction and main goal of socio-economic reforms. The President of the Republic of Uzbekistan Sh.M. Mirziyoyev paid special attention to this important issue: " As the sages of the East said, "The greatest wealth is intelligence and knowledge, the greatest inheritance is a good education, and the greatest poverty is ignorance!" In particular, this issue is the "Year of Science, Enlightenment and Digital Economy Development" ⁵for 2020 . to be named, that is, to further develop science, to educate our youth as possessors of deep knowledge, high spirituality and culture, to rapidly continue the work we have started on the formation of a competitive economy, and to raise it to a new, modern level. Therefore, the final result of the reforms implemented in Uzbekistan is primarily aimed at achieving development in each field.

Therefore, the development of the digital economy in our country has become the most important task of today and the near future. The decision of the President of April 28, 2020 "On measures for the wide introduction of the digital economy and electronic government" sets the task of increasing the share of the digital economy in the country's gross domestic product by 2 times, the volume of services in this field by 3 times, and their export to 100 million US dollars by 2023. .

Of course, the digital economy will bring about certain changes in society, in particular, its impact on working conditions will be significant. In the conditions of digital transformation, the increase in the automation of processes, artificial intelligence, analytical systems working with huge data, and the increase in the use of robots serve as substitutes for labor resources. As a result, business conditions improve and efficiency increases significantly.

⁵Report of the President of the Republic of Uzbekistan Shavkat Mirziyoyev in his Address to the Oliy Majlis. -T.: January 25, 2020. <http://prezident.uz/uz/lists/view/>.

The faster the digital economy is formed, the more conveniences will appear in the standard of living of the population. As we all know, we have been trying to develop the electronic government system for several decades. And the results are not so significant, they began to be noticed only in the last three years. Our people have started to feel the advantages of "electronic government". This also shows that it is the right way to further expand the system of providing electronic state services to the population and business entities based on the principles of "intellectual government".

Until today, banks required to collect various documents and signatures in order to provide services to their customers, but today, on the contrary, the customer uses full-blooded electronic banking services. The reason for this is the introduced innovations. For example, the fact that banks are moving to the digital economy, that plastic cards in the national currency can be exchanged for foreign currencies without restrictions, that the documents for obtaining a loan have gone into electronic form, that blockchain technologies have entered banks, all this is a clear proof of our comments above.

At one time, the introduction of mobile banking was considered as an innovation for customers, but today this technology is considered as a mandatory condition for customers, especially for the younger generation. According to experts and analysts, mobile banking technology is considered as a minimum requirement for banks, and a bank that does not use such technology is considered an outsider in the market of banking services.

According to experts, as of 2018, more than 15 percent of large banks have started using Blockchain technology in their work. Due to this, despite the fact that the Blockchain technology has been created relatively recently, it can be shown that its coverage of revolutionary changes in existing business processes has aroused great interest among the participants of the financial markets.

Blockchain technology demonstrates the possibility of increasing the competitiveness and high potential of many sectors of the financial market. In the future, investment banking and financial transaction management are the most attractive sectors for the implementation of Blockchain technology in the financial market. Examples of industries where blockchain technology can be widely used include retail banking, insurance, real estate investments, and factoring. At the same time, it is wrong to see Blockchain technology as a solution to all existing problems in the development of financial markets. Currently, the legal basis for regulating the use of Blockchain technology in financial markets has not been fully developed, and there are many issues that are not yet resolved in this regard.

Another problem that hinders the widespread adoption of blockchain technology is the fact that its legal status is not clearly defined. In particular, we can see this situation in use in the financial markets. All existing national currency systems are created and regulated by national governments. Considering that blockchain technology is used both nationally and internationally, there are a number of urgent and important problems to be solved in ensuring the legality of its technology. Another problem that hinders the development of blockchain

technology is the large amount of computational operations required to form a block of transactions. Also, one of the reasons hindering the widespread development of Blockchain technology is its high energy consumption and high capital cost.

As stated in the address of the President, in order to increase the material well-being of the population and develop the economy in a sustainable way, the state program "Digital Uzbekistan - 2030" will be created, and the following will be defined as priority tasks in it:

1. Creation of digital economy infrastructure, development of ICT, implementation of "Smart Cities" and "Safe Cities" projects.

2. Development of human capital and formation of digital skills. As stated in the petition, in the next 3-4 years, 1,000,000 programmers who will create computer programs and as many jobs will be created in the field of digital economy.

3. Creating a digital innovation ecosystem. As stated in the petition, "Innovative development is as necessary for us as air."

4. Creating an effective information security system

The more members of the society acquire new digital, high-tech products, the more they become available and their value increases, that is, the synergistic effect of the scale of consumption is manifested. As a result, the potential for economic development will increase.

In general, the digital economy and its technologies have the potential to "disrupt" the traditional financial services market. This requires commercial banks to rapidly implement digital transformation and establish effective lines of cooperation with Fintech companies.

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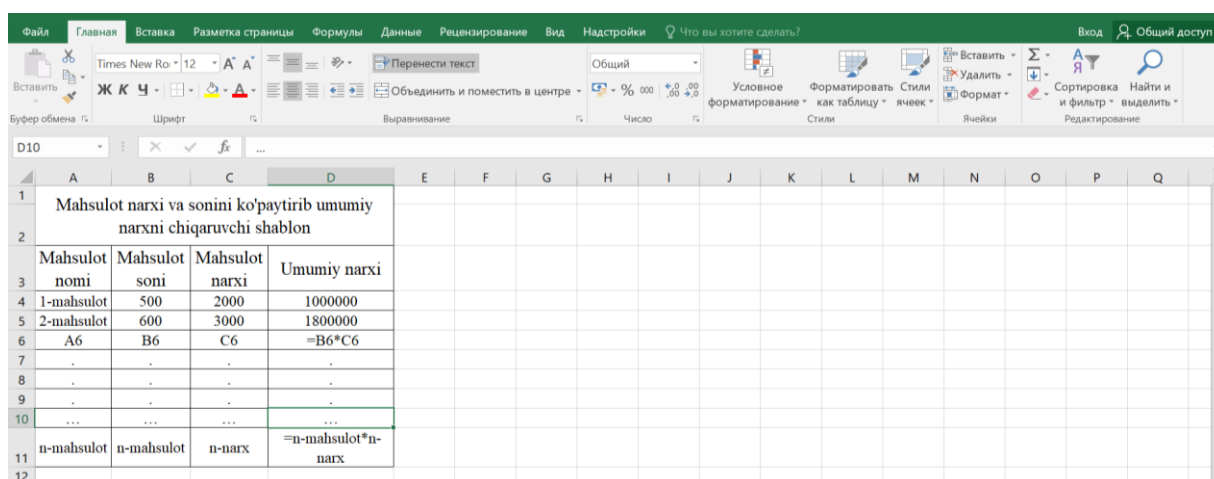
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USING MS EXCEL FOR ACCOUNTING IN THE DIGITAL ECONOMY

Abstract: *By organizing simple calculation processes with the help of MS Excel, templates are presented for performing calculation in service industries. It is shown that it is possible to calculate in Excel without using special programs in accounting. Small service industries can use this software to calculate the amount of work they do when they are just starting out.*

Keywords: *accounting, calculation, program, excel, service, formula, template.*

Formula entry and functions: In addition to the direct tasks in MS Excel, the accountant can add functions such as preparing commercial proposals, calculating contract prices, etc. To perform calculations, it is necessary to apply various coefficients and corrections, as well as to convert prices. And the most important thing is to perform all actions quickly and without harming the tasks. It helps to prepare the main document and separate additional calculations that can be done in an Excel worksheet for the accountant. So, when recalculating the price of a product, you can specify the price in one cell, the number of products in the second, and the conversion formula in the third (= first cell * second cell), then press Enter and get the price. In the first sheet in the desired cell, you can put "=", go to the second sheet and show the third cell with the total. Press Enter again and get the result.



Mahsulot nomi	Mahsulot soni	Mahsulot narxi	Umumiy narxi
1-mahsulot	500	2000	1000000
2-mahsulot	600	3000	1800000
A6	B6	C6	=B6*C6
n-mahsulot	n-mahsulot	n-narx	=n-mahsulot*n-narx

Figure 1. Calculation of the total price of the product

If you need to make such calculations for a large number of points where the price changes only, you can use the main function of Excel - automatic filling of formulas or weighting. The ability to fill formulas is one of the main functions of the program. It automates the process of calculating data in a table without writing the same formula over and over again. Here's how you can drag and drop formulas.

In the formula line, we put a reference to the cell in the table with equal and source data (=A3). After that, we get only the repetition of the value in the table. When you drag this cell, a copy of the table with data is obtained, which changes accordingly as the data in the original table changes. This is an example of dragging cells without setting ranges. Then you can use the basic techniques of excel - these are auto-completion of formulas or weighting.

Counting calendar days Excel can become an indispensable assistant even in such simple actions as counting calendar days. An accountant needs to know exactly how many days there are in a given period to calculate interest, penalties, credits and the like. If it is a short time, it is easy to calculate it using a calendar, but this format is very inconvenient for continuous calculations. In such situations, Excel will help the accountant. To perform calculations, you need to select three empty cells in the table. To get the results, you need to write the start date in one, the end date in the second, and leave the third blank. Recommendation: type the date in the numeric part of the keyboard: 12/10/2016. The program itself converts the entered data into a date format and it comes out to 10/12/2016. Then select the third cell and click the "Add function" button, which you can find by the symbol f(x). After clicking, the "Function Wizard" window will open. Select "Date and Time" from the "Category" list and "360 DAYS" from the "Function" list and click OK. In the displayed window, you need to enter the values of the start and end dates. To do this, you need to click on the cells of the table with these dates and put one in the "Method" line and click OK. If the total value is not displayed in numeric format, you need to check the cell format: right-click and select "Cell Format" from the menu, set "Number Format" and click OK. You can also count days this way: in the third cell, type = DAYS 360 (B1; B2; 1). In parentheses, you need to specify the coordinates of the first two cells with dates, and you need to set the value of one for the method. When calculating interest for weeks, you can divide the number of days obtained by 7. You can also add or subtract any number of days to the date. To do this, you need to write the date in one cell, put an equal sign in the second, then click on the cell with the date and enter "+" or "-" and the required number of days.

Xodim F.I.SH	Ishlagan kuni	Kunlik ish haqqi	Qo'shimcha bonus	Jarimalar	Oylik maoshi
1-xodim	30	150 000,00	50 000,00	-	4 550 000,00
2-xodim	29	150 000,00	-	20 000,00	4 330 000,00
3-xodim	31	150 000,00	30 000,00	-	4 680 000,00
.	=H7*I7+J7-K7
.
.
...
n-xodim	n kun	n so'm	n so'm	n so'm	n so'm

Figure 2. Calculation of monthly salary of employees

Working with reports Excel spreadsheets for accountants are a multi-functional working tool that contains a lot of information for reporting and making current calculations. When printing a table that does not fit on one sheet, you can place its "header" on each separate page, which makes it easier to find the information you need. To do this, select the "File" - "Page Setup" menu and the "Sheet" tab. We put the cursor on "Through rows" or "Through columns" and click on the rows that should be placed on each sheet in the table. You can also use headers and footers to work with such documents. They record the necessary information such as date, page numbers, compiler name, etc. Header and footer settings are available in "Page Options" - "Header and Footer". There are ready-made marking options or you can add your own.

conclusion , I will quote the following template: one month cash flow in the "General catering service" enterprise, linking of accounts, monthly payments, advance payments and accounts payable. -books are listed.

UMUMIY OVQATLANTIRISH XIZMATI Молиявий-ҳўжалик операцияларини ҳисобга олиш КИТОБИ						
9999 Ҳамма счётлар буйича						
2022 йилнинг январ ойи учун						
Сана	Бошланғич ҳисоб ҳужжатининг номи ва рақами	Операциянинг мазмуни	Сумма	Счётлар корреспонденцияси		
				дебет	кредит	
2	3	4	5	6	7	
	Жами айланма	Ой бошига қолдиқ				
18.04.22	60000000	3000000	5 000 000,00	4 000 000,00	100 000,00	
18.05.22	60000000	3000000	5 000 000,00	4 000 000,00	100 000,00	
18.06.22	60000000	3000000	5 000 000,00	4 000 000,00	100 000,00	
18.07.22	60000000	3000000	5 000 000,00	4 000 000,00	100 000,00	
18.08.22	60000000	3000000	5 000 000,00	4 000 000,00	100 000,00	
18.09.22	60000000	3000000	5 000 000,00	4 000 000,00	100 000,00	

Figure 3. Ms in excel account leaflets conduct

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YOSHLARNI HARBIY VATANPARVARLIK RUHIDA TARBIYALASHNING O`ZIGA XOS XUSUSIYATLARI

Annotatsiya: *Ushbu maqola yoshlarni harbiy vatanparvarlik ruhida tarbiyalashning o`ziga xos xususiyatlarini ko`rib chiqadi. Maqolada harbiy vatanparvarlik tarbiyasining mohiyati, uning ta'lim, sport, oila va jamiyat bilan bog`liq jihatlari, zamonaviy texnologiyalarni qo`llash orqali yoshlarni tarbiyalashning samarali usullari tahlil etilgan. Maqola yoshlarning vatanparvarlik ruhida tarbiyalanishi va ularning ma'naviy-axloqiy rivojlanishiga ta'sir etuvchi omillarni o`z ichiga oladi.*

Kalit so`zlar: *yoshlarni tarbiyalash, harbiy vatanparvarlik, ma'naviy-axloqiy rivojlanish, sport va jismoniy tarbiya, oila va jamiyatda tarbiya, milliy qadriyatlar, ta'lim va yoshlar, zamonaviy texnologiyalar, vatanparvarlik ruhida tarbiya.*

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DISTINCTIVE FEATURES OF RAISING YOUNG PEOPLE IN THE SPIRIT OF MILITARY PATRIOTISM

Annotation: *this article examines the peculiarities of educating young people in the spirit of military patriotism. The article analyzes the essence of military patriotic education, its aspects related to education, sports, family and society, effective methods of youth education through the use of modern technologies. The article includes factors that influence the upbringing of young people in the spirit of patriotism and their spiritual and moral development.*

Keywords: *youth education, military patriotism, spiritual and moral development, sports and physical education, upbringing in the family and society, national values, education and youth, modern technologies, upbringing in the spirit of patriotism.*

Yoshlar – har qanday jamiyatning kelajagi, davlat va millatning istiqbolini belgilovchi asosiy kuchdir. Shu bois, ularning tarbiyasi, ilmiy va ma'naviy-axloqiy rivojlanishi davlat siyosatining eng dolzarb yo`nalishlaridan biri bo`lib qoladi. O`zbekiston Respublikasida yoshlarni vatanparvarlik ruhida tarbiyalash masalasi ayniqsa muhim ahamiyatga ega. Harbiy vatanparvarlik tarbiyasi nafaqat yoshlarning mamlakatni sevish va unga fidoyi bo`lish tuyg`ularini rivojlantiradi, balki ularni milliy qadriyatlar, insonparvarlik va mamlakatni himoya qilishga tayyorlashga yo`naltiradi.

Yoshlarni vatan himoyasiga tayyorlash – inson butun hayoti davomida amalga oshiriladigan o'zoq jarayondir. Vatanparvarlik tarbiyasi oiladan boshlanadi va boshlang'ich sinflardan boshlab o'quv yurtida davom ettirilishi lozim.

Kichik yoshdagi I-IV sinf o'quvchilarida Vatan himoyasiga tayyorlikni shakllantirish jarayoni, ularda mavjud cheklangan hayot tajribasi, olingan bilimlar xususiyati va hajmi, ta'lim – tarbiyaning umumiy vazifalarini hisobga olgan holda quriladi. Bu davrda uning samardorligi avvalam bor o'quv, umumta'lim vazifalarni bajarish bilan chambarchas bog'lik. Masalan, askarga bo'lgan hurmat va muhabbat bu yoshda armiya, askarlar jasorati, O'zbekiston Respublikasi Qurolli Kuchlari haqidagi bilimlar asosida shakllanadi.

Kichik yoshdagi o'quvchilar turli qo'shinlar, harbiy texnika, o'q otish qurolining turlariga qiziqadi. Bunda tarbiyachilar zamonaviy jangovar harakatlarda g'alabaga erishish uchun qo'shin turlari orasidagi bog'liklikni o'quvchilarga ko'rsatib berishi lozim. Bu ishni amalga oshirishda o'quvchilarning samolyot, vertolyot, kema va suv osti kemalari, askarlar, zambaraklar tasvirlangan rasmlari juda katta yordam beradi.

Kichik maktab yoshida vatanparvarlik xususiyatiga ega bo'lgan o'yinlar faoliyati katta ahamiyatga ega. Bola o'yin qoidalarini egallagan holda sardor, starshina, razvedkachi, aloqachi, signal beruvchilar rolini bajarishni yaxshi ko'radi. Bunday, tashkil qilingan va o'z-o'zidan yuzaga keladigan, o'yinlar katta ahamiyatga ega. O'qituvchi bunda nafaqat o'yindagi, balki bo'lajak jangchi majburiyatlarini bajarish uchun muhimligini ta'kidlagan holda kundalik hayotdagi intizom, tartib va tarbiya haqida ham qayg'urishi kerak.

O'smirlar V-VIII sinf o'quvchilarining psixologik rivojlanish xususiyatlari harbiy vatanparvarlik tarbiyasi uchun yaxshi zamin yaratadi. Ularda dalil, hozirgi sharoit hodisalarini tahlil qilish va umumlashtirish, atrof-muhit, axloqiy talablar va baholanishga mustaqil qarashlarni ishlab chiqish ehtiyoji yuzaga keladi.

O'smirlarning vatan himoyasiga tayyorligini shakllantirish bir qator ob'yektiv va subyektiv sabablarga bog'liq. Ob'yektiv shartlar ichida eng e'tiborga sazovor jarayon o'quvchilarning o'quv muassasa va undan tashqarida tashkil qilinadigan harbiy vatanparvarlik tarbiyasi faoliyatining har xil turlarida ishtiroki hisoblanadi.

Bo'lajak vatan himoyachisi shaxsini shakllantirish hozirgi ijtimoiy ahvol hodisalariga shaxsiy munosabatni ifodalashda, yangi tushunchalar bilan fikrlash qobiliyatiga ega bo'lishga yordam beradigan turli fanlarning maqsad mohiyatini o'rganishni boshlaydilar.

Bu yosh uchun eng kerakli fanlar – gumanitar, tabiiy, matematika fanlari, jismoniy tarbiya. O'quvchilar bu davrda "harbiy" tushunchalar ma'nosini yanada chuqur anglab yetadi. "Vatan himoyasi", "Harbiy nizomlar" va boshqalar davlatimiz iqtisodiy qudrati va uning Qurolli Kuchlar qudrati tinch va osoyishta hayotimizning mustahkam kafolati ekanligini tushuna boshlaydi.

Vatanparvarlik hissiyotlari o'smirlarda qahramonlikka intilish, jasorat ko'rsatish istagi, tengdoshlari jamoasida o'z o'rniga ega bo'lish, ular hurmatiga sazovar bo'lishi, o'ziga yuqori e'tibor va talabchanlik, katta ijtimoiy faollik kabi yangi his – tuyg'ularni shakllanishiga ko'ra rivojlanadi.

Aynan shu yoshda maktab o'quvchilari ayniqsa botirlik, kuch, iroda, mardlik, do'stlikka va o'rtoqlarga sadoqatni qadrlaydi. Bu ularga Vatan himoyasi muqaddas burch, ahamiyatga molik xususiyatini anglab yetishga imkon beradi.

Harbiy vatanparvarlik ongi nafaqat darslar yoki ijtimoiy topshiriqlarni bajarishda, balki real ijtimoiy ahvol ta'sirida ham shakllanadi.

Katta yoshdagi (X-XI sinf) o'quvchilarning ilmiy dunyoqarashi, intellektual va jismoniy rivojlantirishi, uning kasb tanlashda o'z o'rnini topish jarayonlarining shakllanish davri. Bu yoshdagi o'quvchilarning fikrlashi yanada yetuklashadi, chuqur umumlashtirishlarga, tartib va qobiliyatga ega bo'ladi.

Vatan himoyasiga tayyorlash, shuningdek o'z-o'zini anglash, o'zini tarbiyalash ham sodir bo'ladi. Ular Vatan himoyachisi haqida to'la tasavvurga ega bo'ladilar. Bu nafaqat Ikkinchi Jahon urushi qahramoni yoki faxriysi, baynalminalchi, balki mustaqil O'zbekiston himoyachisining eng yaxshi hislatlari xos bo'lgan zamondoshlarimiz haqidagi qahramonliklar, ularning yuksak marralarni zabt etishlari va xalqimiz mehnatini ishonchli himoya qilish kabi tushunchalar chuqur tasavvurli iz qoldiradi. Biroq hisobga olish kerakki, bu yuksak namunalar faqat o'quvchilarning ishlari va harakatlarida o'rnini topsagina, e'tiborga sazovar bo'ladi. Shuning uchun o'quv-tarbiyaviy jarayonda o'quvchilarga nafaqat o'tgan urush voqealari, xalqning front va front ortidagi ommaviy mehnat jasorati haqida bilimlar berish, balki ularda Vatan himoyasiga tayyorlash ijtimoiy dunyoqarashlarni shakllantirish lozim.

O'quv muassasani tugatgach ko'pgina o'smir yigitlar harbiy kiyim kiyishini bila turib, bu davrda ularda jangchiga muhabbat va hurmatni tarbiyalash, harbiy mehnatning asl chiroyini ochib berish muhim.

Vatanparvar yoshlarni vatan himoyasi asoslarini ta'minlaydigan bilimlar tizimi bilan qurollantirish zarur, chunki vatan himoyasining matonatli va jasur himoyachi sifatida shakllanishidagi ta'lim jarayoni muhim vazifalaridan biri hisoblanadi. O'quvchilar nafaqat harbiy bilimlar, balki birinchi qaraganda armiya, harbiy qurilish, urush va tinchlik muammolariga bevosiga munosabatda bo'ladigan mezonlar bilan tanishadilar. Turli fanlar (tarix, adabiyot, matematika, fizika, kimyo, biologiya, geografiya, fizik-geografik va b.) yig'indisidan kelib chiqib, ular vatan himochisiga zaruriy bilim va ko'nikmalar haqidagi poydevoriy tushunchalar hosil qiladilar.

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HEALTHY LIFESTYLE

***Abstract:** A healthy lifestyle is the lifestyle of an individual with the goal of preventing disease and promoting health. A healthy lifestyle helps us fulfill our goals and objectives, successfully implement our plans, cope with difficulties, and, if necessary, with colossal overloads. Good health, maintained and strengthened by the person himself, will allow him to live a long and joyful life.*

***Key words:** Drug, health, psychoactive, body, smoking, alcohol, stress, physical inactivity, vitamin, protein.*

Health is an invaluable wealth of each person individually, and of the entire society as a whole. When meeting and parting with people close to us, we always wish them good health, because this is the main condition for a full and happy life.¹

The main factors that destroy health

Psychoactive substances (drugs)

Addiction to the use of psychoactive substances (drugs) is a painful attraction that leads to severe disorders, primarily of the mental and physical functions of the body. It's no secret that drugs are poison. Regardless of the amount taken, they cause irreparable damage to our health.

It is generally accepted that drugs must have three characteristics: they are gradually addictive, and they are physical and psychological dependence. Physical dependence is expressed in the fact that in the absence of the drug, the addict's condition sharply worsens, pain, nausea, vomiting, and disorders of the internal organs appear, what is colloquially called "withdrawal." Psychological dependence manifests itself in the willingness of the addict to do anything to get the drug again.

The main danger of narcotic substances is that after taking them, an irresistible craving for repeated use appears, and the addict no longer thinks about the deadly consequences that the drug carries.

Drugs are introduced into the holy of holies of the body - step by step they destroy the addict's nervous system, his brain, and they do this cynically, and sometimes irreversibly. The disturbances affect the functioning of individual neurons, areas of the brain, in particular those responsible for memory and semantic operations. This, in turn, directly affects a person's behavior, his professional activity decreases, he is turned off from social activities, and all his leisure time is occupied with thoughts about drugs. Hence, frequent absenteeism and low labor productivity, cessation of education at school or college, lack of any desire to take care of children, wife, sick parents, neglect of household chores. In other words, the drug addict degrades as a person, turning into a callous, limited egoist, busy only with waiting for the next drug intoxication.

All drugs, regardless of the route of introduction into the body, to a greater or lesser extent necessarily damage: the nervous system (including the brain); immune system; liver; heart; lungs.

Smoking

Nowadays, smoking has become deeply ingrained in the lives of many people and has become an everyday occurrence. Despite the struggle of the public, with the introduction of new requirements of the “anti-tobacco” law, part of the population still remains active smokers, while everyone is aware that nicotine is the strongest poison. In addition to nicotine, other components of tobacco smoke also have a negative effect. When carbon monoxide enters the body, oxygen starvation develops due to the fact that carbon monoxide is more easily combined with hemoglobin than oxygen and is delivered with the blood to all organs and tissues. Frequent and prolonged smoking is associated with manifestations of physical discomfort: morning cough, headache, sharp discomfort in the stomach, heart, sweating, fluctuations in blood pressure, loss of sleep, appetite, and memory loss. The person becomes nervous and irritable. In addition, smokers endanger not only themselves, but also those around them. Inhaling smoky tobacco air (passive smoking) leads to the same diseases that smokers suffer. A smoker inhales smoke that has passed through the filter of the cigarette, while a non-smoker inhales completely unfiltered smoke. This smoke contains 50 times more carcinogens, twice as much tar and nicotine, 5 times more carbon monoxide and 50 times more ammonia than smoke inhaled through a cigarette. Therefore, stopping smoking is a prerequisite for a healthy lifestyle.³

Alcohol

The problem of alcoholism is a branched complex of social pathologies that affect the normal functioning of society. Taking even small doses of alcohol reduces performance, leads to fatigue, absent-mindedness, and makes it difficult to correctly perceive events. Alcoholism is a serious chronic disease that is difficult to cure. It develops on the basis of regular and long-term use of alcohol and is characterized by a special pathological state of the body: an uncontrollable craving for alcohol, a change in the degree of its tolerance and personality degradation. Alcohol has an extremely harmful effect on brain cells, paralyzing their activity and destroying them. The effect of alcohol on the liver is detrimental: with prolonged use, chronic hepatitis and cirrhosis of the liver develop. Drinking alcoholic beverages, regardless of the type of strength, leads to disturbances in heart rhythm, metabolic processes in the tissues of the heart and brain, and irreversible changes in these tissues. The whole society suffers from the consequences of alcoholism, but first of all, the younger generation is at risk: children, adolescents, young people, as well as the health of expectant mothers.³

Stress

Stress - translated from English means “pressure, pressure, tension.” Any person is subject to stress, regardless of their position, position in society and material wealth. A tense emotional state has a negative impact on the psychological and physical state of a person. Stress leads to psycho-emotional disorders (anxiety,

depression, neuroses, low mood, or, conversely, overexcitation, anger, memory impairment, insomnia). Stress is the main risk factor for the manifestation and exacerbation of many diseases: cardiovascular (hypertension, angina, stroke), gastrointestinal tract (ulcers, gastritis), colds and infections, which is explained by weakened immunity. It is impossible to remove most stress factors from our lives, but we can change our perceptions and neutralize their negative impact on our health and life in general.³

Physical inactivity

In the modern world, office work, automation of production, movement by car, and the development of household appliances reduce the human need for movement. Low physical activity contributes to the development of diseases such as arterial hypertension, atherosclerosis, myocardial infarction, diabetes mellitus, obesity and osteoporosis. Even normal, everyday physical activity (walking outside, doing housework, walking up the stairs) will help maintain muscle tone and maintain weight because the activity burns calories.²

Thus, it is obvious that the primary role in maintaining and developing health still belongs to the person himself, his healthy lifestyle, values and attitudes.

Don't forget that your health is in your hands. Don't be hostage to your bad habits.

Stop smoking and alcohol, move more, try to take the troubles and troubles of life more easily! Be healthy!

1. Giving up bad habits.

2. Playing sports.

Physical activity improves the general condition of the body and the functioning of the lymphatic system, which removes toxins from the body. According to research, people who regularly exercise are 25% less likely to get colds than those who do not lead a healthy lifestyle. However, don't be too zealous. Just 30-60 minutes of exercise a day allows you to become healthier, while more serious exercise will make you weaker. Be sure to include push-ups in your program - they promote better lung and heart function. Be sure to do abdominal exercises - this will improve the functioning of the gastrointestinal tract and genitourinary system. Daily morning exercises are a mandatory minimum of physical activity for the day. It is necessary to make it the same habit as washing your face in the morning.

3. Healthy eating.

Healthy eating is a very broad concept (voluminous scientific works have been written about it), but the basic principles of a rational approach to food are as follows:

Limiting animal fats;

Including an increased amount of plant products in the menu;

Exclusion from the daily diet of "fast" carbohydrates – sweets, baked goods, soda, fast food, chips and other "junk" food;

Switching to fractional meals (a small amount of food at one time);

4. Eating foods rich in vitamins.



What foods are rich in vitamins - this question very often worries people who care about their health. After all, as you know, the main source of substances necessary for humans, without which almost all physiological processes in the human body would be impossible, is food. A properly balanced diet can provide the body with the necessary vitamins and minerals. None of the vitamins are synthesized by the human body independently. In addition, of the dozen and a half vitamins that a person needs, only five are fat-soluble (that is, they have the ability to accumulate in the liver and fatty part for a longer time), while the rest are water-soluble, that is, they are excreted with water in excess, and therefore require regular daily replenishment. To help you balance your diet, we will try to tell you which foods are especially rich in the vitamins we need.

Fat-soluble vitamin A was the very first to be discovered (as indicated by its letter designation). It is involved in almost all functions of the body: vitamin A is necessary for maintaining vision and healthy hair and skin, for fighting infections and normal functioning of the immune system, it is a powerful antioxidant and is important for the functioning of the lungs, heart, and thyroid gland. An adult needs to receive 0.9-1 mg of vitamin A per day. The best sources are beef liver (100g of product contains 8.2 mg of vitamin A) and pork liver (3.45 mg), followed by chicken egg yolk (1.26 mg), butter (0.43 mg); Among the sources of plant origin, the richest in this vitamin are carrots, sea buckthorn, rowan, and rose hips.

Vitamin D also tends to accumulate in the body in fatty tissues. It includes two biologically active substances, of which cholecalciferol comes both from food and is synthesized with the help of ultraviolet rays, and ergocalciferol comes only from food. The main function performed by this vitamin is the absorption of calcium in the small intestine; additional functions include participation in metabolic processes and coordination of cell reproduction. The daily requirement of the human body for it is 15 mcg. The maximum amount of vitamin D can be obtained by eating sprats in oil (20.5 mcg per 100 g of product), followed by butter (3.5 mcg), chicken egg (2.5 mcg) and meat (1.3 mcg).

Another essential vitamin from the fat-soluble category is vitamin E. In addition to being the main antioxidant substance, it strengthens the myocardium and vascular walls, slows down the aging of cells, and improves their nutrition. An adult needs to consume 8-10 mg of vitamin E per day; this norm can be obtained by eating butter

(121 mg per 100 g of product), sunflower oil (44 mg), corn oil (18.6 mg), soybean oil (17.1 mg), as well as sprouted grains of wheat and corn (15-25 mg), oat grains, rye. In general, vitamin E is found in many foods.

Vitamin K is important for healthy kidney function, the absorption of calcium by some organs, and it also plays an important role in blood clotting. It is recommended to consume 120 mcg of vitamin K per day, which is most found in spinach (482 mcg), lettuce (173.6 mcg), and white cabbage (76 mcg).

Among the water-soluble vitamins, the largest group is B vitamins. In natural products, they exist together and solve one main task - energy production and participation in cellular respiration. They cannot be accumulated, so you need to take B vitamins daily. It is worth noting that they are destroyed under the influence of alcohol, nicotine, and caffeine.

Vitamin B1. The required rate is 1.1-1.2 mg. Most of it is found in peas (0.81 mg per 100 g), soybeans (0.94 mg), yeast (0.60 mg), beans (0.50 mg), buckwheat (0.43 mg), wheat (0.42 mg), pork and beef liver (0.30 mg each).

Vitamin B2. The daily norm is 1.3 mg. Its maximum content is in the liver (2.19 mg per 100 mg), heart and kidneys (1.8 mg each), eggs, and milk.

Vitamin B6. The norm that the body needs is 1.6-2 mg. It can be obtained by eating foods such as: walnuts (0.80 mg per 100 g of nuts), hazelnuts (0.70 mg), beef liver (0.70 mg), chicken meat (0.52 mg) daily.), red sweet pepper (0.50 mg).

Vitamin B9. The recommended daily intake is 180-200 mcg. Vitamin B9 is found in significant quantities in beef liver (240 mcg), beans (90 mcg), spinach (80 mcg), and walnuts (77 mcg).

Vitamin B12. The required norm is 6 mcg. Its maximum content can be found in beef liver (60 mcg per 100 g of product), pork liver (30 mcg), beef heart (10 mcg), and rabbit meat (4.3 mcg).

Vitamin C is necessary for the normal functioning of bone and connective tissue and is an antioxidant. For adults, the physiological need is 90 mg per day; for smokers, this norm increases by approximately 35 mg; the permissible maximum is 2000 mg. Vitamin C is found mainly in fruits and vegetables. Your body will receive it most if you regularly consume the following products: rose hips (650 mg in fresh, 1000 mg in dry berries per 100 g of berries), sweet pepper (200 mg, in red – 250 mg), currants and sea buckthorn (200 mg), greens, parsley, dried porcini mushrooms (150 mg each), cabbage Brussels sprouts (120 mg), cauliflower (70 mg), oranges (60 mg), sorrel (43 mg), lemons (40 mg).⁴

5. Hardening.

Hardening your body can be your assistant in maintaining a healthy lifestyle. It is best to start it from childhood. The easiest way of hardening is air baths. Water procedures also play a huge role in the hardening process - strengthening the nervous system, having a beneficial effect on the heart and blood vessels, normalizing blood pressure and metabolism. First of all, it is recommended to rub your body with a dry towel for several days, and then move on to wet rubdowns. You need to start wiping yourself with warm water (35-36 C), gradually moving to

cool water, and then to dousing. In summer, it is better to take water procedures in the fresh air after exercise.

6. Protein intake.

Protective factors of immunity - antibodies (immunoglobulins) - are built from protein. If you eat little meat, fish, eggs, dairy products, nuts, then they simply will not be able to form.

7.Reducing stress load.

Prolonged stress causes a powerful blow to the immune system. By increasing levels of negative hormones, it suppresses the release of hormones that help maintain health. By learning to deal with stress, you will stop the flow of excess hormones that make you fat, irritable and forgetful.

8. Get a good night's sleep.

Getting good sleep is one of the best ways to stay healthy. People who sleep 7-8 hours are definitely doing the right thing. But it is not recommended to sleep more than 8 hours. A good night's sleep strengthens the immune system. The fact is that during night sleep the level of melatonin increases, which improves the functioning of the immune system.⁵

If you want to be healthy, lead a healthy lifestyle. Your new motto: no more lying on the couch, more exercise and fresh air! Bad habits and stress are the main enemy of health. Try to get as many positive emotions as possible and take care of proper nutrition. Go ahead and good luck!!!

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BOSHLANG'ICH SINIF O'QISH SAVODXONLIGI DARSLARIDA BADIY ASARLAR USTIDA ISHLASH TAMOYILLARI

Annotatsiya. Boshlang'ich sinf o'quvchilarining badiiy tafakkuri va dunyoqarashini o'stirishda darsliklarda keltirilayotgan badiiy asarlar muhim ahamiyatga ega. Ushbu maqolada badiiy asarlar ustida ishlash jarayoni, badiiy asarlarni tahlil qilish metodikasi va samarali usullari haqida so'z yuritiladi.

Kalit so'zlar: boshlang'ich ta'lim, o'qish darslari, badiiy asar, badiiy asar tahlili, badiiy asarlarni o'rganish bosqichlari.

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STRUCTURE OF WORK ON WORKS OF ART IN READING LITERACY LESSONS IN PRIMARY SCHOOLS

Abstract. Art works presented in textbooks are important in developing the artistic thinking and outlook of elementary school students. This article talks about the process of working on works of art, the methodology and effective methods of analyzing works of art.

Keywords: primary education, reading classes, artistic work, analysis of artistic work, stages of studying artistic works.

Bugungi kunda yosh avlodni ma'naviy barkamol, jismoniy sog'lom va yetuk shaxs sifatida tarbiyalash nafaqat ta'lim tizimining, balki butun jamiyatimizning oldida turgan dolzarb vazifalardan biridir. Bu borada maktab ta'limi, xususan, boshlang'ich ta'lim dasturi muhim ahamiyatga ega. Chunki maktabga ilk qadam qo'ygan bolaning savodini chiqarish, unda dastlabki ilmiy dunyoqarash elementlarini shakllantirish ta'limning aynan shu bosqichida amalga oshiriladi. Bu maqsadga erishish uchun, avvalo, o'quvchilarda yuqori darajadagi o'qish savodxonligini shakllantirish lozim.

O'qish savodxonligi doirasida o'quvchida to'g'ri, tez, ongli, ifodali o'qish malakalarini shakllantirish, ularni oddiy kitob o'quvchisidan chuqur mulohaza yurituvchi, ijodkor kitobxon darajasiga ko'tarish; o'qish orqali tevarak-atrof, borliq haqidagi bilimlarini kengaytirish, ularning dunyoqarashini boyitish; tafakkurida elementar adabiy tushunchalarni shakllantirish; har qanday uslubdagi matnni o'qish va uni anglash, tanqidiy va kreativ fikrlash ko'nikmasini oshirish nazarda tutiladi.

O‘qish savodxonligi – jamiyat tomonidan talab qilinadigan va inson tomonidan qadrlanadigan yozma tilning shakllarini idrok etish va amaliyotda qo‘llay olish qobiliyatidir. O‘qish savodxonligi jamiyat tomonidan talab qilinadigan va inson tomonidan qadrlanadigan yozma til shakllarini tushunish va ulardan foydalanish, shuningdek, matnlardan turli shakllarda ma’no hosil qila olish qobiliyati hamdir.

Zamonaviy maktab oldiga qo‘yilgan vazifalar, kichik maktab yoshidagi o‘quvchilar umumiy rivojlanishining o‘sganligi, psixologiya va xususiy metodika sohasidagi yutuqlar sinfda o‘qish mazmuni va o‘qitish metodlariga o‘zgartirish kiritishni talab etmoqda. Shularga bog‘liq holda badiiy asarni tahlil qilish metodikasi takomillashtira borildi: takroriy bayon qilish mashqlari kamaytirildi, ijodiy va o‘qilgan matn yuzasidan o‘z fikrini bayon qilish ko‘nikmasini o‘stiradigan mashqlar ko‘paytirildi, asar qismlari ustida emas, balki yaxlit asar ustida ishlanadigan bo‘ldi, asar g‘oyasi va obrazlarini tushuntirishda o‘quvchilarning mustaqilligi ortdi, matn ustida ishlashda xilma-xil topshiriq turlaridan, ta’limda texnika vositalaridan va ilg‘or pedagogik texnologiya usullaridan ko‘proq foydalanila boshlandi.

Boshlang‘ich sinflarning o‘qish savodxonligi darslarida o‘ziga xos turli janrga xos asarlar o‘rgatiladi. Bulardan, asosan, hikoya, she’r, ertak, masal, maqol, doston, rivoyat va topishmoq kabi janrdagi asarlar ko‘pchilikni tashkil etadi. Bulardan tashqari, ilmiy-ommabop matnlar ham o‘rin olgan.

Turli janrdagi badiiy asarlar qurilishi, uslubiy jihatidan o‘ziga xos xususiyatlarga ega bo‘lib, ularning o‘quvchilarga ta’siri ham har xil bo‘ladi. Tabiiyki, har bir janrga oid asar matni lingvistik jihatdan ham o‘ziga xos xususiyatlarga ega. Masalan, she’riy asarlar matni hikoya matnidan, ertak matni she’r matnidan, ilmiy-ommabop maqola matni masal janriga taalluqli asarlar matnidan tubdan farq qiladi. Topishmoqlar predmet, voqea-hodisalar o‘rtasidagi o‘xshashlikni taqqoslash orqali o‘zlashtirilsa, maqollar mazmuni hayotiy misollar vositasida sharhlashni taqozo etadi. Shunga ko‘ra, turli janrdagi badiiy asarlarni o‘qishda o‘qituvchidan unga mos usullar tanlash talab etiladi.

O‘qilgan asar mazmunini izchil ravishda qayta hikoya qilish uning rejasini tuzishga yordam beradi. Reja tuzishda o‘quvchi hikoyani tarkibiy qismlarga bo‘ladi va har qaysi qismdagi asosiy fikrni aniqlaydi. Bularning hammasi analitik ish hisoblanadi. Keyin sintetik ishga o‘tiladi, ya’ni bolalar hikoya qismlariga sarlavha topadilar. O‘quvchilar o‘qituvchi rahbarligida reja tuzish jarayonida o‘qilgan hikoyaning har bir qismida bosh va ikkinchi darajali masala nimalardan iboratligi haqida, qanday qilib fikrni qisqa va aniq ifodalash haqida o‘ylaydilar. Sarlavha topish ustida ishlash, o‘quvchilar topgan sarlavhani jamoa bo‘lib muhokama qilish, reja tuzish jarayonining o‘zi bolaning fikrlash qobiliyatini faollashtirishi, unda o‘z mulohazasini isbotlash, asoslash odatlarini tarbiyalashi lozim. Asarni o‘qish va tahlil qilish jarayonida tuzilgan reja doskaga yozilsa, hikoya mazmunini izchil qayta hikoya qilishga yordam beradi. Reja asosida hikoya qilishning vazifasi mazmunni berilgan izchilikda o‘zlashtirishdir. Reja asosida qayta hikoyalash o‘qituvchi savoliga javob berishga nisbatan asar mazmunini aytib berishning xiyla mustaqil formasidir. O‘qilgan asar mazmunini o‘zlashtirish ustida ishlashdagi keyingi

bosqich, qisqartirib hikoyalash hisoblanadi. Qisqartirilgan hikoyalash uchun 2-3 qismga bo‘linadigan, bu bo‘limlar yaqqol ajralib turadigan, mazmuni sodda asarlar tanlanadi.

Qisqartirib hikoyalashga o‘rgatish quyidagicha uyushtiriladi: o‘qituvchi hikoyaning oldindan belgilab qo‘yilgan birinchi qismini o‘qiydi va o‘quvchilar bilan birgalikda eng muhim, asosiy fikr aniqlanadi. Bunda o‘quvchilar ba‘zan asardagi so‘zlardan foydalanadilar. Bu o‘quvchilarga qiyinlik qilsa, bo‘limdagi asosiy fikrni o‘z so‘zlari bilan aytib berishlari mumkin. Keyin o‘quvchilar o‘qituvchi bilan bu qismni qisqartirib hikoyalashda nimalar haqida gapirmaslik kerakligini, qaysilar ikkinchi darajali yoki kam ahamiyatli fikr ekanini aniqlaydilar. Asarning boshqa qismlari yuzasidan ham shunday ish olib boriladi va o‘quvchilar asarni qisqartirib qayta hikoya qiladilar. O‘qilgan asarni qisqartirib hikoya qilishga 3- sinfdan boshlab o‘rgatiladi. Tanlab hikoyalash ham bolalarning tafakkuri va nutqini o‘stirish vositalaridan biridir.

Tanlab hikoyalashda o‘quvchi:

- 1) o‘qigan matndan bir qismini, uning chegarasini ongli ravishda ajratib so‘zlab beradi;
- 2) hikoyadan faqat bir voqeani aytib beradi;
- 3) hikoya mazmunini faqat bir syujet yo‘nalishida so‘zlab beradi.

Bolalar tanlab qayta hikoyalash malakasini hosil qilishga boshlang‘ich sinf izohli o‘qish darsida keng qo‘llanadigan metodik usullar yordam beradi:

- 1) hikoya qismiga chizilgan rasm asosida hikoyalash;
- 2) hikoyadagi bir voqeani tasvirlovchi rasm asosida hikoyalash;
- 3) tanlab qayta hikoyalashni talab etadigan savollarga javob berish.

O‘quvchi tanlab hikoya qilishga tayyorlanganda o‘qilgan matnni tahlil qiladi. Bunday tahlil bolalar tafakkurini, ular nutqidagi mustaqillikni o‘stiradi va o‘qilgan matn mazmunini o‘zlashtirishga yordam beradi. Hikoyani o‘qish bilan bog‘liq holda o‘tkaziladigan ijodiy ishlar ham o‘quvchilar nutqini, tafakkurini o‘stiradi. Bular:

- 1) ijodiy qayta hikoyalash;
- 2) inssenirovka qilish;
- 3) o‘qilgan asarga rasm chizish; hikoyani davom ettirish.

1. Ijodiy qayta hikoyalashda o‘qilgan hikoyaning sharoitini, yo formasini o‘zgartirib hikoya qilinadi, yoki hikoyani yangi epizodlar bilan to‘ldirib hikoya qilinadi.

2. Inssenirovka yoki sahnalashtirishda o‘quvchilar o‘qilgan hikoyani sahnabop qilib o‘zgartiradilar. Buning uchun ular hikoyaga ssenariy haqida, kostyum, qatnashuvchilarning imo-ishorasi haqida o‘ylaydilar, monologik nutqni dialogik nutqqa aylantiradilar (bu tilni o‘rgatish nuqtai nazaridan eng muhim ish hisoblanadi).

3. O‘qilgan hikoyaga rasm chizishda o‘quvchi rassomlar tomonidan chizilgan rasmlardan o‘qilgan asarning mazmuniga mos rasm tanlaydi yoki o‘zi rasm chizadi. Agar o‘quvchi rasmni yaxshi chiza olmasa, o‘zi chizmoqchi bo‘lgan rasmni og‘zaki tasvirlab beradi, ya‘ni so‘z bilan rasm chizadi.

4. O‘qilgan hikoyani davom ettirish usuli maktab tajribasida keng qo‘llanadi. Bu usul hikoyaning mazmuni uni davom ettirishga imkon beradigan asarlarda

qo'llanadi. Boshlang'ich sinflarda hikoya syujeti, kompozitsiyasi, qahramonlarini o'rganish bo'yicha turli tahlillar matn ustida ishlash asosida olib boriladi. Bunda o'quvchining ijodiy faolligi ortadi, ijodiy fikrlash doirasi kengayadi.

Hikoya mazmunini o'zlashtirish bo'yicha matn asosida quyidagicha ishlar amalga oshiriladi:

1. Matn mazmuni yuzasidan o'qituvchi savollariga javob berish.
2. Hikoya matni asosidagi savol-topshiriqlarni bajarish.
3. Hikoya mazmuni yuzasidan o'quvchilarning savollar tuzishi.
4. Hikoya mazmuniga mos rasmlar chizish.
5. Hikoya matnini qismlarga bo'lish.
6. Har bir qismga sarlavha topish.
7. Hikoyaga reja tuzish.
8. Reja asosida qayta hikoyalash (to'liq, qisqartirib va ijodiy qayta hikoyalash).
9. Reja asosida bayon yozish.

Tahlilda o'qilayotgan hikoya matnining tushunarligi hal qiluvchi ahamiyatga ega. Tushunarlik deganda yozuvchi yaratgan badiiy olamning o'ziga xosligi, obrazli tasvirning o'quvchi hayotiy tajribasi, bilim darajasiga muvofiqligi nazarda tutiladi. Hikoyani o'rganishda savollarni, odatda, o'qituvchi beradi, ammo asar mazmuni, qatnashuvchi shaxslarning xulq-atvorini ochish yuzasidan o'quvchilarga ham savol tuzdirish juda foydali. Bu usul bolalarga juda yoqadi va ishni jonlantiradi, asar mazmunini yaxshi tushunish, o'z fikrini izchil bayon qilish malakasini egallash, mazmun va voqealar orasidagi bog'lanishni to'liq esda saqlab qolishda o'quvchilarga yordam beradi.

Boshlang'ich sinflarda badiiy asarni tahlil qilish metodikasida kichik yoshdagi o'quvchilarning badiiy asarni idrok qilishidagi psixologik xususiyatlar albatta hisobga olinadi. Ruhshunos olimlarning tekshirishlaridan ma'lum bo'lishicha, asarni idrok qilishga, bilim olishga xizmat qiladigan komponentlar bilan birga, uni emostional-estetik his etish ham kiradi. Badiiy asarni yaxshi idrok etish uchun uni tushunishning o'zigina yetarli emas. Asarni idrok etish murakkab jarayon bo'lib, asarga unda tasvirlangan voqelikka qandaydir munosabatning yuzaga kelishini o'z ichiga oladi.

Xulosa o'rnida shuni ta'kidlab o'tish kerakki, nutq o'stirish mashg'ulotlarida, bolalarning badiiy asarlarni o'qib, qayta hikoya qilib berishlariga katta ahamiyat beriladi. Badiiy asarlarni qayta hikoya qilib berishga o'rgatish va ularni sahnalashtirish, she'rni yod oldirish o'qituvchiga katta mahorat va mas'uliyat yuklaydi. Muallif tomonidan badiiy asar mazmuni qanchalik yorqin ifodalangan bo'lsa, unda ishtirok etuvchilar nutqi o'quvchiga ifodali, mazmunli yetkazilsa, u bolalar emotsiyasiga ta'sir etadi, his-tuyg'usi rivojlanishiga, asar qahramonlari bilan bo'ladigan voqealarning uzoq esda saqlanishiga, lug'atining boyishiga hamda nutqining grammatik jihatdan to'g'ri shakllanib borishiga ijobiy ta'sir ko'rsatadi. Bolalar hech qanday qiyinchiliksiz o'qituvchining asar yuzasidan bergan savollariga javob bera oladilar, ayrim so'zlarni, jummalarni takrorlaydilar, qahramonlarning ijobiy va salbiy tomonlarini xarakterlab beradilar, o'qituvchiga taqlid qilib, ularning ovozi o'xshatishga harakat qiladilar.

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MASOFAVIY TA'LIM: O'QITUVCHINING YANGI ROLI VA IMKONIYATLARI

Annotatsiya: Ushbu maqola masofaviy ta'limni rivojlantirishning asosiy tendentsiyalarini belgilaydi, masofaviy va an'anaviy ta'lim o'rtasidagi farqlarni ko'rsatadi. Masofaviy ta'limda o'qituvchilar va talabalar tomonidan yuzaga keladigan bir qator muammolarni tahlil qiladi.

Tayanch so'zlar: ta'lim, masofaviy ta'lim, an'anaviy ta'lim.

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DISTANCE LEARNING: THE NEW ROLE AND OPPORTUNITIES FOR EDUCATORS

Annotation: It defines the major trends of distance learning development, shows the differences between the distance learning and the traditional one, analyses the problems that both students and teachers face.

Key words: education, distance learning, traditional education.

Masofaviy ta'lim (MT) - bu o'qituvchi va talabalarning masofadan turib birlari bilan o'zaro ta'siri bo'lib, u o'quv jarayoniga xos bo'lgan barcha tarkibiy qismlarni (maqsad, mazmuni, usullari, tashkiliy shakllari, o'quv qo'llanmalari) aks ettiradi va internet texnologiyalarining o'ziga xos vositalarida yoki interaktivlikni ta'minlovchi boshqa vositalarda amalga oshiriladi [1].

Boshqa ta'lim shakllaridan farqli o'laroq, kompyuter telekommunikatsiyalariga asoslangan masofaviy ta'lim quyidagilarga imkon beradi:

- har qanday ma'lumotni masofadan tezkor uzatish;
- bu ma'lumotlarni xotirada kerakli vaqtga saqlash, tahrirlash va h.k.;
- ushbu maqsadlar uchun maxsus yaratilgan multimedia ma'lumotlari yordamida interaktivlik va o'qituvchi va o'quv kursining boshqa ishtirokchilari bilan tezkor fikr-mulohazalar;
- Internet tizimi orqali turli axborot manbalariga, jumladan masofaviy va taqsimlangan ma'lumotlar bazalariga, dunyo bo'ylab ko'plab konferensiyalarga kirish;

– telekommunikatsiya sohasidagi qo‘shma loyihalarni, shuningdek, xalqaro, elektron konferensiyalarni, kompyuter audio va video konferensiyalarini tashkil etish [2].

Masofaviy ta’limning asosiy xususiyati talabaning mustaqil ishi, uning individual pozitsiyasi va boshqa maxsus xarakterdagi ma'lumotlarni tezda topish, filtrlash, saralash qobiliyati ekanligini tushunish muhimdir.

Jamiyatning oldinga siljish istagini hisobga olgan holda va ta'limning evolyutsion shakllarini tahlil qilish allaqachon puxtalik bilan amalga oshirilganligini hisobga olgan holda, masofaviy ta’lim, ehtimol, o'n yil ichida, eng ustuvor usullardan biri bo'ladi, deb aytish mumkin [3].

Masofaviy ta'lim ochiq ta'limga asoslanadi, ya'ni o'qish joyi, shakli va vaqti erkinligi ta'minlanadi; o'qitilgan kompyuter dasturlari, zamonaviy axborot texnologiyalari asosida mehnat bozoridagi talabga muvofiq kadrlar tayyorlashni ta'minlaydi, bu esa turli mutaxassisliklar va ishlab chiqarishlar bo'yicha mutaxassislar tayyorlashda jahon resurslaridan oqilona foydalanishni nazarda tutadi[4]. Masofaviy ta'limda alohida e'tibor fikr-mulohazalarga beriladi, ya'ni. bilimlarni nazorat qilish. Bilimlarni nazorat qilish talabalarning masofaviy ta'lim jarayonining zarur elementi bo'lib, ularning bilish faoliyatini boshqarish nuqtai nazaridan alohida ahamiyatga ega. Boshqacha aytganda, nazorat axborotning muhim manbai, fikr-mulohaza, bunda o'quvchilar tomonidan bilimlarni o'zlashtirish darajasi turli yo'llar bilan amalga oshirilishi mumkin.

Mavjud tajriba shuni ko'rsatadiki, masofadan turib o'qiyotgan talaba yanada mustaqil, harakatchan va mas'uliyatli bo'lib qoladi. Bu fazilatlarisiz u o'rgana olmaydi. Agar ushbu hususiyatlar dastlab bo'lmagan bo'lsa-da, lekin o'qitish uchun motivatsiya katta bo'lsa, ular rivojlanadi va o'qishni tugatgandan so'ng, mehnat bozorida haqiqatan ham talab qilinadigan mutaxassislar paydo bo'ladi.

Masofaviy ta'limning joriy etilishi, bizningcha, test yoki imtihon topshirishda talabalarning asabiyligini kamaytiradi. Sir emaski, talabalarning tashvishi, qo'rquvi ayrim o'quvchilarga bilimini to'liq ko'rsatishga imkon bermayapti. Masofaviy ta'lim bilan subektiv baholash omili yo'q, guruhning ta'siri yoki talabaning boshqa fanlar bo'yicha ishlashi natijasida yuzaga keladigan psixologik ta'sir olib tashlanadi.

Masofaviy o'qitish jarayonida talabalarni dam olish va stressni engillashtirish uchun dam olish pauzalari va boshqa maxsus usullardan foydalanish yaxshi natijalarga erishiladi.

“Masofaviy ta’lim o‘qituvchining o‘ziga nima beradi?” degan savolga javob berib shuni ishonch bilan aytish mumkinki, masofaviy ta’lim bilan o‘qituvchining roli o‘zgaradi va uning imkoniyatlari kengayadi. Ta'limning bu shakli o'qituvchiga o'quv jarayonining muntazam ravishda vaqtini behuda sarflamaslik imkonini beradi. Shu bilan birga, talaba bilimlarni tekshirish va o'z ustida ishlash uchun yetarlicha vaqt ajratadi. Masofaviy ta'lim tizimlari sizga talabaning shaxsiyatidan tashqari deyarli hamma narsani avtomatlashtirishga imkon beradi. Buning natijasida esa o'qituvchining ish vaqti nihoyat pedagogik ijodga bag'ishlanishi mumkin. Masofaviy ta'lim o'qituvchilari darslarga borish uchun ham, o'quv materiallarini

tayyorlash uchun ham uydan chiqib ketishlari shart emas va bu uyda band bo'lishidan qat'i nazar, buni qila oladigan va xohlaydiganlarning barchasiga o'rgatish imkonini beradi (masalan, ayollar kichik bolalarni tarbiyalamoqda) va sog'liq sharoitlari (masalan, tajribali katta o'qituvchilar). Bundan tashqari, bepul jadval barcha masofaviy ta'lim o'qituvchilariga to'liq bo'lmagan ish kunida ishlash uchun keng imkoniyatlar ochadi, chunki majburiy davomat soatlari minimal darajaga qisqartirilishi mumkin. Biroq, masofaviy ta'lim o'qituvchidan uning texnologiyalari asosida qo'shimcha kuch va ko'nikmalarni talab qiladi. O'qituvchi tomonidan talabalarga o'quv materialini taqdim etishga asoslangan o'qitish an'anaviy ta'lim tizimiga xos bo'lgan muloqotda faol rol o'ynamaydi, balki innovatsion texnologiyalar asosida rivojlantirilmoqda.

Demak, masofaviy ta'lim ta'limning yangi bosqichi bo'lib, u shaxsiy kompyuterlar, video va audio uskunalardan foydalangan holda eng yangi axborot texnologiyalaridan foydalanishni o'z ichiga oladi, deyishimiz mumkin.

Bundan tashqari, samarali deb hisoblash uchun masofaviy ta'limga xos bo'lishi kerak bo'lgan bir qator xususiyatlar mavjud:

- talaba faoliyatini puxta va batafsil rejalashtirish, uni tashkil etish; vazifalar va o'quv maqsadlarining aniq bayoni; zarur o'quv materiallarini yetkazib berish;

- interaktivlik masofaviy ta'lim ta'lim dasturlarining asosiy konsepsiyasi sifatida. Masofaviy ta'lim kurslari talaba va o'qituvchi o'rtasidagi maksimal darajada interaktivlikni, talaba va o'quv materialini o'rtasidagi fikr-mulohazalarni ta'minlashi, shuningdek, guruhda o'rganish imkonini berishi kerak;

- tinglovchilar o'z harakatlarining to'g'riligiga ishonch hosil qilishlari uchun yuqori samarali ikki tomonlama aloqa.

- motivatsiya; buning uchun siz turli xil vositalar va usullardan foydalanishingiz kerak;

- masofaviy ta'lim kursining modulli tuzilishi, bunda talabaning moduldan modulga o'tish jarayonidan xabardor bo'lishi, o'z xohishiga ko'ra yoki tayyorlanish darajasiga qarab rahbar o'qituvchining xohishiga ko'ra istalgan modulni tanlashi mumkin. Shu bilan birga, shuni ta'kidlash kerakki, katta modullar o'rganish uchun motivatsiyani sezilarli darajada kamaytiradi;

Bugungi kunda oddiy o'quvchi bosma o'quv adabiyotlarini (darsliklar, qo'llanmalar) mustaqil o'zlashtira oladi, chunki u maktabda ushbu o'quv qurollari bilan ishlash metodikasi bilan tanishgan.

Masofaviy o'qitishda auditoriya mashg'ulotlari bilan solishtirganda amaliy faoliyatning eng katta muammosi kompyuter aloqasining yangi vositalaridan foydalanish hisoblanadi.

Shunday qilib, masofaviy ta'lim ta'limning yangi shakli sifatida an'anaviy ta'limga yaxshi alternativ bo'lishi mumkin.

Boshqacha aytganda, masofaviy ta'lim zamonaviy avlod uchun misli ko'rilmagan imkoniyatlarni ochib beradi, bu esa ta'lim sohasida sezilarli yutuqlarga erishish va o'quvchining intellektual darajasini oshirish imkonini beradi.

Xulosa. Xulosa qilib aytganda, bugungi kunda masofaviy o'qitish nafaqat o'quv maskanlari uchun zarur, balki globalizatsiya jarayonida katta korxonalar va

muassasalar uchun ham muhim ahamiyatga ega. U mutaxassislarni tayyorlash, qayta tayyorlash va ularning bilim darajasi hamda ko'nikmalarini yuqori darajada ushlab turishda katta rol o'ynaydi.

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METHODS FOR SOLVING PROBLEMS RELATED TO FOOD CHAINS AND ECOLOGICAL PYRAMIDS AND THEIR IMPORTANCE

***Abstract.** This article presents various computational problems and exercises, along with methods for solving them and suggestions for exploring topics related to food chains or ecological pyramids. Problem-solving in these areas is closely tied to the degree of mastery of theoretical knowledge. Without the necessary theoretical understanding of food chains or ecological pyramids, students will be unable to independently solve any exercises or problems. Therefore, some essential information required for solving food chain problems is provided in a simplified manner.*

***Key words:** producers, consumers, reductants, autotrophs, heterotrophs.*

The degree of mastery of the academic subject is determined not only by theoretical knowledge, but also by the ability to apply the acquired knowledge in different situations. If a student doesn't know how to solve a math problem, it shows that he doesn't know math. Even if he knows all the theorems and laws. Unfortunately, many people do not understand that this also applies to biology. The knowledge acquired by students is not determined by the amount of biological terms that we demand from students, but also by their ability to apply them in problem situations.

and exercises presented in the article are developed in accordance with the current curriculum and work program. The solution of the problems from different areas of biology allows to study biological laws, the correct use of nature's gifts, the biology and ecology of individual animals and plants in depth. The article also briefly describes the conditions, working methods, solutions and gives methodical instructions. Solving problems from biology allows students to strengthen and develop their scientific worldview, logical thinking, and knowledge gained from all biology lessons.

Let's look at the methods of processing problems related to food chains or ecological pyramids.

Issue 1. The ecological pyramid consists of potato, Colorado potato beetle, chittak and lion. If the lion's feed contains 40% lipid, and the amount of energy released from it is 1860 kcal, determine the total mass of organic matter in potatoes (t).

Solution: We write the food chain:

Potatoes - Colorado beetle – Chittak - Lion is 40% lipid

The amount of energy released from the lipid is given. We know that 1 g of fat produces 9.3 kcal of energy. We can determine how much fat produces 1860 kcal of energy:

$$\begin{array}{l|l} 1 & \text{---} 9,3 \\ X & \text{---} 1860 \end{array} \quad | \quad X=200$$

If the lipid in the lion's body is 200 g and it makes up 40% of the total organic matter, we can determine the total organic matter:

$$\begin{array}{l|l} 200 & \text{---} 40\% \\ X & \text{---} 100 \end{array} \quad | \quad X=500$$

500 g is the total organic matter in the lion's body, we follow the ecological pyramid rule to determine the substances in potatoes. Potatoes contain 500,000 g, that is , 0.5 tons of organic matter.

Answer: 0.5 t

Issue 2. In the ecological pyramid, the food chain consists of wheat, grasshopper, lizard, white stork and crocodile. The amount of energy separated from the protein in the white stork's body is 8448 kJ and it is 40% of the total organic matter. If 1/3 of the total organic matter in the bird's body is fat, determine the amount of energy released from the carbohydrate in the wheat (kJ).

Solution: If the amount of energy released from the protein in the white stork's body is 8448 kJ, we determine the mass of the protein:

$$\begin{array}{l|l} 1 \text{ g} & \text{---} 17.6 \text{ kJ} \\ X & \text{---} 8448 \text{ kJ} \end{array} \quad | \quad X=480\text{g}$$

480 g of protein is 40% of the total organic matter, we determine the mass of the total organic matter:

$$\begin{array}{l|l} 480 \text{ g} & \text{---} 40\% \text{ kJ} \\ X & \text{---} 100 \text{ kJ} \end{array} \quad | \quad X=1200\text{g}$$

1/3 of the total organic matter is lipid, its mass
1200:3=400 g.

to us the mass of protein and fat in the body of the white stork. We determine the mass of the carbohydrate:

1200-(480+400)= 320 g of carbohydrates

The mass of carbohydrates in a wheat plant increases to 320,000 g according to the ecological pyramid rule. We determine the energy released from it:

320 000 *17 .6 =5632000 kJ

Answer: 5632000 kJ

3. According to the rule of the ecological pyramid, the food chain consists of wheat, locusts, grasshoppers, and foxes. 2112 kJ of energy was released from the protein in the rat's body. If protein is 30% of the total organic matter in the body of wheat, determine the total organic matter (kg) in the body of wheat (a). If 40% of the total organic matter in the wheat body is glucose synthesized in the chloroplasts, how much ATF energy (kJ) was expended (b)?

Solution: If the amount of energy released from the protein in the body of the snail is 2112 kJ, we determine the mass of the protein:

$$\begin{array}{l|l} 1 \text{ g} & \text{---} 17.6 \text{ kJ} \\ X & \text{---} 2112 \text{ kJ} \end{array} \quad | \quad X=120\text{g}$$

If 120 g of protein is 30% of total organic matter, we determine the mass of total organic matter:

$$\begin{array}{l|l} 120\text{g} & \text{---} 30\% \\ X & \text{---} 100\% \text{ kj} \end{array} \quad X=400\text{g}$$

A) we find the total organic matter in the body of wheat in kg.

According to the ecological pyramid rule, wheat contains 4000 g, i.e. 40 kg of organic matter.

B) if glucose makes up 40% of the total organic substances in the body of wheat, we determine its mass:

$$\begin{array}{l|l} 40,000 & \text{---} 100\% \\ X & \text{---} 40\% \text{ kj} \end{array} \quad X=16000$$

We determine the ATF energy (kJ) produced as a result of photosynthesis. In this process, when one mole of glucose is formed, 18 moles of ATF-720 kJ (18*40) energy is also formed. If 16000 g of glucose is formed, we determine how much ATF is synthesized:

$$\begin{array}{l|l} 180\text{g} & \text{---} 8 \text{ mol} \\ 16000 & \text{---} X \end{array} \quad X=1600 \text{ mol}$$

$$1600 \times 40 = 64000 \text{ kJ}$$

Answer: a) 40 kg b) 64000 kJ

Issue 4. In the food chain there are cabbage, white butterfly worm, minnow, wolf. Lipid in the body of the brain makes up 20% of organic substances, and the amount of energy released from it is 7780 kJ. Determine the amount of energy (kcal) released from protein and carbohydrate in the body of the white butterfly worm.

Solution: If the amount of energy released from the lipid in the brain body is 7780 kJ, we determine the mass of the lipid:

$$\begin{array}{l|l} 1\text{g} & \text{---} 38.9 \text{ kj} \\ X & \text{---} 7780 \text{ kj} \end{array} \quad X=200 \text{ g}$$

If 200 g of lipid is 20% of total organic matter, we determine the mass of total organic matter:

$$\begin{array}{l|l} 200\text{g} & \text{---} 20\% \\ 1000\text{g} & \text{---} 100\% \end{array} \quad X=1000 \text{ g}$$

The remaining 80% of organic matter is carbohydrates and proteins. The combined mass of protein and carbohydrate in the white butterfly worm is 8000 g. 1 g of protein and carbohydrate is equal, that is, it produces 4.1 kcal of energy. Let's determine how much energy 8000 g of protein and carbohydrates will produce:

$$8000 \times 4.1 = 32800 \text{ kcal}$$

Answer : 32800 kcal

CONCLUSION

Problems of various forms develop the student's logical thinking, especially to teach students to retain biological concepts in memory, to study science in depth and to apply it in practice. In addition, problems and exercises make the lesson interesting and meaningful.

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**SURXONDARYO HAVZASIDAGI MURAKKAB TAKSONOMIYAGA
EGA TURLAR: ALBURNOIDES HOLCIKI VA GOBIO
URUG'LARINING MOLEKULAR TAHLILI**

***Annotatsiya.** Ushbu maqolada Surxondaryo havzasidagi murakkab taksonomiyaga ega bo'lgan turlarning molekulyar tahlili haqida ma'lumotlar keltirilgan. Jumladan, Alburnoides holciki va Gobio urug'larining molekulyar tahlili bo'yicha o'tkazilgan tadqiqot natijalari berilgan.*

***Kalit so'zlar:** Surxondaryo, Alburnoides holciki, Morfologik tahlil, Molekulyar tahlil, Populyatsiyalar.*

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**MOLECULAR ANALYSIS OF COMPLEX TAXA IN THE
SURXONDARYO BASIN: A STUDY OF ALBURNOIDES HOLCIKI AND
GOBIO GENERA**

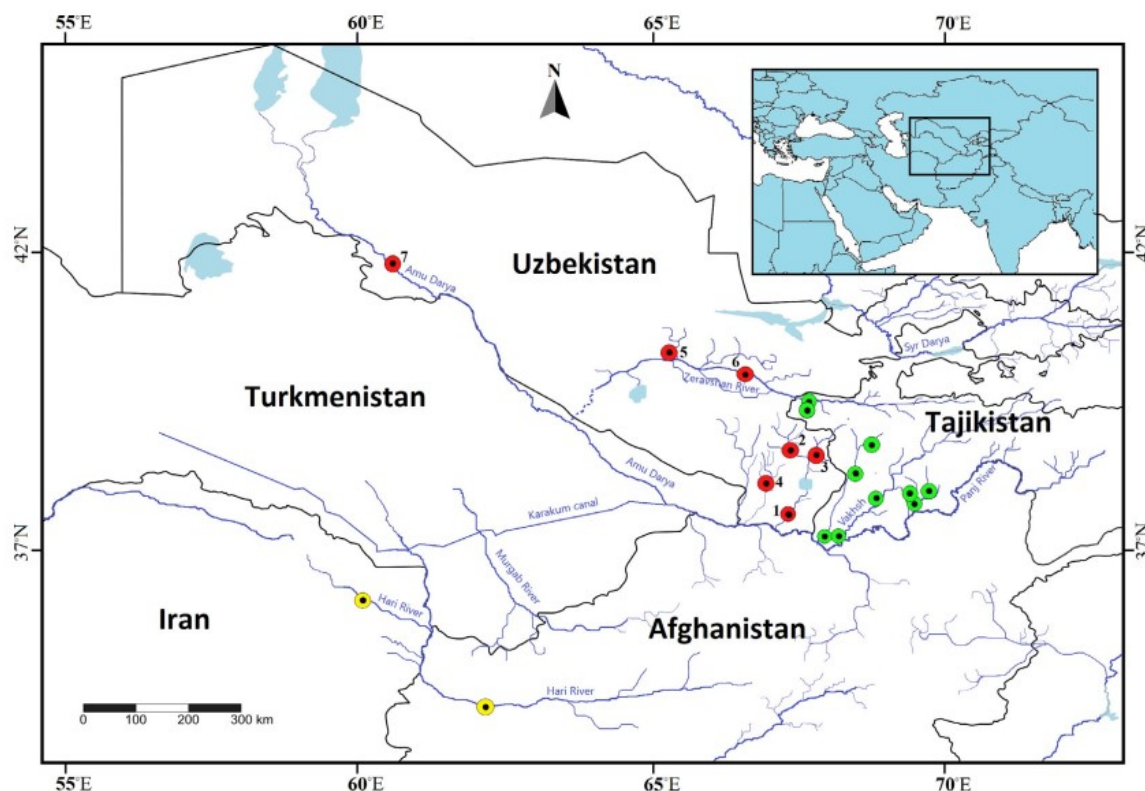
***Abstract:** This article presents information on the molecular analysis of species with complex taxonomy in the Surxondaryo basin. In particular, the results of the molecular analysis of the Alburnoides holciki and Gobio genera are provided.*

***Key words:** Surxondaryo, Alburnoides holciki, Morphological analysis, Molecular analysis, Populations.*

Tadqiqot ishlari davomida Surxondaryoning yuqori oqimi To'palang va Qoratog' daryolarining qo'shilish joyidan to uning Termiz shahri yaqini Amudaryoning asosiy o'zaniga quyilishigacha bo'lgan hududidan 2018-2019 yillar davomida yig'ilgan *Alburnoides* urug'i vakillari morfologik va molekulyar jihatdan o'rganildi. Morfometrik ko'rsatkichlar Coad & Bogutskaya (2012) metodikasi asosida 0.1 mm aniqlikdagi shtangentsirkulda olindi. Bunda standart uzunlik baliq tumshug'ining uchidan to dumining asosigacha bo'lgan oraliqni; dum bandining uzunligi esa anal suzgich qanotining so'nggi shoxlangan nuri tugagan qismidan dumining asosigacha bo'lgan oraliqni o'lchash orqali topildi.

Molekulyar tadqiqotda mitoxondriyaning sitoxrom oksidaza I (COI) genining 625 bp qismi Sheraliev et al. (2020) da qayd etilgan metodika asosida ajratib olindi. Filogenetik tahlil MrBayes dasturida yaratildi va filogenetik daraxt FigTree v.1.4.2 dasturida tahrirlandi.

Alburnoides holciki turining Janubiy va Markaziy Osiyo hududlaridagi populyatsiyalari 1-rasmda keltirilgan.



1-rasm. *Alburnoides holciki* ning Janubiy va Markaziy Osiyo hududlaridagi populyatsiyalari.

Yashil nuqta – Tojikiston hududidagi Vaxsh, Amudaryo va Kofirnixon daryolari populyatsiyalari (Levin et al., 2019); qizil nuqta – O‘zbekiston hududidagi Surxondaryo, To‘palang, Qoratog‘, Sheraboddaryo, Zarafshon, Amudaryo populyatsiyalari (Sheraliev et al., 2021); sariq nuqta – Afg‘oniston va Eron hududidagi Hari daryosi populyatsiyalari (Coad & Bogutskaya, 2012).

Xulosa:

2018-2019 yillarda To‘palang va Qoratog‘ daryolaridan Amudaryoning asosiy o‘zaniga qadar bo‘lgan hududlardan yig‘ilgan namunalar, morfometrik o‘lchovlar va molekulyar tahlil asosida o‘rganildi. Morfometrik ko‘rsatkichlar Coad & Bogutskaya (2012) metodikasi bo‘yicha aniqlik bilan o‘lchangan, molekulyar tadqiqot esa mitoxondriyaning sitoxrom oksidaza I (COI) genining 625 bp qismidan olib, Sheraliev et al. (2020) metodikasiga asoslangan. Filogenetik tahlil MrBayes dasturida amalga oshirildi va natijalar FigTree v.1.4.2 dasturida tahrirlandi.

Alburnoides holciki turining Janubiy va Markaziy Osiyo hududlaridagi populyatsiyalarining taqsimlanishi o‘rganildi, ularning geografik joylashuvi 1-rasmda keltirilgan. Tadqiqot natijalari, ayniqsa, O‘zbekiston hududidagi Surxondaryo, To‘palang, Qoratog‘, Sheraboddaryo va Amudaryo daryolaridagi populyatsiyalarning ekologik va filogenetik ahamiyatini yana bir bor ta’kidlaydi.

Tadqiqotlarning davom ettirilishi, bu turdagi baliqlarning biologik xilma-xilligini saqlab qolish, ularni monitoring qilish va himoya qilish bo‘yicha chora-tadbirlar ishlab chiqish uchun zarur. Olingan ma’lumotlar, *Alburnoides holciki*

turining ekologik holatini yaxshilash, uning populyatsiyalarini barqarorlashtirish va biotexnologik yondoshuvlarni joriy etish uchun muhim ahamiyatga ega.

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SOYA O'SIMLIGINI EKISH OLDDAN TUPROQQA ISHLOV BERISH VA MINERAL O'G'ITLARGA SEZGIRLIK XUSUSIYATLARI

***Annotatsiya.** Mazkur maqolada soya o'simligini parvarishlashning asosiy bosqichlari, tuproqqa ekish oldidan ishlov berish va mineral o'g'itlarga sezgirlik xususiyatlari haqida batafsil ma'lumot berilgan. Soya o'simligi ekishdan oldin tuproqni tayyorlash, boshqa turdagi o'simliklarni yo'qotish va tuproq yuzasini yumshatish kabi muhim jarayonlar tavsiflangan. Shuningdek, soya o'simligi uchun mineral o'g'itlarni vaqtida va me'yorida qo'llashning ahamiyati ta'kidlangan. Maqolada, shuningdek, soya o'simligi uchun sug'orishning ahamiyati, suv va oziqa moddalarining zarur miqdorda ta'minlanishi bilan hosildorlikni oshirishga erishish mumkinligi ko'rsatilgan.*

***Kalit so'zlar:** Soya, tuproq ishlov berish, mineral o'g'itlar, sug'orish, hosildorlik, agrotexnika, biologik xususiyatlar, qishloq xo'jaligi.*

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PRE-SOWING SOIL PREPARATION AND SENSITIVITY OF SOYBEAN TO MINERAL FERTILIZERS

***Abstract:** This article discusses the main stages of soybean cultivation, soil preparation before sowing, and the plant's sensitivity to mineral fertilizers. It describes essential processes such as weed control and soil loosening before sowing. The importance of applying mineral fertilizers in the proper time and amounts is emphasized. The article also highlights the significance of adequate water supply and nutrients to increase soybean yield.*

***Key words:** Soybean, soil preparation, mineral fertilizers, irrigation, yield, agronomy, biological characteristics, agriculture.*

Tuproqqa ekish oldidan ishlov berish zarur bo'lib, bundan asosiy maqsad – boshqa turdagi o'simliklarni (begona o'tlarni) yo'qotish, soya urug'larining bir tekis chuqurlikka tushishi uchun yuqori qatlamning maqbul yumshoqligiga erishish, tuproq yuzasini tekislash va asosan tuproq namligini saqlab qolish hamda uning tuproq yuzasidan bug'lanishini kamaytirish hisoblanadi. Ekish oldidan tuproqqa ishlov berish, uning mexanik tarkibi, ifloslanganlik darajasi va namlik sharoitlariga bog'liq ravishda turlicha texnologik jarayonlarni o'z ichiga oladi. Sho'rlangan tuproqlar yuvilishi shart. Agar tuproq qishki-bahorgi davrda yuvilgan yoki bostirib

sugʻorilgan boʻlsa, u holda yer ikki marotaba yumshatilib, haydaladi (boronalanadi). Ekish oldidan boshqa turdagi oʻsimliklarni (begona oʻtlar) yoʻqotish maqsadida 1-2 marta kultivatsiya oʻtkazilib, kesaklar maydalanadi.

Eng zararli ildizli boshqa turdagi oʻsimliklar (begona oʻtlar) bilan toʻldirilgan dalalar ikki marta tozalanadi: birinchi marta - oldingi hosilni yigʻib olingandan soʻng darhol diskli kultivatorlar bilan 8-10 sm chuqurlikda va ikkinchisida, boshqa turdagi oʻsimliklar (begona oʻtlar) paydo boʻlganda, 14-16 sm chuqurlikdagi kultivatorlar bilan, ikkinchi haydashdan 2-3 hafta oʻtgach, 27-30 sm chuqurlikda shudgor qilinadi. Agar koʻp yillik begona oʻtlar bilan zararlanish koʻp boʻlsa, begona oʻtlar birinchi tozalanib, qayta oʻsib chiqqandan keyin dalaga gerbitsid sepiladi.

Bahorda tuproqqa ishlov berish jarayonida uni 1,35-1,4 g/sm³ gacha zichlashtirib yuboradigan ogʻir diskli (K-701 va boshqa ogʻir rusumli) traktorlardan foydalanish tavsiya etilmaydi. Odatda Arion 600c (610c, 620c, 630c) va Arion 600 (620,630,640,640) rusumli traktorlardan shudgorlashda foydalanish maqsadga muvofiq. Kultivatsiya uchun esa “New Holland TD 5.110”, “TTZ LS U-62”, “USMK-5,4A”, Belarus traktori “MTZ 80” va prujinali borona “BP-8” dan foydalanish mumkin.

Tuproqlarning shoʻrlanish darajasiga qarab 1-2 marta erta bahorda shoʻri yuviladi. Yer tobga kelganida shudgor qilinib, yer tekislanadi. Tuproqdagi namlik tezda yoʻqolmasligi uchun mola bostiriladi. Tuproqni oʻz muddatida va sifatli tayyorlash soya navlari urugʻlarining sifatli ekilishini taʼminlab, maysalarning qiygʻos unib chiqishiga imkoniyat yaratadi.

Soya mineral oʻgʻitlarga sezgir oʻsimlikdir. Soya oʻsimligi boshqa dukkakli ekinlar kabi ildizida yashovchi simbiotik tugunak bakteriyalari (*Bradyrhizobium japonicum*)ning faoliyati tufayli atmosfera azotini biriktirib olishi natijasida qoʻshimcha iqtisodiy va ekologik foyda keltiradi. Soya ildizidagi *Bradyrhizobium japonicum* kislotali tuproqlarda yaxshi rivojlana olmaydi, shuning uchun ham tarkibida kislota mavjud boʻlgan oʻgʻitlardan foydalanmaslik maqsadga muvofiq. Soyani mineral oʻgʻitlar bilan taminlash tizimi urugʻlarni ekish davrida va oʻsimliklarning vegetatsiyasi davrida mineral oʻgʻitlarni berishdan iborat. Bunda ularning meyori tuproqning agrokimyoviy xossasidan kelib chiqib gektariga 30-40 kg azot, 70-90 kg fosfor va 30-40 kg kaliy berish maqsadga muvofiq.

Oʻrganilgan soya navlarini yetishtirilganda mineral oʻgʻitlar 2 marta berildi: urugʻlarni ekish davrida, qolgan yarim qismi esa oʻsimliklarda gullashning boshlanish davrida ishlatildi. Soya oʻsimligini barg orqali ham oziqlantirish mumkin. Unumdorligi past tuproqlarda soya oʻsimligi gullashining boshlangʻich davrida ozuqa elementlariga juda muhtoj boʻladi. Shu davrda barglar orqali qoʻshimcha oziqlantirish tavsiya qilinadi. Sugʻoriladigan dehqonchilikda qishloq xoʻjaligi ekinlaridan olinadigan hosil koʻp jihatdan oʻsimliklarni vegetatsiya davrida biologik xususiyatlariga mos ravishda suv bilan taʼminlashga bogʻliqdir, chunki oʻsimlikdagi barcha fiziologik va biokimyoviy jarayonlar yetarli suv bilan taʼminlashni talab qiladi. Soya oʻsimligi gullashdan dukkaklari pishguncha suvga talabchan boʻladi, suv yetishmasa gullari va dukkaklari toʻkiladi, pirovardida

hosildorlik kamayadi. Shuning uchun soyadan yuqori hosil olish uchun yetarli me'yorda sug'orish zarur.

Sug'oriladigan sharoitlarda mineral o'g'itlarning samaradorligi o'simliklarning suv bilan ta'minlashiga ham bog'liqdir. Tadqiqotlarimizda o'rganilgan soya navlarining biologik xususiyatlaridan kelib chiqib, ertapishar va o'rtapishar navlarini 6-7 marta (har safar 600 m³ ga me'yorida) sug'orish kerak. Bunda o'simliklarning gullash va pishish davrlarida sug'orish tez-tez amalga oshiriladi.

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LOCAL, ENDEMIC, AND ACCLIMATIZED FISH SPECIES, AND CONSERVATION EFFORTS

*Abstract: This article explores the ichthyofauna of the Aral Basin, focusing on the local, endemic, acclimatized, and accidentally introduced fish species. The Aral Basin is home to 37 fish species, of which 22 are local or endemic, including species such as *Dzihunia amudarjensis*, *Iskandaria pardalis*, and *Salmo oxianus*, representing 19% of the basin's fish fauna. The paper highlights the importance of conserving these endemic species, several of which are listed in the Red Book of Uzbekistan. Additionally, the article addresses the ecological impact of acclimatized and accidentally introduced species and underscores the need for effective management strategies. Newly discovered species, such as *Gobio sibiricus* and *Opsariichthys bidens*, are also discussed, emphasizing the dynamic nature of the Aral Basin's ichthyofauna. The findings stress the importance of ongoing research and conservation efforts to maintain the biodiversity of the region and prevent the extinction of endangered species.*

Key words: Aral Basin, ichthyofauna, endemic fish species, acclimatized species, conservation, Red Book of Uzbekistan, biodiversity, ecological impact, fish species discovery.

The Aral Basin is home to a diverse and rich ichthyofauna, with 37 species of fish identified. These species include local and endemic fish, acclimatized species, and those that have been accidentally introduced. The local and endemic fish species are crucial for maintaining the region's ecological balance, while the acclimatized and accidentally introduced species have altered the ecological dynamics. The Aral Basin's fish fauna reflects the region's unique geographic and ecological characteristics and highlights the importance of understanding its biodiversity and the management of natural resources.

Among the 37 fish species identified in the Aral Basin, 22 species are considered local or endemic. Local fish species are those that naturally occur in this region, and their existence is vital for maintaining the ecological stability of the basin. Endemic species, on the other hand, are unique to the Aral Basin and are not found anywhere else in the world. These species have evolved over time to adapt to the specific environmental conditions of the basin and are crucial to the region's natural heritage.

Endemic fish species in the Aral Basin include *Dzihunia amudarjensis*, *Iskandaria pardalis*, *Oxynoemacheilus oxianus*, *Triplophysa kafirigani*, *Capoetobrama kuschakewitschi*, *Leuciscus lehmanni*, and *Salmo oxianus*. These species make up 19% of the total fish fauna of the basin. Endemic fish are highly

sensitive to ecological changes, and their preservation is crucial for maintaining the biological balance of the region. The presence of such a large number of endemic species in the Aral Basin underscores its biological importance.

In addition to the local and endemic species, the Aral Basin also hosts 6 species of acclimatized fish. These species have been introduced into the region intentionally and have adapted to the local environmental conditions. Acclimatized species can sometimes alter the ecological dynamics by competing with native species for resources. However, they can also contribute to the diversification of the basin's ichthyofauna. The introduction of these species must be carefully managed to ensure they do not disrupt the delicate ecological balance of the region.

Accidentally introduced fish species, numbering 9 in total, have entered the Aral Basin due to human activities, such as transportation of fish for aquaculture or ornamental purposes. These species may pose a threat to local ecosystems, especially if they outcompete native species or introduce new diseases. However, they also represent an interesting aspect of the region's changing ecological landscape. These species must be monitored closely to assess their impact on the native fauna.

Five fish species from the Aral Basin are listed in the Red Book of Uzbekistan due to their endangered status. These species are *Sabanejewia aralensis*, *Luciobarbus conocephalus*, *Capoetobrama kuschakewitschi*, *Glyptosternon osshanini*, and *Salmo oxianus*. These fish are considered to be at risk of extinction and require immediate protection and conservation efforts. The inclusion of these species in the Red Book highlights the need for effective conservation strategies to prevent further loss of biodiversity in the Aral Basin.

The discovery of new fish species in the Aral Basin is an important aspect of ongoing research in the region. For example, *Gobio sibiricus* (Siberian gudgeon) was recorded for the first time in Uzbekistan, marking a significant expansion of the country's ichthyofauna. Similarly, the species *Opsariichthys bidens* was identified for the first time in the Surkhandarya River and the lower reaches of the Topalagdarya River. These discoveries highlight the dynamic nature of the Aral Basin's fish population and provide new insights into the ecological changes occurring in the region.

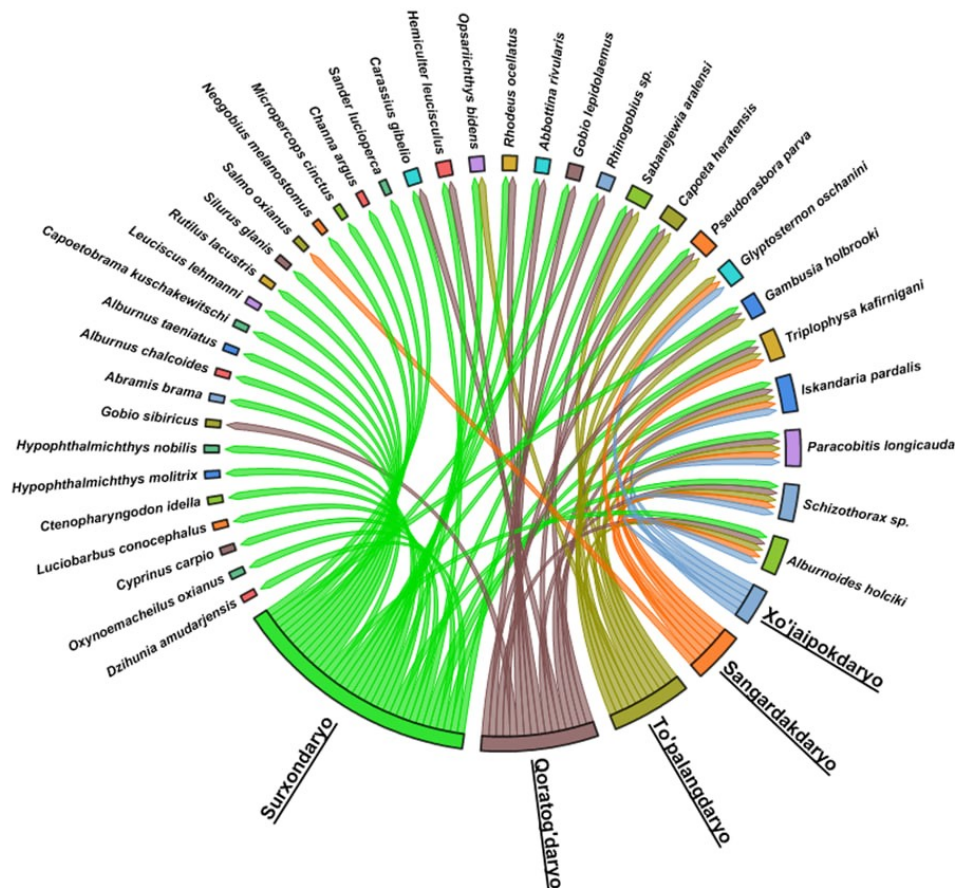


Figure 1. Distribution of fish families and species by river.

Conclusion

The Aral Basin's ichthyofauna is characterized by a high degree of biodiversity, including local, endemic, acclimatized, and accidentally introduced species. The preservation of endemic fish species is critical for maintaining the ecological balance of the basin. At the same time, the management of acclimatized and accidentally introduced species is essential to avoid potential disruptions to the local ecosystems. The inclusion of several fish species in Uzbekistan's Red Book underscores the importance of conservation efforts to protect these species from extinction. Furthermore, the discovery of new fish species demonstrates the need for continued research and monitoring to better understand the evolving ecological dynamics of the Aral Basin and to inform conservation strategies.

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**SURXONDARYO SUV HAVZALARINING BALIQLARI
(ACTINOPTERYGII: TELEOSTEI): BALIQ TURLARINING
TARQALISHI VA MUHOFAZA HOLATI**

Annotatsiya. Ushbu maqolada Surxondaryo viloyatidagi baliq faunasining xilma-xilligi va ekologik ahamiyati tahlil qilinadi. Tadqiqotlar Surxon, Qoratog', To'palang, Sangardak va Xo'jaipok kabi asosiy daryolarda olib borildi va 37 baliq turi aniqlangan. Ularning 73% (27 tur) TMXI Qizil kitobiga kiritilgan, shundan ba'zi turlar "Qirilib ketish arafasida" bo'lgan turi, *Capoetobrama kuschakewitschi* kabilar. Ushbu baliqlarning ekologik ahamiyati va ularning muhofazasi masalalari hamda kelajakdagi tadqiqotlar va chora-tadbirlar haqida so'z boradi.

Kalit so'zlar: Surxondaryo, baliq faunasi, ekosistemalar, Qizil kitob, *Capoetobrama kuschakewitschi*, baliq turlari, ekologik ahamiyat, muhofaza, antropogen omillar, daryo turlari

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**FISHES OF THE SURXONDARYO WATER BASINS
(ACTINOPTERYGII: TELEOSTEI): DISTRIBUTION OF FISH SPECIES
AND CONSERVATION STATUS**

Abstract: *This article discusses the diversity and ecological significance of fish fauna in the Surxondaryo region. Research was conducted in the main rivers of the region, including Surxon, Qoratog', To'palang, Sangardak, and Xo'jaipok, where 37 fish species were identified. Of these, 73% (27 species) are listed in the IUCN Red List, including some species like *Capoetobrama kuschakewitschi* which are classified as "endangered." The ecological importance of these fish, their conservation issues, and recommendations for future research and conservation efforts are also addressed.*

Key words: *Surxondaryo, fish fauna, ecosystems, Red List, *Capoetobrama kuschakewitschi*, fish species, ecological significance, conservation, anthropogenic factors, river species.*

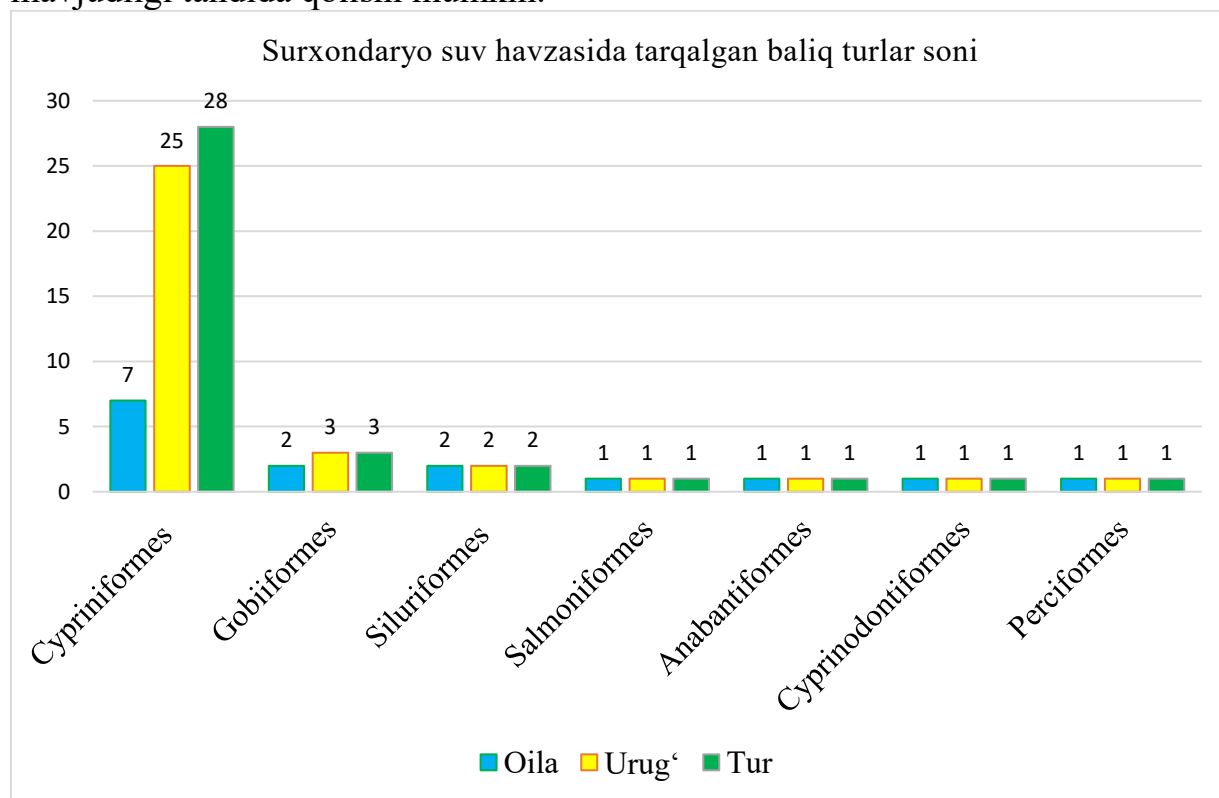
Surxondaryo viloyatida amalga oshirilgan tadqiqotlar davomida bu hududda tarqalgan baliq turlari haqida chuqur ma'lumotlar olindi. Tadqiqotlar Surxon, Qoratog', To'palang, Sangardak va Xo'jaipok kabi asosiy daryolar va ularning

irmoqlarida olib borildi. Bu daryolar hududdagi baliq faunasining xilma-xilligini va uning ekologik ahamiyatini aniqlashga imkon yaratdi.

Baliq turlarining tarqalishi va taksonomiyasi: Havzada o‘rganilgan 37 baliq turi orasida, asosan, 28 turi *Cypriniformes* turkumi (tuzli baliqlar)ga mansub bo‘lib, bu turkum hududda eng keng tarqalgan baliq guruhini tashkil etadi. *Cypriniformes* turkumi odatda daryolarda yuqori faoliyat ko‘rsatadigan baliqlardir, ular o‘zlarining moslashuvchanligi va ko‘p ko‘payishi bilan ajralib turadi. Daryolarda uchraydigan yana uchta baliq turi *Gobiiformes* (gobiyalar) turkumiga mansub bo‘lib, ular ko‘pincha daryolarning quyi qismlarida va pastki qismlarida tarqalgan. *Siluriformes* turkumidagi baliqlar, xususan, daryolarda pastki qatlamlarda yashashga moslashgan.

Bundan tashqari, tadqiqotlar davomida *Salmoniformes*, *Anabantiformes*, *Cyprinodontiformes*, va *Perciformes* kabi boshqa baliq turkumlarining ham mavjudligi aniqlangan, ammo ular daryolar bo‘ylab nisbatan kamroq tarqalgan. Bu baliqlar, asosan, daryolarning yuqori oqimlarida, sho‘r va toza suv manbalarida uchraydi.

Qizil kitobdagi turlar va muhofaza holati: Tadqiqotda aniqlangan baliqlarning 73% (27 tur) TMXI (Xalqaro Tabiatni Muhofaza qilish Jamiyati) Qizil kitobiga kiritilgan. Bu baliqlarning ekologik holatini va ularning mavjudligini tahlil qilish zarurligini ko‘rsatadi. Shular orasida *Capoetobrama kuschakewitschi* turi "EN" – qirilib ketish arafasida bo‘lgan turlar toifasiga kiritilgan. Bu baliq turi faqat Surxondaryo havzasida tarqalgan bo‘lib, uning ahvoli jiddiy xavf ostida ekanligini ko‘rsatadi. Agar bu baliq turining muhofazasi to‘g‘ri amalga oshirilmasa, uning mavjudligi tahdida qolishi mumkin.



1-rasm. Baliq turlar soni turkum, oila va urug‘lar kesimida taqsimlanishi

Ekologik ahamiyat: Baliq faunasi ekosistemalarning sog‘lom ishlashini ta‘minlashda muhim rol o‘ynaydi. Baliqlar nafaqat oziq zanjiri tarkibiga kiradi, balki ular suv tizimlarining biologik va kimyoviy muvozanatini saqlashda ham muhim omildir. Surxondaryo havzasidagi baliqlarning ko‘pligi va xilma-xilligi bu hududning ekologik ahamiyatini yana bir bor ta‘kidlaydi.

Xulosa: Kelajakda, bu hududdagi baliq turlarining biologik va ekologik o‘zgarishlarini o‘rganish zarur. Shuningdek, baliqlarning turlari va ekologik holatining o‘zgarishiga sabab bo‘layotgan antropogen omillarni aniqlash va tahlil qilish ham muhimdir. Muhofaza choralari ko‘rilmagan baliq turlari qisqa vaqt ichida yo‘qolib ketishi mumkin, bu esa ekosistemadagi muvozanatni buzishga olib keladi.

Shuningdek, Surxondaryo va unga yaqin daryolarda baliqlarni ko‘paytirish va muhofaza qilishga qaratilgan maxsus tadbirlarni ishlab chiqish zarur. Bu faqat tabiiy resurslarni saqlab qolish bilan cheklanmaydi, balki hududdagi baliqchilik va boshqa iqtisodiy faoliyatlarni ham barqaror ravishda rivojlantirishga yordam beradi.

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ZAMONAVIY TA'LIMDA STEAM YONDASHUVINING AHAMIYATI: TANQIDIY FIKRLASH VA IJODIY QOBILIYATLARNI RIVOJLANTIRISH

***Annotatsiya.** Ushbu maqolada O'quvchilarning bilim faolligini oshirish, mustaqillik rolini oshirish hamda kreativ fikrlash qobiliyatini oshirishda STEAM texnologiyalarini o'quv jarayonida qo'llashning xususiyatlari va afzalliklari keltirilgan bo'lib, ushbu texnologiyani zamonaviy maktabda qo'llashning muhim jihatlari belgilab berilgan.*

***Kalit so'zlar:** STEAM, Ta'limdagi samarali o'qitish metodi*

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THE IMPORTANCE OF THE STEAM APPROACH IN MODERN EDUCATION: DEVELOPING CRITICAL THINKING AND CREATIVE SKILLS

***Abstract:** This article discusses the features and advantages of using STEAM technologies in the educational process to enhance students' learning activity, increase independence, and develop creative thinking skills. Key aspects of implementing this technology in modern schools are also outlined.*

***Keywords:** STEAM, effective teaching method in education.*

Zamonaviy dunyoda texnologiya, san'at, fan va muhandislik tafakkurisiz tasavvur qilib bo'lmaydigan narsalar tobora bir-biriga yaqinlashib, bir-biriga zid bo'lishni to'xtatmoqda. Hamkorlik va ijodiy qobiliyatlarni namoyon qilish qobiliyati, har qanday faoliyat turida o'z bayonotining ma'nosini boshqalarga eng tushunarli, vizual shaklda yetkazish qobiliyati hayot davomida rivojlanishi kerak bo'lgan muhim qobiliyatlar qatorida birinchi o'rinda turadi [1].

Bilish jarayoniga beriluvchanlik, o'rganilayotgan mavzuga ilmiy qiziqish, orzu qilish, tasavvur qilish, axborotni tanqidiy tahlil qilish va o'z fikriga ega bo'lish, irodani tarbiyalash kabi fazilatlarni rivojlantirish. va sa'y-harakatlarini uzoq vaqt davomida taqsimlash qobiliyati ham zamonaviy ta'limning dolzarb muammosidir. O'rganish, tajriba qilish, empatiya, xatolarni xotirjam boshdan kechirish va barqarorlikni yo'qotmasdan qayta urinib ko'rish qobiliyati, o'z fikrlari va g'oyalarini boshqalarga etkazish qobiliyati (o'zini yoki mazmunini taqdim etish) o'quv natijalari sifatida muhim o'quv natijalari sifatida ko'rib chiqilishi kerak [3].

STEAM - bu bir nechta fan sohalari birlashtirgan ta'lim texnologiyasi. Bu tanqidiy fikrlash, tadqiqot qobiliyatlari va guruhda ishlash ko'nikmalarini rivojlantirish vositasidir.

STEM so'zi ingliz 4 so'zning bosh harflaridan tashkil topgan abreviatura bo'lib, unda:

S – Science –Fan

T – Technology – Texnologiya

E – Engineering –Muhandislik

A – Art – San'at

M – Mathematics – Matematika kabi fanlarning qo'shilishidan kelib chiqqan bo'lib, Ushbu yondashuv bilan maktab o'quvchilari faoliyatining mazmuni san'at va eng yangi axborot texnologiyalaridan foydalanishga bag'ishlangan muhim ijodiy komponentga asoslanadi[2,3]. O'quvchilar o'zlarini eng ko'p ilhomlantiradigan, o'zini namoyon qilish vositalarini tanlashlari, umumiy tushunchani ishlab chiqishlari va uni to'liq amalga oshirishlari, ta'lim jarayonida boshidan oxirigacha uni amalga oshirish texnikasini o'zlashtirishlari kerak. Shunday qilib, o'quvchilar ijod jarayonining ijodiy jihatlarining to'laqonligi va ahamiyatini anglay oladilar, san'atdagi turli yo'llar va usullar bilan tanishadilar, hamkorlikdagi ijodiy faoliyatda chinakam ishtirok etadilar.

Loyihani ishga tushirishga tayyorgarlik bosqichi STEAM laboratoriyasiga mas'ul o'qituvchi tomonidan ilmiy muammoni shakllantirish edi. Loyihaga kirish va uning doirasida harakat qilish uchun o'quvchi o'zi ega bo'lgan bilimlarini qo'llashi yoki yangi fanlararo bilimlarga ega bo'lishi, qiziqish ko'rsatishi, maqsadlarga erishishda qat'iyatli bo'lishi, o'z ishini rejalashtira olishi va a'zolar bilan kerakli o'zaro munosabatlarni amalga oshirishi kerak edi.

STEAM ta'lim muhitida bolalar bilimga ega bo'ladilar va darhol undan foydalanishni o'rganadilar. Shuning uchun, ular o'sib ulg'ayganlarida va hayotiy muammolarga duch kelganida, atrof muhitning ifloslanishi yoki global iqlim o'zgarishi bo'ladimi, bunday murakkab masalalarni faqat turli sohalardagi bilimlarga tayanib va birgalikda ishlash orqali hal qilish mumkinligini tushunadilar. Bu yerda faqat bitta mavzu bo'yicha bilimga tayanish yetarli emas.

Ta'lim tizimida sinf - dars tizimidan loyihaviy faoliyatga tomon o'tish, fundamental bilimlarni funksional bilimlarga ko'chirish, ularni amaliyotda faol qo'llash jarayoni orqali fanlar integratsiyasi, muammolar yechimining yangicha yo'llarni izlash, lozim topilsa, kashf etishga yo'naltirilgan kabi vazifalarni qo'ydi.

Masalan biologiya fanida an'anaviy dars o'tish tizimi orqali moddalarni hujayraga ta'siri og'izaki va yozma tarzda o'rganilib yod olinsa, STEAM ta'lim tizimi orqali o'rganilganda esa moddalarni sintez qilish bilan bir qatorda ularni amalda tirik organizmda sinab ko'rishga imkon yaratiladi.

Bundan tashqari STEAMni afzalligini ko'rishimiz mumkin an'anaviy darsda suvni fizik biologik kimyoviy xususiyatlarini chizish yozish ta'riflash orqali tushuntirilsa STEAMda esa suvni suniy sintez qilish orqali o'quvchilar uning to'laligicha xususiyatlarni ta'riflay oladilar.

Olib borilgan kuzatishlarimizdan xulosa qilishish mumkinki, ushbu texnologiya qo'llanilganda o'quvchilardan jamoada ishlash talab qilinib, bu jamoa a'zolari o'rtasidagi konstruktiv o'zaro munosabatlarni qo'llab-quvvatlaydi, ishtirokchilarni bir-birining fikrini hurmat qilishga o'rgatadi, ularni bahslashish va yechim topish, bir-birining kuchli tomonlaridan qanday foydalanishni o'rgatadi. Ular o'zlarining murakkab muammolarini hal qilish uchun ko'pincha nostandart va muayyan guruh va muayyan loyiha uchun noyob bo'lgan yechimlarni izlashga harakat qiladilar.

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THE SIGNIFICANCE OF INTRODUCTION TO NATURE IN THE DEVELOPMENT OF COGNITIVE PROCESSES IN PRE-SCHOOL CHILDREN 6-7 YEARS OLD

***Annotation:** This article talks about the role of introducing preschool children to nature in the development of cognitive processes and the didactic possibilities of the model of introducing children to nature.*

***Key words:** preschool, adult, youth, child, technology, form.*

As the development of the preschool education system in our country is becoming more and more different, great attention is being paid to improving the educational process and increasing the efficiency of this process. In the "First Step" state educational program, the main issue of education and training of children has been fully developed. In accordance with the requirements of the program, it is important to introduce children to nature in pre-school educational organizations in order to raise children as spiritually mature, moral and pure people. Its purpose is to prepare children of preschool age for school, to be careful with nature in the process of introducing them to nature, to be kind to the Motherland, to implement ecological education and upbringing, and to educate young people who have perfect knowledge about nature. Introduction to nature occupies an important place in the didactics of preschool education, because all types of education are carried out through introduction to nature. Children are introduced to nature, taking into account their age characteristics and physiological structure. At the same time, their interests, abilities, needs, character traits, and talents are taken into account in different age groups.

- The structure of the child's organs

- higher nervous system, internal organs, body structure, age-related changes are important in getting acquainted with nature. One of the main tasks of education is to enrich children's understanding and imagination about inanimate natural phenomena, plants and animals, and human labor, as well as to create simple skills in growing plants and caring for animals.

According to M. Umarova, who conducted research on the formation of a responsible attitude to the environment in preschool children of 6-7 years of age, it is important to start educating this feeling from an early age of childhood. Every child grows a desire to look at the local country where he lives and the nature of Uzbekistan with love, to put his heart into it. This feeling born in childhood develops and enriches during school years. That is why P. Yusupova is his «Формирование начала материалистического миропонимания у старших дошкольников в процессе знакомства их с растениями в условиях Узбекистана» in the research work called, the Methodist scientist A.V.

Zaporozhes quotes the following opinion: "... the didactics of preschool age should be developed in such a way that children are not only familiar with the external aspects of the objects around them, but also with the simplest connections between them, let them get acquainted with the closest causes of observed phenomena, some features of their changes and development, such material is not only suitable for the level, but also interesting for a preschooler." A child learns the laws of nature through awareness. Based on the above considerations, it can be said that introducing children of preschool age to nature is an educational tool to educate them in the right attitude to nature and to understand real knowledge about the environment based on emotional experience. According to my observation, children's activities in the environment are mostly spontaneous and unexpected, and it is correct to consider this as the main reason for their attitude towards nature. especially with the pedagogical influence of educators of the preschool educational organization, such illegal activities are corrected. That is why it is very important for children to acquire reliable information about nature from preschool age. In order for children to correctly perceive natural phenomena, it is necessary to direct the process of their perception of nature. It is impossible to successfully solve the task of educating children of preschool age in all aspects - mental, aesthetic, moral, physical, without introducing children to nature and using it widely in the educational work of preschool educational organizations. Educational tasks of introducing children to nature. According to the concept of development of the preschool education system of the Republic of Uzbekistan until 2030, interrelated educational and educational tasks are carried out in the process of introducing children to nature. The main task of mental education is to provide children with information about inanimate nature, plants, animals, to enable them to adequately perceive natural events. Sensory culture is an integral part of mental education. It is related to improving the analysis, strengthening the emotional experience that is the basis for further generalizations in children, natural science. aimed at forming initial concepts. Children's acquisition of knowledge about nature should be strongly connected with their cognitive abilities - sensory apparatus, logical thinking, attention, speech, observation, interest in learning, etc. In order to develop thinking and form a scientific outlook, it is necessary to introduce children to natural objects and phenomena, to teach them to understand the observed objects and phenomena, and to make them understand the connections and relationships between them. Causal connections and relationships between natural phenomena in the process of understanding develop thinking. The child perceives certain properties of the surrounding environment and nature: the hot and cold of the air with his skin, the taste of liquids with his tongue, the smell in the air with his nose, the color of various objects in nature with his eyes, and the sounds with his ears. sense with 'i, that is, these properties affect the child's five different senses, and go to the brain through the nerve cells located in these organs, and as a result, some of the nature in the brain knowledge about their properties appears, their appearances, images, images, scenes are created. It is also important to cultivate curiosity in children. Education

through nature is a part of general education, and it sets itself the task of educating children with a good knowledge of their young characteristics, cognitive processes, and abilities. Preschool education has many aspects, it is a very broad social phenomenon that deals with the study of the laws of pedagogy. The goal of providing aesthetic education to young people is to develop the aesthetic taste and ideal of a person, to develop the ability to perceive the surrounding things correctly. Aesthetic education instills in the child such feelings as the ability to warm oneself with taste, behave, work, behave properly in public. In particular, mother teaches to love and enjoy nature, that is, to feel beauty. The smell, shape and colors of flowers and fruits, the singing of birds, the gurgling of water in streams, the rustle of snow in winter - all this allows children to imagine things and phenomena in nature and serves as a rich material for educating and growing their aesthetic sense. . The growth of such an aesthetic feeling in children of the age of preschool educational organization, in turn, creates the necessary conditions for love, understanding and learning of art, life, and nature.

There are many and various ways to teach moral education to children through nature. We mentioned only some of them above. It would be an excellent light upon light if every educator would implement it based on their own circumstances and national traditions. Children's participation in growing plants and taking care of animals instills in them a sense of responsibility and hard work in every work. Physical education. The importance of being physically healthy in the spiritual formation of a person and in living a meaningful life is incomparably great. It is not for nothing that our people said that "healthy body is wealth of the region" and "may your four children be healthy". These sayings have different meanings. The body of children of preschool age develops very quickly. It is known from children's anatomy and physiology that up to 6-7 years old, children grow up to 5 cm every year, and their body weight increases by 2-2.5 kg. And then it slows down a bit. It can be seen from this that it is necessary to ensure a child's healthy physical growth from a young age. What should be paid attention to in order to raise physically healthy children of preschool age? In this case, legitimate questions may arise as to what educational tools should be used. In order to properly educate children physically, the following conditions must be strictly observed:

- education by forming hygienic skills (building, yard, equipment, clothing, footwear hygiene);

- to be under the constant control of medical personnel (health, anthropological data, physiological condition);

- planning the daily routine of children in preschool educational organizations (eating, sleeping, playing, training, walks, exercising). To provide physical education to children of preschool age by means of nature, taking walks in the open air, going on trips to the foothills, river banks, being in a park in the city, working with them in the yard of a preschool educational organization, organizing action games activities, getting to know the world of plants and animals, visiting zoos play an important role in the physical education of a child. Taking care of the

flowers in the yard of the preschool educational organization, softening the soil, watering, cleaning the flower garden from weeds, applying mineral or cultural fertilizers to the flowers, help children to be hardworking and physically healthy. gives The existence of a playground and a yard of a preschool educational organization is of great importance in the physical education of the young generation.

Summary. A component of the personal environmental culture of preschool children aged 6-7 is knowledge of nature and its orientation from the point of view of ecology, organization of use in daily life, various activities: (home environment, work process and various games) does. In the pedagogical process of preschool educational organizations, environmental education of a person can be carried out by revealing the following types of activities.

1. Formation of elements of environmental consciousness in children. A child is defined by understanding and imagining the elements of ecological consciousness, character and content of knowledge about nature. They should have knowledge that has an ecological content that shows the interdependence of natural phenomena.

2. Formation of various nature-related knowledge and skills in children, activities related to nature should have the character of nature conservation. During specific activities related to nature (looking at plants and animals in the field yard and nature corners, active participation in work related to nature protection), children, taking into account the needs of living organisms, for plants and animals they learn to organize an environment close to natural conditions. In this case, it is important to foresee the consequences of negative actions, to know how to behave in nature, and to preserve the integrity of selected species and living organisms.

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Geografiya ta'lim yo'nalishining 2 kurs talabasi

SURXONDARYO VILOYATI GEOGRAFIK O'RNI, TABIIY SHAROITI VA YER YUZASINING TUZILISHIGA TABIIY GEOGRAFIK TAVSIF

Annatsiya: Surxondaryo viloyati O'zbekiston Respublikasining eng janubiy qismida joylashgan, iqlimi quruq subtropik iqlim mintaqasiga joylashgan, Surxondaryo viloyati relyefi tog' va tekisliklardan iborat, shimoldan janubga qiyalanib va kengayib boradi. Tog'lardan oqib tushadigan ko'pdan ko'p daryo va soylar dara hosil qilgan. Surxondaryo viloyatining zamini o'ta qadimiy ekanligi, u murakkab geologik rivojlanishni boshidan kechirganligi, Surxondaryo viloyati hududi bir qancha morfologik strukturalardan iboratligi haqida ma'lumotlar ushbu maqolada yoritib berilgan.

Kalit so'zlar. mineral xom ashyolar, geografik kenglik, geografik uzoqlik, geologik rivojlanish bosichlari, mutloq balanflik, Orogen va plitali strukturalar, Gertsin va Alp bosqichlari.

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SURKHANDARYA REGION GEOGRAPHICAL POSITION, NATURAL CONDITIONS AND NATURAL GEOGRAPHICAL DESCRIPTION OF THE STRUCTURE OF THE EARTH'S SURFACE

Annation: Surkhandarya region is located in the southernmost part of the Republic of Uzbekistan, the climate is located in the region of dry subtropical climate, the relief of Surkhandarya region consists of mountains and plains, slopes and expands from North to South. More and more rivers and streams flowing from the mountains formed dara. Information about the fact that the land of surkhandarya region is extremely ancient, it has undergone complex geological development, the territory of Surkhandarya region consists of several morphological structures is covered in this article.

Key words. mineral raw materials, geographical latitude, geographical distance, geological development pressures, absolute balance, orogenic and plate structures, Herzin and Alpine stages.

Surxondaryo viloyati O‘zbekiston Respublikasining eng janubiy qismida joylashgan bo‘lib iqlimi quruq subtropik iqlim mintaqasiga joylashgan. Viloyat hududi $37^{\circ} 10^1 - 39^{\circ} 02^1$ shimoliy kenglik va $66^{\circ} 32^1 - 68^{\circ} 25^1$ sharqiy uzoqlikda joylashgan. Surxondaryo viloyati O‘zbekiston Respublikasining tarkibiy qismidagi 12 ta viloyat va Qoraqalpog‘iston Respublikasining biridir. Viloyat mamlakatimizda siyosiy, ma‘muriy, iqtisodiy va ijtimoiy hayotida o‘ziga xos o‘rin tutadigan viloyatdir. Surxondaryo viloyatining tarkibi ma‘muriy jihatdan davrlar osha o‘zgarib turgan. Surxondaryo viloyati - 1941-yil 6 martda tashkil etilgan (1925-yil 29 iyundan Surxondaryo okrugi bo‘lgan). 1960-yil 25 yanvarda Qashqadaryo viloyati bilan qo‘shilgan. 1964-yil fevralda qaytadan tashkil qilindi. Respublikaning janubi-sharqida, Surxon-Sherobod vodiysida joylashgan. Viloyat nomi vohadan oqib o‘tuvchi "Surxon" (fors-tojik: "qizil") daryosi nomidan kelib chiqqan. Janubidan Amudaryo bo‘ylab 180 km masofada Afg‘oniston Islom respublikasi bilan, shimoliy, shimoli-sharq va sharqdan Tojikiston, janubi-g‘arbdan Turkmaniston, shimoli g‘arbdan Qashqadaryo viloyati bilan chegaradosh. Maydoni 20,1 ming km² bo‘lib, 9-10 ming km kv maydoni tekislik, qir va adirlardan, qolgan 10-11 ming km kv dengiz sathidan 1500-4500 metrgacha balandlik va undan yuqori bo‘lgan tog‘ hamda tog‘ tizmalaridan iborat.

Surxondaryo viloyati relyefi tog‘ va tekisliklardan iborat, shimoldan janubga qiyalanib va kengayib boradi. Tog‘lardan oqib tushadigan ko‘pdan ko‘p daryo va soylar dara hosil qilgan. Surxondaryo va Sheroboddaryo oqib o‘tadigan tekislik shimoliy, g‘arb va sharqdan baland Hisor tizmasi (eng baland joyi 4643 m) va uning tarmoqlari (Boysuntog‘, Ko‘hitangtog‘, Bobotog‘) bilan o‘ralgan.

Viloyatimizning xaritada ko‘rinish egri chizilgan uchburchakga o‘xshaydi. U shimol tomondan janubga qarab 220-250 km, g‘arbdan sharqga esa 150-170 kmga cho‘zilgan. Viloyatning uchta tomoni tog‘lar bilan o‘ralgan, chegarasi janubiy tomoni ochiq. Uning janubdagi Amudaryo o‘zani orqali Afg‘oniston davlati bilan o‘tgan chegarasi daryo o‘zaniga ko‘ra g‘oyat egri bugridir.

Surxondaryoning g‘arbiy va shimoli-g‘arbiy chegara chiziqlarida joylashgan baland tog‘lar viloyatda o‘zgacha iqlimiy sharoit hosil qiluvchi omillardir. Janubiy chegaradagi ochiqlik esa shimoliy va shimoli-g‘arbiy havo massalarining viloyat hududiga kirib kelishi uchun “darvoza” hisoblanadi.

Viloyatning tabiatiga tabiiy landshaftiga, uning iqlimi, suv resurslari, tuprog‘i, o‘simliklar va hayvonot dunyosi holatiga uning geografik o‘rni ta’sir ko‘rsatib turadi. Shuningdek viloyatning iqtisodiy va ijtimoiy rivojlanishiga chegaradosh davlatlar bilan ta’siri kuchli. Ayniqsa, Afg‘oniston bilan Amudaryo porti va Amudaryo temir yo‘li va avtomobil yo‘li orqali olib borilayotgan 20 dan ortiq Osiyo va Yevropa davlatlarining iqtisodiy, texnikaviy, savdo-sotiq aloqalari, hamda Tojikiston bilan Termiz–Dushande, Termiz–Yavon temir yo‘l va avtomobil yo‘llari orqali olib borilayotgan aloqa viloyat ijtimoiy va iqtisodiy taraqqiyotiga kuchli ta’sir ko‘rsatib turadi.

Surxondaryoning viloyatining maydoni 20,8 ming kv. km. Viloyat mamlakat hududining 4.6 foizini tashkil qiladi. Surxondaryo viloyati maydonini boshqa davlatlar bilan qiyoslaganimizda uning salmoqli ekanligini bilamiz. Jumladan uning

hududi Kipr maydonidan 2,23 marta, Quvaytnikidan 1,3 marta, Livannikidan 2, Singapurnikidan 34,7 marta, Markaziy Amerikadagi Yamayka davlatidan 1,89 marta katta va Salvador davlati (21.0 ming kv.km.) ga deyarli tengdir.

Surxondaryo viloyatining zamini o'ta qadimiy bo'lib, u murakkab geologik rivojlanishni boshidan kechirgan. Surxondaryo viloyati hududi bir qancha morfologik strukturalardan iborat. Ular quyidagilardan iborat: Tekislangan tektonik yuzalar, Strukturali tekislangan yuzalar, Akkumulyativ yuzalar.

Tog'lar bilan tekislik orasida adir va tog' oldi zonasi joylashgan. Tog'lar shimoliy sovuq havo oqimlarini to'sib turishi natijasida subtropik o'simliklar o'stirish uchun qulay iqlim sharoiti vujudga kelgan. Tog' zonasi va adirlarda, asosan, g'alla yetishtiriladi, chorva uchun yozgi yaylov. Mutlaq balandligi 300–500 m bo'lgan Surxon-Sherobod tekisligida paxta ekiladi, bog' tokzorlar barpo qilingan.

Respublikamiz, xususan Surxondaryo viloyati hududi tabiatining rivojlanishi va relyefining vujudga kelishi turli geologik era va davrlarda yuz bergan endogen va ekzogen jarayonlar ta'siri natijasi hisoblanadi. Surxondaryo viloyati ham har xil katta-kichiklikdagi tektonik strukturalardan tashkil topgan bo'lib, ulardan eng kattalari antiklinal burmali strukturalardir.

O'zbekistonning tog'li janubiy, sharqiy va markaziy qismlari orogen o'lka tarkibiga kiritiladi. Surxondaryo viloyatida u Hisor-Zarafshon sistemalaridagi tog' tizmalari, Afg'on-tojik botig'ining shimoli-g'arbiy qismini o'z ichiga oladi. Orogen va plitali strukturalar Gertsin va Alp tog' paydo bo'lish davrlarida hosil bo'lgan va turli katta-kichikliklardagi va yo'nalishlardagi yer yoriqlari (razlamlari) bilan kesilgan. Mazkur yoriqlar orqali neogen davridan boshlanib, hozir ham davom etayotgan yangi tektonik harakatlar ta'sirida turli balandliklar ko'tarilgan, ba'zilari cho'kkan, natijada viloyatning biz hozir ko'rib turgan tog' tizmalari va tog' oralig'i botiqlari hosil bo'lgan. Gertsin tog' paydo bulish davrida tektonik harakatlar bilan bir qatorda vulkan jarayonlari ham sodir bo'lgan. Vulkanik yer yoriqlari bo'ylab sodir bo'lgan gidrotermal va boshqa jarayonlar rudali, rangli, nodir, qimmatbaho foydali qazilmalar hosil bo'lgan.

O'zbekiston hududi shu jumladan, Surxondaryo viloyati o'zining geologik rivojlanish davrlarida juda ko'plab muhim paleotektonik va paleogeografik jarayonlarni kechirgan. Geologik davrlarning o'ziga xos xususiyatlari shundaki, har bir davrda, albatta, yer rivojlanishi tarixida muhim ahamiyatga ega bo'lgan jarayonlarni sodir etgan. Geosinklinal sharoitda sodir bo'ladigan jarayonlar bir necha marotaba takrorlangan bo'lib, bu jarayonlar bevosita Surxondaryo viloyati hududiga ham tegishlidir. Kembriyning boshlanish davrida Oloy, Turkiston, Zarafshon va Hisor tizmalari o'rnidagi dengiz tektonik harakatlar natijasida chekinib, uning o'rnida tog'lar hosil bo'lgan, vendning oxiriga kelib esa tektonik harakatlarning so'nishi va yemirilish jarayonlarining kuchayishi oqibatida u hududning yer yuzasi tekislangan.

So'nggi yillarda mamlakatimizda ona zamin bag'ridagi bitmas-tuganmas mineral xom ashyo zaxiralarini chuqur o'rganish va ulardan davlatimizning taraqqiyoti yo'lida foydalanishga e'tibor juda kuchaydi. Bizning zaminimiz nafaqat go'zal tabiati, qolaversa mo'tadil iqlimi, qulay geografik joylashuvi, qadimiy va

tarixiy yodgorliklariga ega bo'lmagan balki, qimmatbaho mineral xom ashyo zaxiralariga ham juda boydir.

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NUROTA ETNOTOPONIMLARI HAQIDA AYRIM MULOHAZALAR

Annotatsiya O'zbekiston toponimiyasining boy va serqirra materiallarini turli hududlar bo'yicha to'plash va tadqiq qilish o'zbek tilshunosligining eng muhim yo'nalishlaridan biridir. Keyingi yillarda olib borilgan ilmiy izlanishlar natijasida O'zbekistonning bir qator viloyatlari mintaqalari toponimiyasini lingvistik, tarixiy-tipologik nuqtayi nazardan tahlil qilishga bag'ishlangan monografiyalar nashr etildi, dissertatsiyalar yozildi, toponimlar izohli lug'atlari tuzildi. Shunga qaramasdan, o'zbek nomshunosligining bir qator murakkab hamda dolzarb masalalari haligacha o'z yechimini topgan emas. Nomlar, xususan, joy nomlari, urug'-qabila nomlari bilan bog'liq ma'lumotlarni o'rganish, tahlil qilish bilan insonlar qadim zamonlardan buyon shug'ullanib kelganlar. Ushbu maqolada Nurota tumani hududiga tegishli bo'lgan etnotoponimlarning yuzaga kelishiga doir ayrim fikr va mulohazalar keltirilgan.

Kalit so'zlar: etnotoponim, etnonim, etnooykonim, urug' nomlari, joy nomlari

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SOME REMARKS ON NUROTA ETHNOPONYMS

Abstract. One of the most important areas of Uzbek linguistics is the collection and research of the rich and diverse materials of the toponymy of Uzbekistan in different regions. As a result of the scientific research carried out in the following years, monographs devoted to the analysis of the toponymy of the regions of a number of regions of Uzbekistan from the linguistic, historical and typological point of view were published, dissertations were written, and explanatory dictionaries of toponyms were compiled. Nevertheless, a number of complex and urgent issues of Uzbek nomenclature have not yet been resolved. In particular, historical and etymological research of Uzbek ethnonyms and the system of proper nouns formed on their basis is one of such urgent issues. Since ancient times, people have been engaged in studying and analyzing information related to names, in particular, place names, clan and tribe names. This article presents some thoughts and comments on the emergence of ethnotoponyms belonging to the territory of Nurota district.

Key words: ethnotoponym, ethnonym, ethnoonym, clan names, place names.

O‘zbekiston toponimiyasining boy va serqirra materiallarini turli hududlar bo‘yicha to‘plash va tadqiq qilish o‘zbek tilshunosligining eng muhim yo‘nalishlaridan biridir. Keyingi yillarda olib borilgan ilmiy izlanishlar natijasida O‘zbekistonning bir qator viloyatlari mintaqalari toponimiyasini lingvistik, tarixiy-tipologik nuqtayi nazardan tahlil qilishga bag‘ishlangan monografiyalar nashr etildi, dissertatsiyalar yozildi, toponimlar izohli lug‘atlari tuzildi.

Etnik nomlar – etnonimlarga urug‘, qabila, elat, xalq, millatlarning nomlari kiradi. Turkiy tillarda, jumladan, o‘zbek tilida etnonimlardan yasalgan toponimlar keng tarqalgan va bunday nomlar “Etnik belgilar asosida yasalgan toponimlar”, “Etnotoponimlar” deb yuritilmoqda [5]. Etnonim va etnotoponimlarni to‘plab, tadqiq etish o‘zbek tilidagi atoqli otlar tizimining shakllanish bosqichlari xususida qimmatli ma’lumotlar beribgina qolmay, xalqimiz tarixi, urf-odatlar, turmush tarzi, o‘lkamiz jug‘rofiyasi va arxeologiyasi, shuningdek, ma’naviyatimiz sarchashmalari haqida keng qamrovli izlanishlar olib borishga asos bo‘la oladi. Xalqaro internetdagi ma’lumotlarda esa “Etnonim (etno... va oputa — ism, nom) urug‘, qabila, elat, xalq, millat va boshqalar xil etnik uyushmalar nomi. Biror til-dagi etnonimlar majmui etnonimiya deb yuritiladi. Urug‘, qabila, xalq nomi o‘zi tomonidan tanlangan yoki o‘zgalar (ko‘pincha qo‘shni etnoslar) tomonidan berilgan bo‘lishi mumkin. Etnonim etnosning o‘zi tomonidan tanlangan bo‘lsa — avtoetnonim: o‘zgalar tomonidan nomlangan bo‘lsa — allogen (ekzogen) etnonim deb yuritiladi”, -deya izoh berilgan [6].

Etnotoponim materiallarini alohida olingan hududlar bo‘yicha to‘plash va o‘rganish esa, ushbu masalaning mohiyatiga yanada chuqurroq kirib borish hamda mintaqaviy-lisoniy hodisalar tizimining o‘ziga xos qonuniyatlari va xususiyatlarini ochishga ko‘maklashadi.

Nurota etnonimlari va etnotoponimlarini o‘rganishda Abulg‘oziy Bahodirxonning “Shajarayi turk” va “Shajarayi tarokima” singari asarlari ham tarixiy-etnografik dalillarga boy ishonchli manba bo‘la oladi. Ushbu asarlarda turkiy qabilalarning kelib chiqishi haqida qimmatli tarixiy ma’lumotlar hamda afsona va rivoyatlar mavjud. Ayniqsa, etnonimiyaga oid ma’lumotlar taniqli tilshunos X.Doniyorov tomonidan batafsil tahlil qilingan [2].

Nurota tumani hududidagi etnotoponimlarni tahlil qilishdan oldin bitta masalaga, ya’ni etnonimlarning atoqli ot sistemasiga munosabati muammosiga qisqacha to‘xtab o‘tishga to‘g‘ri keladi. Chunki biz o‘z ishimizda etnonimlarni atoqli otlar guruhida talqin qilmoqdamiz, ammo bu masalada nomshunoslikda turlicha qarashlar mavjud. Bir guruh tadqiqotchilar etnonimlarni atoqli ot deb hisoblashadi. Chunonchi V.A. Nikonovning yozishicha, etnonimlarning atoqli ot ekani yoki atoqli ot emasligini hal qilish ushbu nomlar haqidagi nazariyaga yetarli ravishda aniqlik kiritish bilan bog‘liqdir[3]. A.V.Superanskaya etnonimlarni “Onomastika doirasiga kirmaydigan lug‘aviy birliklar kategoriyasiga mansub”, deb biladi[4]. Ushbu masala o‘zbek nomshunosligida ham hal etilmagan.

O‘zbekcha matnlarda etnonimlarning goh bosh, goh kichik harflar bilan yozilayotganligi ham bu masalada ikkilanish mavjudligidan darak beradi. Umuman, ushbu muammo alohida tekshirishlarni talab qiladi. Ammo bitta masala aniqki,

etnonimlar toponegizlar orasida yetakchi o‘rin egallaydi. Nuroto tumani madaniy jihatdan ham eng boy hudud hisoblanadi. “Nurota viloyati geografiyasi Navoiy viloyatining boshqa viloyatlari orasida eng xilma-xildir. Tumanning shimoliy va g‘arbiy qismlarini cho‘l va dashtlar, janubiy va sharqiy qismlarini tog‘lar, yaylovlar va sug‘oriladigan yerlar egallaydi [7].

Turkiy, jumladan, o‘zbek etnonimlari to‘g‘risida tarixchilar, etnograflarning asarlarida juda ko‘p ma‘lumotlar mavjud. O‘zbek etnonimiyasini tadqiq qilish ishiga keyingi yillarda X.D.Doniyorov[5] va S.S.Gubayevalar[6] katta hissa qo‘shdi.

Professor T.Nafasov Qashqadaryo viloyati hududidan 400 ta etnotoponimlarni to‘plaganini[7], T.Rahmatov Samarqand va uning atroflari hududida 200ga yaqin etnotoponimlar mavjudligini yozishgan edi[7]. S.Qorayev O‘zbekiston hududidagi aholi istiqomat qiluvchi joy nomlarining 10 dan 30 foizi etnotoponim ekanini aytgan[8]. S.S.Gubayevaning fikricha esa, Farg‘ona vodiysida bu miqdor ba‘zi joylarda 30-50 foizgacha, ayrim hududlarda esa 10-11 foizni tashkil qiladi[8].

O‘zbek toponimiyasi bo‘yicha yoqlangan ishlarning barchasida o‘rganilayotgan hududda uchraydigan etnotoponimlar tahlil qilingan.

O‘zbek toponimikasida etnotoponimlar maxsus tadqiq qilingan ishlar ham yuzaga keldi. Biz bu o‘rinda A.Otajonovning Xorazm etnotoponimlariga[6], A.Turobovning Samarqand viloyati etnooykonimlariga[8] bag‘ishlangan ishlarini ko‘zda tutmoqdamiz. Har ikkala tadqiqotda o‘rganilayotgan hudud toponimiyasidagi etnonimik negizlar asosida yasalgan nomlar atroflicha tahlil qilingan.

O‘zbekistonning turli hududlarga mansub etnonimlar tahlili shuni ko‘rsatganki, toponimlarning bu tipi yuzaga kelishiga ko‘ra ikki belgisi bilan ajralib turadi:

1. Etnonimlar ko‘proq aholi istiqomat qiluvchi hududlarda uchraydi.
2. Etnotoponim ko‘chmanchi aholi yashagan yoki ularning avlodlari yashayotgan joylarda uchraydi.

Biz Nurota tumani hududidan to‘plagan etnotoponimlar miqdori 80 tadan oshadi. Bu biz to‘plagan umumiy materialning 4 foizini tashkil qiladi.

Etnotoponimlarni ularning etnonimik negiziga ko‘ra (toponegiziga) ikkiga bo‘lish mumkin:

1) Negizida xalq, elat yoki millat nomi yotgan etnotoponimlar: Arab (q.), Qozoqovul, Turkmanlar (q), Turkmanariq kabi.

2) Negizida urug‘, qabila va ularning mayda shaxobchalari nomi yotgan etnotoponimlar: Qovchin (qq), Qiyot (qq), Bolg‘ali (qq.), Bahrinto‘p (qq.), Qo‘shnamg‘ali (qq.), Kerayit arig‘i kabi.

Toponimning etnotoponim ekanini, ya‘ni nom negizida etnik leksika yotganini aniqlash ba‘zan qiyinchilik tug‘diradi. Mana shunday hollarda toponimning tarkibidagi ba‘zi ko‘rsatkichlarga e‘tibor berish lozim bo‘ladi. Odatda tarkibida quyidagi belgilar uchrasa, toponim etnonimdan yasalgan bo‘ladi.

1) Nom tarkibida to‘p (to‘b), to‘pi (to‘bi) so‘zlari uchraydi. Bu so‘zlar aslida etnonimik indikatorlardir. X.Doniyorov shodmonto‘pi, shodito‘pi, yashig‘to‘pi, qozoqto‘pi kabi etnonimlarni qayd etgan[13]. S.Gubayeva tarkibida to‘p, to‘plar so‘zlari mavjud nomlar etnotoponim degan xulosaga kelgan va Kaltato‘pi, Xolmonto‘p, Eshboyto‘p, Urto‘p, Taqchito‘p, Shayitto‘p kabi nomlarni dalil sifatida keltirgan edi[14]. Nurota toponimiyasida ham tarkibida ushbu komponent bor bo‘lgan toponimlar mavjud: Bahrinto‘p (qq.), Erganakto‘p (qq.), Eshonto‘p (qq.) kabi.

2) Oxirida -li, -di, -ti (lahjaviy) qo‘shimchalari mavjud ba‘zi toponimlar etnotoponimlardir: Jilontamg‘ali, Kovushli, Taroqli, Qo‘shamg‘ali, Qoziyoqli, Bolg‘ali, Tug‘ali, Keshtali (Kashtali), Cho‘michli, Choriqli, Qaychili, Chiroqli, Ilonli, Sarkali va b.

3) Oxirida -chi qo‘shimchasi mavjud ba‘zi nomlar etnotoponimlardir: Polvonchi (qq.), Tuyachi, Tuyachitepa, Cho‘pchi (qq.), Korizchi kabi.

4) Tarkibida -lar qo‘shimchasi kelgan nomlar etnotoponimlardir. X. Doniyorov beklar, boylar, yortilar, kallalar, parchalar, xo‘jalar, qirqlar, qoralar, qullar kabi etnonimlar borligini qayd etgan[15]. S.Gubayeva -lar affiksli Pillakashlar, Arablar, Xastalar tipli nomlarni etnotoponim deb hisoblaydi[16]. S.Qorayev fikricha esa, -lar, -on, -obod so‘zli nomlar etnotoponimlarga kiradi[17]. Nurota toponimiyasida -lar qo‘shimchasini olgan quyidagi nomlar mavjud: Minglar, Cho‘rilar, Ko‘salar, Zarkokillar, Gadoylar, Ulug‘lar, Garruklar, Arablar (aq.), Kulollar va b.

5) Tarkibida -on, -yon qo‘shimchalari mavjud nomlar etnotoponimlar hisoblanadi. Ko‘plik tushunchasini ifoda etuvchi ushbu tojikcha affikslar o‘zbekcha -lar qo‘shimchasiga to‘g‘ri keladi. Ushbu qo‘shimchalar O‘zbekiston hududidagi tojikcha toponimlar tarkibida uchraydi. Chunonchi, Nurota hududida Uyron toponimi uchraydi. Ammo ushbu model Nurota hududi uchun xarakterli emas.

6) Oxiri -i qo‘shimchasi bilan tugovchi ba‘zi nomlarni ham etnotoponimlarga kiritish mumkin: Ajinabegi, Urganji kabi. Ushbu model ham Nurota toponimiyasida siyrak uchraydi.

Etnotoponimlarning ma‘nosini talqin etish borasida ancha munozarali tomonlar bor. Ba‘zi ishlarda etnotoponimning (toponimning) ma‘no va etimologiyasi deb, uning negizida yotgan etnonimning ma‘no va etimologiyasi talqin qilinadi. Bunga qo‘shilish qiyin. Aslida etnotoponimlarning ma‘nosi soddadir, ya‘ni har qanday etnotoponim o‘zi mansub bo‘lgan hududda o‘tmishda etnonimda ifodalangan etnik guruh yashagani yoki ularning avlodi hozirda yashayotgani haqida darak beradi. Xususan, o‘zbek etnonimiyasi va ular zamirida hosil bo‘lgan atoqli otlar tizimini tarixiy-etimologik jihatdan tadqiq qilish ana shunday dolzarb masalalar sirasiga kiradi.

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USING REALIA IN TEACHING ENGLISH TO ESL STUDENTS

Abstract: This article highlights the pedagogical aspects of developing learning competences of ESL students of using realias in English classes. In this article it is clearly shown the how relevant is to understand the realias for students in learning English. Also, several guidelines, and methods are provided for developing student learning competences in English classes.

Key words: realia, competence, cultural literacy, ESL learners

Introduction

Today as the world is changing rapidly, great attention is paying to learning foreign languages. There are many, reasons why learning a new language is a good idea. It allows to communicate with new people. It helps you to see things from a different perspective, or get a deeper understanding of another culture. It even has health benefits, as studies have shown that people who speak two or more languages have more active minds later in life. In fact, one in five people on the planet speak or understand at least a little bit of English. This makes English one of the most useful languages you can learn. Realia for ESL can make the learning experience more memorable and create connections between objects and vocabulary words or other language concepts. This can make it easier to recall information.

Review and Discussion

What is realia? Realia are the words that denote special features of culture, everyday life, folklore and historical epochs of cultures, within they exist. Belonging to only one culture, they do not have any equivalents in the other.

Realia refers to authentic objects from real life that one uses in the classroom to teach a specific concept. Realia can be both physical and virtual, as long as it is something used in the real world.

As Vinogradov V emphasizes realia is a word that expresses a reality or event that belongs to a single language group. Realias belong to a group of words that are inextricably linked to the culture of a particular nation but are completely foreign to another nation. In the early stages of language learning, the learner may encounter realities. Very common realities include topographic place names, household item names, art-related words, and so on.

Vlaxov S. and Florin S. interpret a group of realities encountered in communication through transcription. In their view, realities with a national color can be transmitted through transcription and translated using a functional element of reality that represents a false reality.

So, realias, that is, words denoting the objects, concepts and situations that do not exist in the practical experience of people who speak a different language. This includes words denoting various items of material and spiritual culture, peculiar only to a particular nation, for example, the names of:

- a) national dishes: e.g. xolva, patir non, palov, xandon pista, pashmak, oqchoy, shirgovoq;
- b) the types of folk clothes and shoes, dance: e.g. munojat, yor-yor, kovush, kalish, paranji;
- c) the types of folklore: e.g. yallama, yor-yor, ziyofat, afandi;
- d) phrases denoting political institutions and social phenomena specific only to a certain nation: e.g. domla, mirza, oqsoqol, qalandarboshi;

Readers of English can not catch the meaning of the phrase —nahorgi oshll. In Translation we may give a description or use the footnote technique. Nahorgi osh – (gathering of men and eating pilaf together early in the morning/ at dawn on special occasions such as: weddings or new baby arrival ceremonies.)

Similarly, in the English language there are no matches for Uzbek nouns: pudding, mousse, muffins. On the other hand in the Uzbek language there are no lexical correspondences to English words: glimpse, floorer, exposure (in the sense of liability to the forces of nature: rain, sun, wind, cold).

Methods

In teaching realia to ESL students can be incorporated into a ton of fun activities that can liven up your in-person or virtual classroom and get students excited about learning English. Here are some methods to be used in teaching realias while teaching English to ESL learners.

Method 1. Following directions

One of best ways of using realia is to give students directions to carry out with the objects. For example, if you're teaching prepositions, have students take out the items from their pencil bags, and give directions like, —Put the pencil under the eraser|| or, —Put the eraser in the pencil bag.|| Or, for a lesson on comparing objects say, —Hold the pencil higher than the eraser.|| It's a great way to make students active participants in the lesson. Again, this game can easily be played in both the physical or virtual classroom.

Method 2. Guess what it is.

Fill a bag with realia and have students take turns trying to guess what one of the objects is by putting their hand in the bag and feeling it. They can use vocabulary to describe the object to their classmates as they guess. Also this game can be adapted to the virtual classroom by hiding an object in a bag or under a cloth. Students can look at the shape and listen to you describe the object (e.g., it's heavy, soft, it's round, etc.) while they try to guess what it is.

Method 3. Act out a scene

It doesn't matter what concept you're teaching, acting out scenes and roleplaying is a wonderful way to help students memorize the material and encourage speaking skills through

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THEORETICAL BASIS OF DEVELOPING INNOVATIVE ACTIVITY OF FUTURE GEOGRAPHY TEACHERS ON THE BASIS OF A CREATIVE APPROACH

***Abstract:** This article discusses the theoretical foundations of the development of innovative activity in future geography teachers based on a creative approach. Innovative activity is a creative approach to mastering existing methods, forms and tools for a teacher to improve his profession, which, as a subject and organizer of innovative activity, creates, applies and popularizes innovation, ensures that innovation is systematic, holistic and sustainable. The article also pays special attention to the issues of developing an innovative educational environment.*

***Keywords:** Innovative activity, innovative approach, creativity, creative thinking, motivation, technology, creative orientation.*

The task of determining the priority areas of systemic reform of higher education, raising the process of training highly qualified personnel with modern knowledge and high spiritual and moral qualities, independent thinking to a qualitatively new level, modernizing higher education, developing the social sphere and economic sectors based on advanced educational technologies is set out in the Concept for the Development of the Higher Education System of the Republic of Uzbekistan until 2030. How effectively this task is solved will have a significant impact on ensuring the achievement of the goals of socio-economic reforms and a radical restructuring of the life of our society being implemented in our country. Because, as practice shows, the effectiveness of any socio-economic changes directly depends on the professional development of specialists mobilized to fulfill the tasks set in this regard.

Today, education is one of the most important areas of human activity, and the increasing role of education in society is leading to the emergence of new directions of economic development. The need to develop and improve the education system in any country is due to new trends in socio-economic development in the modern world. Therefore, the process of training teachers for innovative activities based on creative approaches requires that they be carried out based on the latest achievements of modern science and technology.

When directing future specialists to innovative activities, the following should be taken into account:

- radically improving the personnel potential of the education system, increasing the professional prestige of educators, teachers, professors and researchers;

- radically changing educational and vocational programs, taking into account modern achievements in education, science, technology, economy and culture at the global level;

- developing the spiritual and moral qualities of students at all levels and stages of education based on the principles of national ideology and the priority of the rich intellectual heritage of the people and universal values;

- improving the education management system, developing forms of public management, regionalization of educational institutions;

- develop and implement measures to strengthen the role of family, parents, public organizations, neighborhoods, charitable and international funds in education, as well as in the spiritual, moral, creative, intellectual and physical education of young people [3].

It is clear from this that the development of innovative activity in future geography teachers is also a complex process, which requires the teacher to implement such stages as using existing innovations in practice, introducing new ideas and methods into the existing system, systematizing the content, forms and methods of implementing a new idea, and developing his own concept or methodology for teaching and upbringing.

In this context, innovative activity refers to a teacher's creative approach to mastering existing methods, forms and tools for improving his profession. The need for a stable scientific concept and classification of innovations in education and innovative pedagogical activity is a modern requirement. For this, it is advisable to systematically develop scientific knowledge aimed at education. It is also necessary to strengthen the integration between educational knowledge and practical pedagogical activity. The teacher, as a subject and organizer of innovative activity, participates in the creation, application and popularization of innovation. The goal of innovative activity is to get the highest result from the effort expended. Unlike other various spontaneous innovations, innovation is a mechanism for managed and controlled changes. Not every innovation in the education system can be an innovation. Innovation is systematic, holistic and continuous, designs a new system of activity in a certain practice, completely renews the positions of the subjects of practice. In this case, new areas of activity are opened, new technologies are created, new qualitative results of activity are achieved, and as a result, the practice itself is renewed. The introduction of innovation into practice is carried out in innovative processes. The innovative process is the process of preparing for innovative changes and their implementation.

A number of research scientists of our republic define innovative activity in their research works as follows - this is an activity aimed at acquiring and applying new knowledge. It includes the following:

- fundamental (theoretical, experimental) scientific research aimed at obtaining new knowledge;

- applied innovation aimed primarily at applying new knowledge to achieve practical goals and solve specific tasks;

- practical experimentation aimed at creating and further improving new projects, products, processes, production and use services, systems or methods as a result of scientific research or their further development [1,2].

The process of preparing future geography teachers for innovative activities based on creative approaches is manifested in: creativity in a future teacher (the ability to create clear ideas in students about the nature of the Earth, its population, and natural geographical processes occurring in the environment), computer literacy, high information culture (the ability to effectively use video and audio lessons, presentations, and Internet resources to convey geographic information to students), the ability to complete the activity in introducing innovations (expanding the scope of students' logical thinking based on geographical knowledge), the ability to be progressive in innovative activities, and the ability to acquire leading professional pedagogical skills (the ability to form practical geographical skills in students).

The level of preparation of future geography teachers for innovative activities, including the innovative process and innovative potential, is determined by directing them to intellectual and creative activities using new educational technologies. To achieve this, the main processes are the introduction of future geography teachers into innovative processes from the moment they enter a higher educational institution, their creative approach to the education system, the formation of their innovative resources based on creative approaches, and the formation of knowledge, skills and qualifications in organizing innovative activities.

One of the important components of the creative approach is motivation. In teaching, as in educational activities, the motivational sphere is distinguished. These are external and internal motives, for example, the desire to achieve something as an external motive, and attention to the process and result of one's activity as an internal motive.

Creativity is a personal characteristic of a person, associated with his self-improvement and development [4]. Creativity - this component refers to the teacher's ability to create and implement new ideas. The level of creativity in the work of a future creative teacher is taken into account by three indicators: productivity, creative orientation, and creativity diagnostics. The process of preparing future geography teachers for innovative activities based on creative approaches directly includes determining the actual problems of preparing them for innovative activities, creating scientific-methodological, software-didactic, software-informational support for optimizing the training of future teachers, and participating in competitions with scientific, scientific-methodological, innovative projects in this regard, and conducting regular creative activities to widely introduce them into training for innovative activities.

In conclusion, it should be noted that the acquisition of heuristic methods in innovative activity gives a great impetus to the development of creativity, but does not always guarantee the successful solution of creative problems. Innovative pedagogical activity means a new approach to the organization of learning and

education. This, first of all, involves the use of new methods of effective interaction between students and teachers, leading to the achievement of the desired results, innovative education involves the search and application of new ideas, the teacher develops and implements new methods and independently selects solutions. The innovative process is aimed at qualitatively improving the system into which the innovation is being introduced, and involves motivating its participants and changing their views from the standpoint of innovation.

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**YAPON MUSHMULASI (*ERIOBOTRYA JAPONICA* (THUNB.) LINDL.
NING HUYAYRA SHIRASINING KONSENTRATSIYASINI
REFRAKTOMETRIK USULDA ANIQLASH**

Annotatsiya. O'simliklar fiziologiyasi sohasidagi tadqiqotlar, o'simliklarning atrof-muhit sharoitlariga moslashuvchanlik va himoya mexanizmlarini qanday rivojlantirishi haqida ma'lumot beradi. Ushbu tadqiqotda, Yapon mushmulasining suv ta'minlanishi va ularning hujayra shirasi konsentratsiyasidagi o'zgarishlar tahlil qilingan. O'simlikning suv resurslarini tartibga solish qobiliyati va tuproq namligi bilan bog'liq fiziologik jarayonlar muhokama qilingan. Tadqiqotlar Surxondaryo viloyatining issiq iqlim sharoitida olib borilgan. Natijalar shuni ko'rsatadiki, tuproq namligi va havo sharoitlari o'simliklarning hujayra shirasining konsentratsiyasiga sezilarli ta'sir ko'rsatadi.

Kalit so'zlar. Yapon mushmulasi, hujayra shirasining konsentratsiyasi, tuproq namligi, suv ta'minlanishi, ekologik moslashuv, qurg'oqchilik, Surxondaryo.

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**THE CONCENTRATION OF CELL SAP IN JAPANESE LOQUAT
(*ERIOBOTRYA JAPONICA* (THUNB.) LINDL.) WAS DETERMINED
USING THE REFRACTOMETRIC METHOD**

Abstract. Research in plant physiology reveals how plants adapt to environmental conditions and develop protective mechanisms. This study analyzed the water supply of Japanese loquat and the changes in their cell sap concentration. Physiological processes related to plant water regulation and soil moisture were discussed. The research was conducted in the hot climate of the Surkhandarya region. The results showed that soil moisture and climatic conditions significantly affect the concentration of cell sap in plants.

Keywords. *Japanese loquat, cell sap concentration, soil moisture, water supply, ecological adaptation, drought, Surkhandarya.*

Hozirgi davrda o'simliklar introduksiyasining ahamiyati kamaymasdan, balki ilgorigidek sayyoramiz o'simliklari resurslarini o'zlashtirishning yangi istiqbollarini ochib bermoqda. Sug'oriladigan dala sharoitida ham urug'larning unib chiqish ko'rsatkichlari nisbatan xona sharoitidagi natijalardan ancha past bo'ldi.

Hujayra shirasining konsentratsiyasi o'simliklarning suv rejimi holatining sezgir ko'rsatkichlaridan biri hisoblanadi. Hujayra shirasining konsentratsiyasi o'simliklarning atrof-muhit sharoitlariga ekologik moslashuvi bilan ma'lum darajada bog'liq bo'lib, u o'simliklarning qurg'oqchilikka chidamlilik ko'rsatkichi hisoblanadi. Ya'ni, tuproq namligi ortishi bilan o'simlik bargining hujayra shirasi konsentratsiyasi kamaygan, tuproq suvsizlangan sari, hujayra shirasi konsentratsiyasi ortgan.

Umumiy nazariy qism. Tuproq namligi o'lchash ekinlarning sug'orish vaqtini belgilashning eng ishonchli ko'rsatkichlaridan biri hisoblanadi. Tuproq namligi bo'yicha sug'orish muddatlarini aniqlash usulining ishonchligini ta'minlash uchun esa ko'pgina ishlar qilinishi kerak. Biroq, ishlab chiqarish sharoitida tuproq namligi bilan sug'orish vaqtini aniqlash juda qiyin va uzoq vaqt talab qiladi. Sug'oriladigan ekinlar namligining eng muhim fiziologik ko'rsatkichlaridan biri hujayra shirasining konsentratsiyasi hisoblanadi. Barglarning hujayra shirasining konsentratsiyasini aniqlashning refraktometrik usuli daladagi o'simliklarning suv rejimi holatini baholash uchun juda oddiy va qulay bo'lib hisoblanadi.

Hujayra shirasining konsentratsiyasi o'simliklarning suv rejimi holatining sezgir ko'rsatkichlaridan biri hisoblanadi. Hujayra shirasining konsentratsiyasi o'simliklarning atrof-muhit sharoitlariga ekologik moslashuvi bilan ma'lum darajada bog'liq bo'lib, u o'simliklarning qurg'oqchilikka chidamliligining ko'rsatkichi hisoblanadi. Yani tuproq namligi ortishi bilan o'simlik bargining hujayra shirasi konsentratsiyasi kamayadi, tuproq suvsizlangan sari esa hujayra shirasi konsentratsiyasi ko'payadi. Barglarning hujayra shirasining konsentratsiyasi ko'proq bargning joylashishi va yoshiga qarab ham o'zgarib turishi mumkin. Shuning uchun analiz maqsadlari uchun barglarni tanlash prinsipiga aniq rioya qilish kerak.

Refraktometriya usuli hujayra shirasining konsentratsiyasini va potensial osmotik bosimni tez va aniq o'lchash imkonini beradi, shuning uchun dala ishlari uchun juda qulaydir. Usul hujayra shirasi tomonidan yorug'likning sinishi ko'rsatkichini hisobga olishga asoslangan.

Materiallar va jihozlar: O'simliklarning mevalari, qo'l press aparati yoki ohak, doka, qaychi, chinni kosalar, pipetkalar, refraktometr, filtr qog'ozi.

Ishni bajarish tartibi. Qo'l pressi yordamida sharbat ilgari doka bilan o'ralgan o'rganilayotgan o'simliklarning ikki-uchta mevasidan olinadi. Eksperimental variantlar sifatida har doim bir xil o'simlik mevasini tanlanadi. masalan har doim o'simlik poyasining o'rta qismidan yoki har doim o'simlikning yuqoridagi

mevasidan namuna olinadi. Qo‘l press bo‘lmasa, o‘simlik massasi chinni hovonchada ohak solib eziladi, ikki qavatli dokadan va filtr qog‘ozdan o‘tkaziladi. Aniqlashni har qanday refraktometrda amalga oshirilishi mumkin (1-rasm).



1-rasm. Qo‘l press va u yordamida

hujayra

shirasini ajratish jarayoni.

Tadqiqot natijasi. Sug‘orishdan oldin hujayra shirasi konsentratsiyasi va tuproq namligini bir vaqtning o‘zida aniqlash natijalari ular o‘rtasida yaqin teskari bog‘liqlik mavjudligini ko‘rsatdi: tuproq namligi qanchalik yuqori bo‘lsa, hujayra shirasi konsentratsiyasi shunchalik past bo‘ladi. Shu bilan birga, xuddi shu tuproq namligida, o‘simliklar rivojlanishning bir bosqichidan keyingi bosqichiga o‘tganda ham hujayra shirasi konsentratsiyasi ko‘tarilishi aniqlandi, bu o‘simliklarning qarishi bilan bog‘liq.

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SURXONDARYO VILOYATI SHAROITIDA SALVIA OFFICINALIS L.NI KO‘PAYTIRISH USULLARI VA IQTISODIY SAMARADORLIGI

***Annotatsiya:** Ushbu maqolada Surxondaryo viloyati tuproq – iqlim sharoitida dorivor mavrak ya’ni *Salvia officinalis* L o‘simligini ko‘paytirish, plantatsiyalarini tashkil etishda ko‘paytirishning urug‘ orqali generativ va novda hamda ildiz qalamchalari orqali vegetativ usulda ko‘paytirishning natijalari, bir gektar maydonda plantatsiya tashkil etishning o‘rtacha xarajatlar smetasi bayon etilgan.*

***Kalit so‘zlar:** salvia, urug‘, novda, plantatsiya, o‘shish, xarajat, ildiz.*

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METHODS OF PROPAGATING *SALVIA OFFICINALIS* L. AND ITS ECONOMIC EFFICIENCY IN THE CONDITIONS OF SURKHANDARYA REGION

***Abstract:** This article discusses the methods of propagating the medicinal herb *Salvia officinalis* L. in the soil and climate conditions of the Surkhandarya region. It presents the results of generative propagation through seeds and vegetative propagation through cuttings and root segments, as well as an average cost estimate for establishing plantations per hectare.*

***Keywords:** salvia, seeds, cuttings, plantation, growth, cost, root*

Kirish. Surxondaryo viloyati iqlim va tuproq sharoitlari bilan *Salvia officinalis* ni o‘stirish uchun qulay hududlardan biri hisoblanadi. Viloyatning iliq va quruq iqlimi, tuproqning qumli va loyqa tarkibi bu o‘simlik uchun mos keladi. Ushbu maqolaning asosiy maqsadi – *Salvia officinalis* ni samarali ko‘paytirish usullarini aniqlash va ularning iqtisodiy samaradorligini baholashdan iboratdir. Mazkur

tadqiqotda *Salvia officinalis* ni ko‘paytirishning turli usullari (urug‘ bilan, novdalari orqali vegetativ usullar) o‘rganilib, har bir usulning samaradorligi va mahalliy iqtisodiyotga ta‘siri tahlil qilinadi.

Materiallar va usullar. Tadqiqot Surxondaryo viloyati Termiz davlat universiteti tajriba maydoni hududida olib borildi. Ushbu hududlarning tuproq xususiyatlari va iqlim sharoitlari *Salvia officinalis* uchun mos keladigan yuqori harorat va qumli-loyqa tuproq bilan tavsiflanadi. Harorat darajasi yoz faslida +35 °C va undan yuqoriroq bo‘lib, qish oylarida esa nisbatan yumshoq iqlim kuzatiladi. Ushbu o‘simlikni muvaffaqiyatli o‘stirish uchun talab qilinadigan quyosh nuri, tuproq tarkibi va namlik darajasi tadqiqot davomida nazorat qilib borildi [2].

Natijalar. Tadqiqot davomida *Salvia officinalis*ni ko‘paytirishning uch xil usuli (urug‘, so‘qmoqlar va vegetativ usul) sinovdan o‘tkazildi. Quyidagi 1- jadvalda har bir usul bo‘yicha o‘shish ko‘rsatkichlari keltirilgan.

1-Jadval

Surxondaryo viloyati sharoitida *Salvia officinalis* L ning urug‘, novda va ildiz qalamchalaridan ko‘paytirishdagi o‘shish ko‘rsatkichlari

Ko‘paytirish usuli	Unib chiqish darajasi (%)	Ildiz otish darajasi (%)	Yashash ko‘rsatkichi (%)	O‘shish tezligi (sm/oy)
Urug‘ bilan ko‘paytirish	75	—	70	3.5
Novdalar orqali	—	85	80	4.2
Ildiz qalamchalari orqali	—	90	85	5.0

1- jadvaldan ko‘rinib turibdiki, Ildiz qalamchalariorqali ko‘paytirish eng yuqori o‘shish va yashash darajasi bilan ajralib turadi. Urug‘ bilan ko‘paytirishda unib chiqish darajasi nisbatan pastroq bo‘lib, bu usulni o‘stirish uchun ko‘proq vaqt talab etilishi kuzatildi.

Tadqiqot davomida o‘shish tezligi va yashash darajasi bo‘yicha kuzatilgan natijalar har bir usulning o‘shish sharoitlariga mosligini aniqlashga yordam berdi. Quyidagi 2-jadvalda o‘shish bosqichlari davomida olingan ma‘lumotlar aks etgan:

2-Jadval

Salvia officinalis L. ning har bir ko‘paytirish usullari bo‘yicha o‘shish ko‘rsatkichlari

Ko‘paytirish usuli	1-oy o‘shish darajasi (sm)	3-oy o‘shish darajasi (sm)	6-oy o‘shish darajasi (sm)	Yillik o‘shish darajasi (sm)
Urug‘ bilan ko‘paytirish	3.5	9.8	15.2	28.5
Novdalar orqali	4.2	11.0	18.3	33.0

Ildiz qalamchalari orqali	5.0	13.5	20.8	36.5
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Yuqoridagi jadvaldan ko‘rinib turibdiki, vegetativ usulda ildiz qalamchalaridan ko‘paytirilgan o‘simliklarning o‘sinh tezligi yuqoriroq bo‘lib, o‘simlik yil davomida yaxshi rivojlangan va sharoitga moslashgan. Bu usul orqali ko‘paytirishda o‘simlikning moslashuvchanligi va ildizlanish qobiliyati ham yaxshiroq ekanligi kuzatildi.

Surxondaryo viloyatining iqlim sharoitida 1 gektar maydonda plantatsiya tashkil etishda urug‘ bilan ko‘paytirish va vegetative usulda ko‘paytirish xarajatlari tahlil qilindi. (3-jadval)

3-jadval

Bir gektar maydonga *Salvia officinalis* L. plantatsiyasini tashkil etish xarajatlari

Xarajat turlari	Urug‘ bilan ko‘paytirish (so‘m)	Vegetativ usul bilan ko‘paytirish (so‘m)
Urug‘ yoki ko‘chat narxi	3,000,000	7,000,000
Ekish ishlari	2,500,000	3,000,000
Parvarish xarajatlari	1,500,000	1,800,000
Sug‘orish xarajatlari	1,000,000	1,000,000
Yig‘im-terim xarajatlari	2,000,000	2,500,000
Umumiy xarajatlar	10,000,000	15,300,000

Ushbu jadvaldan ko‘rinib turibdiki, *Salvia officinalis* ni vegetativ usulda ko‘paytirish xarajatlari urug‘ bilan ko‘paytirishga qaraganda yuqoriroq.

Urug‘ bilan ko‘paytirish dastlabki xarajatlarni kamaytirish uchun qulay bo‘lsada, vegetativ usul yuqori hosildorlikka ega bo‘lib, yuqori iqtisodiy samaradorlikni ta‘minlaydi. Dastlabki sarmoyani oshirish imkoniyati mavjud bo‘lsa, vegetativ usulni tanlash tavsiya etiladi, chunki bu usul hosildorlik darajasi yuqoriligi tufayli umumiy foyda ko‘rsatkichlarini oshiradi.

Muhokama. Tadqiqot natijalari *Salvia officinalis* ni Surxondaryo viloyati sharoitida ko‘paytirishning samarali usullarini aniqlash imkonini berdi. Urug‘ bilan ko‘paytirish usuli boshqa usullarga qaraganda nisbatan kam xarajat talab etsa-da, uning unib chiqish darajasi va o‘sinh tezligi pastroq bo‘ldi. Bu usul o‘simlikning urug‘ orqali tabiiy ko‘payishiga mos bo‘lsa-da, iqtisodiy samaradorlik nuqtai nazaridan ancha kam foyda keltirishi aniqlandi.

Xulosalar. *Salvia officinalis* L. ni Surxondaryo viloyati sharoitida ko‘paytirish bo‘yicha tadqiqotdan quyidagi xulosalarga kelindi:

1. Urug‘ bilan ko‘paytirish usuli eng kam xarajatli bo‘lsa-da, unib chiqish darajasi va iqtisodiy samaradorligi pastligi sababli bu usul ko‘proq tabiiy ko‘payish jarayonlariga mos tushadi.

2. Vegetativ ko‘paytirish usuli eng yuqori iqtisodiy samaradorlikka ega bo‘lib, Surxondaryo viloyati sharoitida *Salvia officinalis* L. ni keng ko‘lamda o‘stirish uchun eng mos usul ekanligi aniqlandi.

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YAPON MUSHMULASI (*ERIOBOTRYA JAPONICA* (THUNB.) LINDL.) NING MADANIYLASHTIRILISHI

Annotatsiya. Maqolada Yapon mushmulasining tarqalishi, madaniylashtirilishi va o'sish xususiyatlari o'rganilgan. O'simlikning iqlimga moslashuvi, meva va urug'lari haqida batafsil ma'lumot berilgan.

Kalit so'zlar: Yapon mushmulasi, tarqalish, madaniylashtirish, meva, urug', o'sish, iqlim.

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DOMESTICATION OF JAPANESE LOQUAT (*ERIOBOTRYA JAPONICA* (THUNB.) LINDL.)

Abstract. The article explores the distribution, domestication, and growth characteristics of Japanese loquat. Detailed information is provided on its climate adaptation, fruits, and seeds.

Keywords: Japanese loquat, distribution, domestication, fruit, seed, growth, climate.

Mushmula tabiiy subtropik iqlimda o'sadi. Uning uchun issiqlik va yuqori namlik muhim ahamiyatga ega. O'zbekistonda esa mevali daraxtlar Amudaryo va Sirdaryo bo'yida joylashgan hududlarda yetishtiriladi.

O'zbekistonda Yapon mushmulasi yetishtirila boshlandi. O'simlik 8-10 m. gacha o'sishi mumkin bo'lgan baland bo'yi daraxt hisoblanadi. Yaproqlari keng va uzun bo'lib hozirgi kunda fermer xo'jaliklarida etishtiriladi. O'zbekiston sharoitida o'simlikning gullash davri (oktabr) noyabr-yanvar oylariga to'g'ri keladi va oq rangli kichik gullar bilan qoplangan. Generativ davrda 1-3 dona besh tojibargli gul hosil bo'ladi va o'z-o'zidan changlanadi. Daraxtlar aprel-may oylarida meva bera boshlaydi. Mushmula mevasi shiraliligi va shakar miqdorining yuqoriligi bilan ajralib turadi. Uning ta'mi pishgan olchaga o'xshaydi. Mevaning shakli nok shaklida yoki cho'zilgan silindrsimon shaklga ega bo'ladi. Mevalar shingilda to'da bo'lib joylashadi, meva eti oq- sariq yoki sariq rangda. Meva ichida urug'lar 1-2 (5) dona bo'lib, dumaloq shaklga ega.

Mushmula mevasi faqat 4-5 kun davomida suvli va mazali bo'lib turadi. Mevalarini uzoq muddat saqlash uchun ular daraxtdan generativ novdasi bilan birga uzib olinadi.

Mushmula urug'laridan ko'paytiriladi yoki barglardan o'stiriladi. Urug'lar avval qutilarga ekilib keyin urug' ko'chatlari boshqa joyga o'tqaziladi.

Urug'lar zich himoya qobig'i bilan o'ralib turadi. Ekishdan oldin uni pichoq bilan kesish tavsiya etiladi. O'sish stimulyatori sifatida osh tuzining eritmasi ishlatiladi va eritmada 12 soatgacha saqlanadi.

Urug'ko'chatda 4 dona chin barg paydo bo'lgandan keyin yerga ko'chiriladi. Ochiq yerga o'simlikni o'tqazish paytida kaliy tuzidan qo'shimcha ozuqa sifatida foydalanish tavsiya etiladi. Mushmula 3 yoshida gullashni boshlaydi va 4 yilda meva beradi.

Hozirgi paytda subtropik hududlarida o'sadigan yapon mushmulasi Samarqand davlat universiteti oranjeriyasida (SamDU Biologiya fakulteti) yetishtirilmoqda. Mualliflar o'zlarining tadqiqotlarda Rosaceae Juss. oilasiga mansub *Eriobotrya japonica* Lindl. ning gullash va meva berishi, o'sishi va rivojlanishi hamda fenologik kuzatishlarini olib borgan [18].

Tadqiqot olib borishdan avval ma'daniy o'simliklarning kelib chiqish markazlari, o'simliklarni introduksiya va iqlimlashtirilishi, ma'daniy o'simliklarning genetik xilma-xilligining geografik markazlari tahlil etilgan. Ular quyidagi ko'rinishda:

1. Janubiy Osiyo tropik markazi (ma'daniy o'simlik turlari umumiy sonining 33% ga yaqin).
2. Sharqiy Osiyo markazi (ma'daniy o'simliklarning 20%).
3. Janubi-g'arbiy Osiyo markazi (ma'daniy o'simliklarning 4%).
4. O'rta er dengizi markazi (ma'daniy o'simliklarning 11% ga yaqin).
5. Efiopiya markazi (ma'daniy o'simliklarning 4% ga yaqin).
6. Markaziy Amerika markazi (taxminan 10%)
7. And (Janubiy Amerika) markazi (taxminan 8%)

Ma'lumki, qadimgi dehqonchilik ma'daniyatining asosiy markazlari Dajla, Furot, Gang, Nil va boshqa yirik daryolarning keng vodiylari deb hisoblangan bo'lsa, Vavilov tadqiqotlarida deyarli barcha ma'daniy o'simliklar tropik, subtropik va tog'li hududlarda paydo bo'lganligini asoslab berdi.

Yapon mushmulasi - (*Eriobotrya japonica* Thunb.) - Ra'nodoshlar (*Rozaceae* Juss.) oilasiga mansub, ko'p yillik doimiy yashil subtropik daraxt yoki buta. Ulardan oddiy mushmula va Yapon mushmulasi degan turlari ahamiyatlisi hisoblanadi. Oddiy mushmulasining (Germaniya mushmulasi) novdasida barglari zich bo'lib shakllanadigan va o'sadigan kichkina daraxt. Yapon mushmulasining bo'yi 3-6 metrgacha (9-metr) bo'ladi. Bargi doimo yashil nashtarsimon, uzunligi 2,5 sm. gacha, eni 7-8 sm. gacha bo'ladi.

To'pguli-murakkab shingil. Gulining diametri 1,5 sm, xushbo'y gultojbargining rangi oq. Kuzda noyabr-dekabr oyida shoda bo'lib gullaydi, guli oq yoki bir oz pushti rangda bo'ladi. Bahorda aprel-may oyida mevasi pishib yetiladi. Mevasining shakli va kattaligi yovvoyi olmaga o'xshaydi, nimsariq, pishish oldidan qoramtir bo'ladi, yaxshi pishgan mevasining po'stini qo'l bilan archib yeyiladi, po'sti shaftoli po'stidan qalinroq bo'ladi. Mazasi bir oz nordon-shirin. Mushmulaning ochiq maydonda o'sadigan navlarini mevasi may va iyun oylarida

pishadi. Rezavor meva sifatida xonadonlarda o‘stirish tavsiya etiladi. Mushmula mevasi diametri 3 sm. gacha, ma‘daniy navlari 10 sm. gacha bo‘ladi. Bir dona mevasi 30 grammgacha (madaniy navlari 100 grammgacha) bo‘ladi. Yapon mushmulasi Xitoyda “Pipa”, Yaponiyada “biwa”, Portugaliyada “nespera” yoki “magnorio”, “Ispaniyada” “nispero”, Hindistonda” lauaat”, Italiyada “musmula”, yoki “muspula”, Maltada “erigi”, Frantsiyada “bibasse”, Germaniyada “japanische mispel” yoki “woll mispel”, Armanistonda” Nor Ashcher”, Gretsiyada “mousmaula” yiki “mespilia”, Turkiyada “musmula”, Vengriyada” naspolya”, Livanda “Akkadenek” yoki “Akka Dhuniya”, Gruzziyada “mushmula”, Isroilda “shesiq”, Arabiston davlatlarida “Askidinya”, yiki “Bashmala” deb nomlanadi. “Nor Ashxar” deb Armanistonda atalishi va uning ma‘nosi “yangi dunyo” degan ma‘noni bildiradi. Malta davlatida esa Yapon mushmulasi ”malta olxo‘risi” deb nomlanadi. Mushmula grek so‘zidan olingan bo‘lib “erion”- jun va “botrys”- tuklanish ma‘nosini bildiradi. Mushmula turkumi o‘z ichiga 30 turni oladi. Mushmula mevasida 2-3 ta gacha (5ta) urug‘ bo‘lishi mumkin.

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YAPON MUSHMULASINING TARQALISHI VA UCHRAYDIGAN HUDUDLARI

Annotatsiya. O'zbek tilida: Maqolada Yapon mushmulasining tarqalishi, o'sish sharoitlari va uning dunyoning turli mintaqalaridagi ekotizimlarga moslashishi haqida batafsil ma'lumot berilgan. Shuningdek, o'simlikning agronomik ahamiyati ko'rib chiqiladi.

Kalit so'zlar: Yapon mushmulasi, tarqalish, ekotizim, agronomiya, iqlim, o'sish, o'simlik.

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DISTRIBUTION OF JAPANESE LOQUAT AND ITS FOUND REGIONS.

Abstract. This article explores the distribution of Japanese loquat, its growing conditions, and adaptation to ecosystems in different regions of the world. The agronomic importance of the plant is also discussed.

Keywords: Japanese loquat, distribution, ecosystem, agronomy, climate, growth, plant.

Osiyoning janubiy-sharqidagi geografik viloyati Hindixitoy yarim oroli, Malay arxipelagi va unga yondosh hududlarni o'z ichiga oladi. Maydoni 4,5 mln. km². relyefi o'rtacha balandlikdagi tog' va tekisliklardan iborat. Tropik o'rmon va savannalar keng tarqalgan. Iqlimi nam ekvatorial va subekvatorial mussonli, janubiy-sharqda Bruney, Vetnam, Indoneziya, Kamboja, Laos, Malayziya, Myanma, Singapur, Tailand, Filippin davlatlari joylashgan. Ba'zan janubiy-sharqiy Osiyoda joylashgan davlatlarni Janubiy Osiyo tarkibiga ham kiritiladi.

Sharqiy Osiyo- Osiyodagi tabiiy o'lka (ba'zida bir guruh tabiiy o'lkalar sifatida ko'riladi) - Tinch okeanga tutash taxminan 60° va 20° oralig'idagi tropik, subtropik va mo'tadil mintaqalarni o'z ichiga oladi. Relyefi murakkab tuzilishga ega, o'rtacha balandlikdagi tog' va tog' oldi (Jugjur, Sixote Alin, Katta Xingan, Sinlin, Nanlin, Kamchatka) va akkumulyativ tekisliklar (Amurbo'yi, Shimoliy Sharqiy Xitoy, Buyuk Xitoy) almashinib keladi. Sharqiy Osiyoning katta qismi g'arbiy Tinch okean geosinklinal mintaqasida joylashgan.

Geosinklinal mintaqa- Yer po'stining uzun (o'n, yuzlab km), nisbatan tor va chuqur cho'kmasi hisoblanadi. Dengiz havzalari tubida vujudga keladi va odatda, yer yoriqlari bilan chegaralangan, cho'kindi va vulqon jinslarining qalin qatlami

bilan to'lgan bo'ladi. Uzoq davom etgan shiddatli tektonik deformatsiyalar natijasida Geosinklinal murakkab burmali struktura- tog' tizimlariga aylanadi. Odatda, okeandan qit'aga o'tish zonasida yoki qit'alar oralig'ida joylashadi. Geosinklinal okean tubi Yer po'stining qit'a yer po'stiga aylanishi deb tushuniladi.

Vulqon ko'p, seysmik faol zona. Iqlimi yozi sernam, mussonli va qishi quruq iqlim. Yoz va kuz oylarida tayfun ko'p bo'ladi. Tabiiy o'simliklari, asosan, shimolda aralash va tayga o'rmonlari, janubi keng bargli subtropik va tropik o'rmonlardan iborat. Qurg'oqchil hududlarda o'rmon-dasht va dasht o'simliklari o'sadi. Tekisliklarda aholi zich, katta maydonlar ekinzorlardan iborat. Sharqiy Osiyoda Rossiya va Xitoyning sharqiy qismi, Yaponiya, Koreya (KXDR va Koreya respublikasi) joylashgan, ba'zida Filippinni ham shu o'lka tarkibiga kiritiladi.

Tabiati asosan, mo'tadil va subtropik mintaqalarda (janubiy qismida kichikroq hudud tropik mintaqada) joylashgan. Tabiati jihatidan Sharqiy Osiyoda joylashgan sharqiy va Markaziy Osiyoda joylashgan g'arbiy qismlarga bo'lingan. Mamlakatning sharqiy qismi dengiz bo'yi pasttekisliklari, past va o'rtacha balandlikdagi tog'lardan iborat. Xitoyning g'arbi esa baland tog'lik, katta tizmalar, keng yassi tog'lik va botiqlardan iborat. Xitoy qirg'og'ining uzunligi 15 ming km. Yirik yarim orollari: Shandun va Lyaodun.

Xitoy murakkab orografiyaga ega bo'lgan tog'li o'lka. Mamlakatning janubiy g'arbida Tibet tog'lari, undan shimolda Markaziy Osiyo tekisliklari va yassi tog'lik mintaqalari va atrofi tog'lar bilan o'ralgan Sharqiy Xitoy pasttekisliklari yaqqol ajralib turadi. Tibet tog'i Xitoyning eng baland qismidir (o'rtacha balandligi 4500 m ga yaqin).

Markaziy Osiyo tekisliklari va yassi tog'liklari g'arbda bir-biridan Sharqiy Tyanshan tog'lari bilan ajralgan, Hashqar tekisligi va Jung'ariya tekisligini o'z ichiga oladi. Ularga janubiy sharqdan Turfon soyligi (tubi dengiz sathidan 154 m past) tutashgan. Sharda esa Gashun Gobisi, Alashan va Ordos plato va tekisliklari, ular orasida Beyshan, Alashan va Inshan tog'lari joylashgan. Sharqiy Xitoy past tekisliklari, asosan, Sariq dengiz sohili bo'ylab shimoldan janubga cho'zilgan va tog' tizmalari bilan o'ralgan.

Xitoyning iqlimi g'arbda kontinental, sharqda, asosan, mussonli bo'ladi. Mavsumlar davomida havo haroratining farqi katta. Yanvarning o'rtacha harorati Xarbinda $-20,4^{\circ}$, Pekinda $-4,6^{\circ}$, iyulniki xuddi shu joylarda 23° va 26° darajaga etadi. Yillik yog'in Sharqiy Xitoyda 500-2000 mm (ko'p qismi yozda yog'adi) g'arb va shimoliy g'arbiga tomon iqlimning kontinentalligi ortib boradi. Yozi issiq (Turfon botig'ida iyulning o'rtacha trasi 34), qishi sovuq, yanvarning o'rtacha harorati Xitoyning shimolida (Xaylar) - 28° , g'arbida (Urumchi) - $14,9^{\circ}$. Yillik yog'in 250 mm dan kam, Qashqar tekisligi va saydamda 50 mm dan kam bo'ladi. Tibet tog'ligida qish juda sovuq, yozi esa salqin. Gartokda (Hind daryosining yuqori qismi) yanvarning o'rtacha harorati - $11,8^{\circ}$, iyulniki $11,8^{\circ}$ bo'ladi. Haroratning sutka davomidagi farqi katta. Kuchli shamollar esadi. Xitoyning baland tog'larida muzliklar bor, lekin yog'in kamligidan katta maydonni egallamaydi (100 ming km^2 chamasida).

Xitoyning iqlimi juda xilma-xil - janubi-sharqdagi subtropikdan shimoli-g'arbdagi keskin kontinental (quruq) gacha bo'ladi. Janubiy qirg'oqda ob-havo quruqlik va okeanning turli xil singdirish xususiyatlari tufayli yuzaga keladigan mussonlar bilan belgilanadi. Mavsumiy havo harakati va ular bilan birga keladigan shamollar yozda ko'p miqdorda namlikni o'z ichiga oladi va qishda juda quruq bo'ladi. Mussonlarning boshlanishi va chekinishi ko'p jihatdan butun mamlakat bo'ylab yog'ingarchilik miqdori va tarqalishini belgilaydi. Xitoyda kenglik, uzunlik va balandlikdagi katta farqlar, mamlakatning ko'p qismi mo'tadil iqlimda joylashganiga qaramay, turli xil harorat va meteorologik rejimlarni keltirib chiqaradi.

Mamlakat hududining 2/3 qismidan ko'prog'ini tog' tizmalari, baland tog' va platolar, cho'l va chala cho'llar egallaydi. Aholining taxminan 90 foizi mamlakat hududida va atiga 10 foizida - qirg'oqbo'yi hududlarida va Yangtze, Xuanj ("Sariq daryo") va Chjujiang kabi yirik daryolarning tekisliklarida yashaydi. Bu hududlar uzoq va intensiv qishloq xo'jaligi ekinlarini yetishtirish va atrof-muhitning sanoat bilan ifloslanishi natijasida og'ir ekologik vaziyatga tushib qolgan.

Xitoyning eng shimolidagi Heilongjiang provinsiyasi Vladivostok va Xabarovsk iqlimiga o'xshash mo'tadil iqlimga ega, janubiy Xaynan oroli esa tropik mintaqada joylashgan. Qish oylarida bu hududlar orasidagi harorat farqi katta, ammo yozda farq ancha kamayadi. Heilongjiang shimoliy qismida qishki harorat -38° gacha tushishi mumkin, yanvarning o'rtacha harorati -16° atrofida boladi. Bu hududda iyul oyining o'rtacha harorati 20°, Guandongning janubiy qismlarida o'rtacha harorat yanvarda 10° dan iyulda 28° gacha etadi.

Yog'ingarchilik hatto harorat kabi o'zgarib turadi. Qinling tog'larining janubiy yonbag'irlarida ko'plab yomg'ir yog'adi, ularning eng ko'pi yozgi mussonlarga to'g'ri keladi. Tog'lardan shimol va g'arbg'a qarab harakatlansangiz, yomg'ir bo'lish ehtimoli kamayadi. Mamlakatning shimoli-g'arbiy hududlari eng qurg'oqchil bo'lib u yerda joylashgan cho'llarda (Takla-Makan, Gobi, Ordos) deyarli yog'ingarchilik bo'lmaydi.

Xitoyning janubiy va sharqiy hududlarida tez-tez (yiliga 5 marta) halokatli tayfunlar, shuningdek, toshqinlar, mussonlar, sunamilar va qurg'oqchiliklar bo'lib turadi. Xitoyning shimoliy hududlari har yili bahorda shimoliy cho'llardan kelib chiqadigan Koreya va Yaponiyaga olib boradigan sariq chang bo'ronlari bilan qoplanadi.

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YAPON MUSHMULASI (*ERIOBOTRYA JAPONICA* (THUNB.) LINDL.) NING TARQALISHI VA SISTEMATIK TAHLILI

Annotatsiya. Bu maqolada Yapon mushmulasining tarqalishi, morfologiyasi va kimyoviy xususiyatlari o'rganilgan. Ushbu o'simlikning tibbiy va oziq-ovqat sanoati uchun foydaliligi, shuningdek, uning shifobaxsh xususiyatlari haqida ma'lumotlar keltirilgan.

Kalit so'zlar: Yapon mushmulasi, morfologiya, shifobaxsh, kimyoviy, meva, barg, tibbiy.

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DISTRIBUTION AND SYSTEMATIC ANALYSIS OF JAPANESE LOQUAT (*ERIOBOTRYA JAPONICA* (THUNB.) LINDL.)

Abstract. This article examines the distribution, morphology, and chemical properties of Japanese loquat. The study highlights its medicinal and nutritional benefits as well as its therapeutic characteristics.

Keywords: Japanese loquat, morphology, therapeutic, chemical, fruit, leaf, medicinal.

Yapon mushmulasi (*Eriobotrya japonica* (Thunb.) Lindl.) Janubiy va Janubi-Sharqiy Osiyo hamda Himolayda tarqalgan 30 ga yaqin doimiy yashil butalar va mayda daraxtlarni birlashtiradi. *Eriobotrya japonica* ning Vatani Xitoy va Yaponiyaning nam subtropiklari hisoblanib, asosan tog' yonbag'irlarida o'sadi. O'simlik vatanidan XIX asrda Yevropaga olib kelingan, keyinchalik janubiy Kavkazda va Qrimning janubiy qirg'oqlarida o'stirilgan. Hozirgi paytda Qora dengiz sohillarida - Kavkazning subtropik mintaqalarida, Ozarbayjonda, Qrimda, shuningdek, janubiy Amerika, AQSH, Italiya, Avstraliya va Isroilda yaxshi o'sib hosil bermoqda.

Rossiya hududida Sochinskaya, Xvamli, Karadagskaya, Goytkhskaya navlarini yetishtirish tavsiya etilgan [14].

Mushmula deb ataladigan ikki o'simlik turi muhim ahamiyatga ega bo'lib, ular German va Yapon mushmulasi yoki loquat deb ataladi. German mushmulasi daraxt yoki buta o'simlik hisoblanadi. Germaniyaga Janubi-g'arbiy Osiyodan keltirilgan.

Mushmula eramizdan bir necha asr oldin Qrimda, Kavkazda, Yevropaning janubida Ozarbayjonda o'stirilgan. Qulay sharoitda Mushmula daraxtining

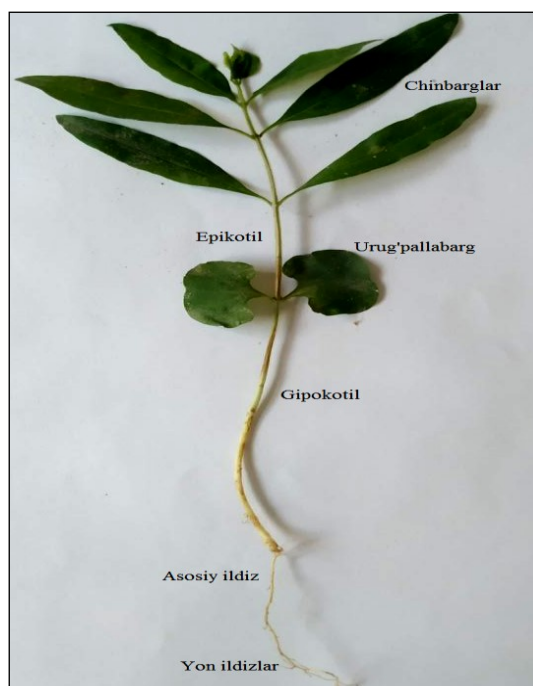
balandligi 8 metrgacha yetadi, shoxlari tikanli, barglari oval-cho‘zinchoq, uzunligi 15 sm, kengligi 4 sm gacha, yozda barcha barglari yashil bo‘ladi va kuzda qizil rangga aylanadi [27]. Nemis mushmulasi may oyining ikkinchi yarmida gullaydi. Gullari oq, besh tojibargli, gullar o‘rnida diametri 1,5 dan 3 sm gacha bo‘lgan dumaloq jigarrang mevalar hosil bo‘ladi. Ba‘zi musmula navlarida mevalarning diametri 5 sm gacha yetishi mumkin. Nemis mushmulasi juda yumshoq iqlimli bo‘lgan hududlarda o‘sadi.

Yapon mushmulasi - *Rosaceae* oilasiga mansub *Eriobotria* turkumiga mansub doimiy yashil o‘simlik. Ushbu turga 30 ga yaqin o‘simlik turlari kiradi. Birinchi marta o‘simlikni Shved botanigi K. P. Turnberg tomonidan “Yaponiya florasi” (1784) kitobida batafsil tavsiflangan. Yapon mushmulasi juda katta barglarga ega. Odatda barglarning uzunligi 25 sm gacha va kengligi 8 sm gacha yetadi. Denov tumani sharoitida esa urug‘dan unib chiqqan urug‘ko‘chatlarining morfologiyasi o‘rganildi va asosiy novda, yon novda, epikotil, gipokotil shakllandi (1.1-rasm).

Mushmula bargning uzunligi 40 sm va eni 13 sm.ni tashkil etdi (1.2-rasm). Barg yuqoridan, barg yaproqlari yashil, qattiq, pastdan - bir oz jigarrang va tukli bo‘lib ko‘rinadi.

Yapon mushmulasi Xitoyda, Yaponiyada issiq iqlimda o‘sadi. Oktabr oyida gullaydi. Gullari oq va kuchli yoqimli hidga ega (1.2-rasm). Mevalari may-iyun oylarida pishadi. Yevropa iqlimida mushmula bahorda gullaydi, mevalari esa oktabrgacha pishadi. Mevalari bir oz cho‘zilgan bo‘lib uzunligi 8 sm va diametri 4 sm gacha yetadi, rangi yorqin sariq yoki to‘q sariq bo‘ladi (1.3-rasm).

To‘pgulda 10-12 donadan iborat gullari joylashadi. Har bir mevada 1 dan 5 donagacha urug‘lari bo‘ladi. Yapon mushmullasining maydalangan urug‘laridan qahvaning ta‘miga juda o‘xshash bo‘lgan ichimlikni tayyorlash mumkin. Mushmulla mevasini yig‘ib olingandan iste’mol etish tavsiya etiladi. Hozirgi vaqtda mushmula nafaqat Osiyo mamlakatlarida balki janubiy Yevropada, Kavkazda ham yetishtiriladi, ayniqsa Isroilda “Shesek” nomi bilan mashhur bo‘lib, Ispaniyada esa “Nispero” daraxti sifatida tanilgan. So‘nggi paytlarda olimlar Yapon mushmulasi mevasining foydali va shifobaxsh xususiyatlariga katta e’tibor berilmoqda.



1.1-rasm. Yapon mushmulasining morfologiyasi



Barg enining o'lchami



Barg uzunligining o'lchami

1.2-rasm. Yapon mushmullasi bargining ko'rinishi va o'lchami

Mushmula buyrak disfunktsiyasi uchun ishlatiladi, yangi iste'mol qilinganda diuretik sifatida ta'sir etadi. U nafaqat ortiqcha suyuqlikni, balki toksinlarni ham olib tashlashga qodir, shu bilan birga foydali moddalar tarkibini to'ldiradi. Yapon mushmulasi mevasi tarkibidagi A vitamini va kaliy yurak hamda qon tomirlarining ishini barqarorlashtiradi.

Mushmulaning mevalaridan tashqari boshqa qismlari ham ishlatiladi. O'pka kasalliklari uchun gullarning qaynatmasidan foydalanish mumkin. Yallig'lanishga qarshi vosita va ekspektoran sifatida qo'llaniladi. Astma, turli yo'tal, surunkali bronxit uchun tavsiya etiladi.

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SALVIA OFFICINALIS L. O'SIMLIGINI SURXONDARYO VILOYATI SHAROITIDA PLANTATSIYALARINI TASHKIL ETISHDA EKISH SXEMASINING AHAMIYATI

Annotatsiya: Ushbu tadqiqot Surxondaryo viloyati sharoitida *Salvia officinalis* L. (dorivor mavrak) o'simligini plantatsiyalarda turli ekish sxemalarida yetishtirish samaradorligini o'rganishga bag'ishlangan.

Kalit so'zlar: *Salvia*, o'sish, biomassa, plantatsiya, barglar, dorivor

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THE IMPORTANCE OF PLANTING SCHEMES IN ESTABLISHING PLANTATIONS OF *SALVIA OFFICINALIS* L. UNDER THE CONDITIONS OF SURKHANDARYA REGION

Annotation. This study investigates the effectiveness of cultivating *Salvia officinalis* L. (medicinal sage) in different planting schemes in plantation conditions in the Surkhandarya region.

Keywords: *Salvia*, growth, biomass, plantation, leaves, medicinal

Ushbu tadqiqotda Surxondaryo viloyati sharoitida *Salvia officinalis* L. o'simligini plantatsiyalarda turli ekish sxemalariga ko'ra yetishtirish samaradorligi o'rganildi. Natijalar o'simliklarning o'sish sur'ati, biomassa hosildorligi va dorivor moddalar miqdoriga ekish masofasining ta'sirini aniqlash imkonini berdi.

1. O'sish sur'ati. Tajribada har bir ekish sxemasi bo'yicha o'simliklarning o'sish sur'ati o'lchandi. 30x30 sm masofada ekilgan o'simliklarda o'sish sur'ati yuqori bo'lsa-da, barglar soni kamroq ekanligi kuzatildi. Buning sababi o'simliklar orasidagi raqobatning kuchayganligi va oziqa moddalarning yetishmasligidir. Boshqa tomondan, 50x50 sm masofada ekilgan o'simliklar orasidagi raqobat kam bo'lib, o'sish sur'ati yuqori bo'ldi, ammo ayrim hollarda ortiqcha joy talab qilgani

kuzatildi. 40x40 sm masofada ekish esa optimal natijalarni ko'rsatdi, bu masofada o'simliklar ham keng tarqalib, yaxshi rivojlanishi mumkin bo'ldi (1-jadval).

2. Biomassa hosildorligi. Biomassa miqdori ekish masofalariga bog'liq holda sezilarli farq qilishi aniqlandi. 30x30 sm masofada ekilgan o'simliklarda biomasaning umumiy miqdori o'rtacha darajada edi, lekin raqobat sababli ayrim o'simliklar yetarli o'sish imkoniyatiga ega bo'lmadi. 50x50 sm masofada esa umumiy biomassa ko'rsatkichlari yuqori bo'lib, har bir o'simlikning rivojlanishiga keng imkoniyat yaratilgani kuzatildi. 40x40 sm masofada esa biomasaning miqdori optimal bo'lib, umumiy hosildorlikning yuqori ko'rsatkichlari qayd etildi (2-jadval).

3. Dorivor moddalar tarkibi. *Salvia officinalis* o'simligining asosiy dorivor xususiyatlari uning efir moylari va boshqa faol moddalar tarkibi bilan bog'liq. Tadqiqot natijalariga ko'ra, ekish masofalari o'simliklardagi dorivor moddalar miqdoriga sezilarli ta'sir ko'rsatdi. 30x30 sm masofada ekilgan o'simliklarda efir moylari va boshqa faol moddalar miqdori nisbatan kam bo'ldi. Bu o'simliklar orasidagi raqobat tufayli oziqa moddalarining yetishmasligi bilan izohlanishi mumkin. 50x50 sm masofada dorivor moddalar tarkibi yuqori bo'lsa-da, bu masofa iqtisodiy jihatdan optimal emasligi aniqlandi. 40x40 sm masofa dorivor moddalar miqdori va sifat ko'rsatkichlari bo'yicha eng maqbul natijalarni taqdim etdi (3-jadval).

Quyida har bir jadvalga statistik tahlil va ularning natijalarini tushuntiruvchi izohlar keltirilgan. Statistik tahlil natijalarni yanada aniqroq talqin qilishga yordam beradi va qaysi ekish sxemasi eng samarali ekanligini ko'rsatadi.

1-jadval

Ekish sxemasi (masofa)	O'sish sur'ati bo'yicha natijalar		Kuzatishlar
	O'rtacha bo'y (sm)	Barglar soni (o'rtacha)	
30x30 sm	35 ± 2	18 ± 1	Raqobat tufayli o'sish cheklangan
40x40 sm	42 ± 3	25 ± 2	Optimal o'sish sur'ati
50x50 sm	45 ± 4	27 ± 3	Raqobat kam, ammo ortiqcha joy talab etiladi

Statistik tahlil: Bu jadval o'simliklarning o'sish sur'atini o'lchash uchun o'rtacha bo'y va barglar sonini aks ettiradi. Tahlil natijalariga ko'ra, ekish sxemasi o'simlik o'sishiga sezilarli ta'sir ko'rsatadi. 50x50 sm sxemada o'simliklar bo'yi eng yuqori (45 sm) bo'lsada, bu masofada yer samaradorligining pasayishi kuzatiladi. 40x40 sm sxema o'simliklarning o'sish va barg hosil qilishda optimal natija ko'rsatgan, chunki raqobat yetarli darajada past, ammo yer samaradorligi yuqori darajada saqlanib qoladi.

Izoh: 40x40 sm masofa o'simliklar uchun yetarli joy va ozuqa ta'minlaydi, shu sababli bu ekish sxemasi o'simlik o'sish sur'atini oshiradi. Bu esa hosildorlik uchun maqbul natija beradi.

Biomassa hosildorligi bo'yicha natijalar		
Ekish sxemasi (masofa)	Qurilgan biomassaning o'rtacha miqdori (g)	Kuzatishlar
30x30 sm	500 ± 25	Raqobat sababli biomassaning miqdori o'rtacha darajada
40x40 sm	650 ± 30	Optimal hosildorlik, yuqori biomass
50x50 sm	700 ± 35	Yaxshi biomass, lekin iqtisodiy jihatdan optimal emas

Statistik tahlil: Biomassaning o'rtacha miqdori ekish masofasiga bog'liq ravishda sezilarli o'zgarishlar ko'rsatadi. 50x50 sm masofada qurilgan biomassa miqdori eng yuqori (700 g) bo'lgan, lekin 40x40 sm masofada (650 g) bu qiymatga yaqin natija qayd etilgan va bu masofa yerning samaradorligini yaxshiroq saqlashga imkon beradi.

Dorivor moddalar tarkibi bo'yicha natijalar			
Ekish sxemasi (masofa)	Efir moylari (%)	Boshqa faol moddalar (%)	Kuzatishlar
30x30 sm	1.2 ± 0.1	1.0 ± 0.1	Faol moddalarning miqdori kamroq
40x40 sm	1.5 ± 0.1	1.3 ± 0.1	Eng yuqori dorivor modda tarkibi
50x50 sm	1.6 ± 0.2	1.4 ± 0.1	Yuqori tarkib, lekin iqtisodiy jihatdan optimal emas

Statistik tahlil: Ekish masofalari *Salvia officinalis* L. o'simligidagi dorivor moddalarning miqdoriga sezilarli ta'sir ko'rsatadi. 50x50 sm masofada efir moylari va faol moddalar miqdori eng yuqori ko'rsatkichni beradi, ammo 40x40 sm masofa deyarli bir xil dorivor modda miqdorini saqlab qolgan va iqtisodiy samaradorlik nuqtai nazaridan optimal hisoblanadi.

Xulosa. Ushbu tadqiqot *Salvia officinalis* L. (dorivor mavrak) o'simligini Surxondaryo viloyati sharoitida turli ekish sxemalari orqali plantatsiyalarda yetishtirish samaradorligini o'rgandi. Tadqiqot natijalari o'simlikning o'sish sur'ati, biomassa hosildorligi va dorivor moddalar tarkibiga ekish masofasining sezilarli ta'sirini ko'rsatdi. Uzoq masofalardagi ekish o'simlikning bo'y o'sishi va dorivor moddalar tarkibiga ijobiy ta'sir qilsa-da, bu ekish sxemalari yer samaradorligini kamaytirishi va iqtisodiy jihatdan optimal bo'lmasligi aniqlandi.

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YAPON MUSHMULASI (*ERIOBOTRYA JAPONICA* (THUNB.) LINDL. NING MADANIYLASHTIRILISHI

***Annotatsiya.** Maqolada yapon mushmullasining fenologik xususiyatlari hamda ularning iqlim sharoitlariga moslashuvi o'rganilgan. Tadqiqotda harorat, namlik va tuproq sharoitlarining o'simliklarning rivojlanish bosqichlariga ta'siri tahlil qilingan. Ushbu ma'lumotlar iqlim o'zgarishi sharoitida yashil maydonlarni barqaror saqlash uchun muhim ahamiyat kasb etadi.*

***Kalit so'zlar:** Yapon mushmulasi, daraxtlar, butalar, fenologiya, iqlimga moslashuv, yashil maydon, ekologiya*

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JAPANESE LOQUAT (*ERIOBOTRYA JAPONICA* (THUNB.) LINDL.) CULTIVATION

***Annotation:** The article explores the phenological characteristics of Japanese loquat and its adaptation to climatic conditions. The study analyzes the impact of temperature, humidity, and soil conditions on the developmental stages of plants. This information is crucial for the sustainable maintenance of green spaces under changing climate conditions.*

***Keywords:** Japanese loquat, trees, shrubs, phenology, climate adaptation, green spaces, ecology.*

Daraxt-butalardagi fasliy o'zgarishlarni kuzatish bilan bir paytda daraxtzorlarda mavjud zararli hashoratlarni qishlovdan uchib chiqishi, tuxum qo'yishi, urchishi va zamburug' kasalliklarni rivojlanish bosqichlari ham qayd etib boriladi. Bu kuzatishlar ularga qarshi kurash choralarini ishlab chiqish imkoniyatini beradi. Daraxt-butalarni gullashi, gullashining davomiyligi, barglarini kuzda sariq, qizil rangga kirishi kabi fenologik fazalarni ko'kalamzorlashtirishda ahamiyati kattadir, ular shu manzarali xususiyatlariga ko'ra ko'kalamzorlashtirish uchun tanlab olinadi. Fasliy o'zgarishlarni o'rganish natijasida olingan ma'lumotlarga asoslanib daraxt-buta turlarini fenospektrini va fenoxaritasini tuzish mumkin. Bular

o'z navbatida turni qaysi iqlim sharoitida o'stirish va ulardan qanday foydalanish ahamiyatlarini ko'rsatib beradi.

Mamlakatimiz shaharlari va aholi punktlarini ko'kalamzorlashtirish hamda bugungi kundagi holatini yaxshilash va iqlimlashtirilgan o'simliklarni muhofaza qilish dolzarb muammolardan hisoblanadi. Chunki ko'kalamzorlashtirish atrof-muhitning sanitariya gigiyena holatini yaxshilashda, shamol kuchini pasaytirishda, shovqinni kamaytirishda, havoni tozalashda va uni mo'tadillashtirishda muhim ahamiyatga ega. Bugungi kunda ko'kalamzorlashtirishda muhim ahamiyatga ega bo'lgan istiqbolli o'simliklarning morfologik, biologik va o'ziga xos bo'lgan ekologik xususiyatlarni o'rganish ushbu o'simlikni Denov tumani iqlim sharoitidagi aholi manzilgohlarida ko'paytirishga va ulardan keng foydalanishga imkon beradi [24].

O'simliklarning o'sish va rivojlanishini ontogenezning dastlabki bosqichlarida o'rganish uning biologik xususiyatlarini bilishda muhim ahamiyatga ega. O'simliklar yuvenil davridayoq o'z tarixiy taraqqiyotining barcha belgilarini namoyon qiladi. Yangi sharoitda introduksiya qilinayotgan o'simliklar yuvenil davrida tezroq moslashishlari kuzatiladi.

O'simlik o'z rivojining dastlabki bosqichlaridayoq ham morfologik belgilari, ham hayotiy jarayonlari kechishida keskin farqlar kuzatilishi orqali ular hayotining keyingi bosqichlarida qay darajada moslasha olishini belgilash mumkin. Bunday introdusentlar qatoriga kiruvchi daraxtlar kelgusida mamlakatimiz xalq xo'jaligida, o'rmon xo'jaligida, jumladan, aholi sog'lig'ini saqlashda muhim ahamiyatga ega bo'lishi aniq.

Fenologik kuzatishlar har yili kolleksiyadagi hamma navlar bo'yicha 5 yil gullash va hosil berish, 5-6 xo'jalik hosilini berguncha olib boriladi. Keyinchalik kuzatishlar ilmiy izlanishlar rejasiga muvofiq olib boriladi.

Meva ko'chatzorida meva ekinlari navlarini ko'paytirish, bog'dorchilikda qabul qilingan uslublar bo'yicha olib boriladi. Introdusentlarning yangi sharoitda gullashi va urug' hosil qilishi adaptatsiyaning muhim ko'rsatkichidir. Chunki o'simliklarning ekologik omillarga bo'lgan talabi yangi sharoitga mos tushgandagina ular gullaydi, urug' hosil qiladi va pirovardida avlod qoldiradi. Bu esa juda ko'plab o'tkazilgan ilmiy tadqiqotlarda o'z isbotini topgan. Iqlimlashtirilgan o'simliklarning gullash biologiyasi ko'plab olimlar tomonidan keng o'rganilgan. Har xil daraxtlarda generativ bosqichga turli yoshda kirishi mumkin. Mushmula tabiiy arealida dastlab 3 yoshida generativ bosqichga kirishi qayd qilingan. Iqlimlashtirilgan sharoitda esa bu ko'rsatkich u yoki bu tomonga o'zgarishi mumkin. Introduksiya qilinayotgan o'simliklarning gullash jarayonini, gullarning changlanishini o'rganish ularni ekologik va biologik jihatdan tavsiflashga imkon beradi. Ko'pchilik olimlarning izlanishlari natijasida olingan ma'lumotlariga ko'ra, hasharotlar, shamol yordamida yoki o'zaro changlangan o'simliklardan sun'iy yo'l bilan changlanishining afzalligi, gullarning morfologiyasidagi va biologiyasidagi o'zgarishlarga moslashuvchanlik xususiyatlarini keltirib chiqaradi. O'simliklarning gul tuzilishi, gullash biologiyasi, changlanish usullari va changdonlarning yetilish vaqtlarini o'rganish - ulardagi

seleksiya ishlarini olib borishda muhim ahamiyatga ega. R.Y. Levinaning fikricha, o'simliklarning gullash biologiyasi - reproduktiv biologiyaning bir qismidir va uni o'rganish botanika fani uchun muhim ahamiyatga ega. Gullash fazasi eng asosiy faza hisoblanib, u o'zida barcha fenofazalar bog'liqligi va o'simlikning yangi muhitga moslashishini mujassamlashtiruvchi tizimdir [11]. Introduksiya qilingan hududlarda Mushmulaning gullash biologiyasi yetarlicha o'rganilmagan.

Mushmula ustunchasi bitta, ipsimon, uzunligi 5-6 mm, tumshuqchanning ichki qismida changlarni qabul qiluvchi to'qima bo'lib, chang naylarini hosil qilishda ishtirok etadi. Mushmulaning gulida changchi gullari urug'chi gullarga nisbatan oldin yetiladi. Gulning ochilish paytida ustuncha cho'ziladi va chang donalarini qabul qiladi. Ustunchaning yuqori qismida qisqa va o'rta qismida esa nisbatan uzun so'rg'ichlar mavjud. Aynan ustunchaning o'rta qismida unib chiqqan va tarmoqlangan ko'plab chang naylari kuzatildi (3.1-rasm). Chang donasining yetilganligini (fertilligi) gullashning boshlanishida past 85%, (a-rasm), yalpi gullash paytida yuqori 97%, (b-rasm) va gullash yakunida esa o'rtacha 90%, (c-rasm) ekanligi aniqlandi. *Rosaceae* oilasi uchun entomofiliya usuli va ksenogam tipi xarakterlidir. Gullash paytida ko'plab hasharotlarning changlanishda ishtirok etishi kuzatildi. Tumshuqchada o'z changdonasi o'sganligiga asoslanib avtogamiya ham bo'lish mumkin degan fikrga kelindi.

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SURXONDARYO VILOYATI TAQIR O'TLOQI TUPROQLARIDA G'O'ZA KO'CHAT QALINLIGINING HOSILDORLIK VA KO'CHATLAR NOBUD BO'LISHIGA TA'SIRI

Annotatsiya. Tadqiqot Surxondaryo viloyati tuproq-iqlim sharoitida g'o'zaning ko'chat qalinligining hosildorlik va nobud bo'lish jarayoniga ta'sirini o'rganishga qaratildi. Optimal ko'chat qalinligi hosildorlikni oshirish va nobud bo'lishni kamaytirishda muhim ahamiyatga ega ekani aniqlandi.

Kalit so'zlar: G'o'za ko'chat qalinligi, Surxondaryo viloyati, Hosildorlik, Ko'chat nobud bo'lishi, Optimal qalinlik, Tuproq-iqlim sharoiti, Havo va hasharotlar ta'siri, O'rta va ingichka tolali g'o'za

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IMPACT OF COTTON SEEDLING DENSITY ON YIELD AND MORTALITY IN THE SOIL-CLIMATIC CONDITIONS OF SURXONDARYO REGION

Abstract. The study investigates the impact of cotton seedling density on productivity and seedling mortality in the soil and climate conditions of Surxondaryo region. Optimal seedling density significantly enhances yield while reducing plant losses.

Keywords. Cotton seedling density, Surxondaryo region, Yield, Seedling mortality, Optimal density, Soil-climatic conditions, Weather and insect impact, Medium and fine fiber cotton.

Chigit ekishni maqbul muddatlarda, agrotexnik talablarga to'liq rioya qilgan holda o'tkazish, nihollarni tuproqning tabiiy namligiga undirib olish paykallarda sog'lom, bir tekis nihollar hosil qilishni ta'minlaydi hamda mo'l va sifatli hosil yetishtirishga puxta zamin tayyorlaydi.

Ko'chat qalinligi g'o'za hosildorligini belgilovchi asosiy omillardan biri hisoblanib, g'o'zaning navi, tuproq iqlim sharoitiga qarab joylashtirish maqsadga muvofiq hisoblanadi. G'o'zaning ko'chat soni va uni dalada joylashishi hosildorlikni ta'minlashda muhim ahamiyatga ega.

O'simlikxo'r qandalalar soni va g'o'za o'simligiga zararini o'rganishda ko'chat qalinligini ta'siri tajribada ilk bora o'rganilgan. Tajriba tizimiga muvofiq

har xil ko‘chat qalinligi (90-100; 110-120; 120-130 va 140-150 ming tup/ga) qoldirilganda qandalalar soni va zarari aniqlandi.

Surxondaryo viloyatining taqir o‘tloqi tuproqlari sharoitida 2018-2020 yillarda o‘tkazilgan tajriba ma‘lumotlariga ko‘ra, o‘rta tolali g‘o‘zaning ko‘chat qalinligi nazariy ko‘chat soni 90-100 ming tup/ga bo‘lganda o‘rtacha 95,7-96,0 ming tup/gani; 110-120 ming tup/ga bo‘lganda o‘rtacha 116,5-117,1 ming tup/gani; ingichka tolali g‘o‘zaning nazariy ko‘chat soni 120-130 ming tup/ga bo‘lganda o‘rtacha 124,5-124,8 ming tup/gani; 140-150 ming tup/ga bo‘lganda o‘rtacha 146,7-146,9 ming tup/gani tashkil etdi. Variantlar bo‘yicha ko‘chat qalinligi bir-biridan sezilarli farq qilmadi.

G‘o‘zani yagona qilishdan boshlab paxta terimigacha bo‘lgan davr mobaynida noqulay ob-havo sharoiti, zararkunanda va kasalliklarning ta‘sirida hamda kultivatsiya va chopiq o‘tkazish, egat olish vaqtida o‘simlikning shikastlanishi natijasida g‘o‘za tuplari 3,5-5,5 ming tupgacha nobud bo‘lishi aniqlangan.

Amal davri oxirida olingan ma‘lumotlarga ko‘ra, o‘rta tolali g‘o‘zaning ko‘chat qalinligi o‘rtacha 92,3-92,5 va 111,1-111,6 ming tup/gani, ingichka tolali g‘o‘zaning ko‘chat qalinligi o‘rtacha 120,6-120,9 va 141,6-141,9 ming tup/gani tashkil etib, amal davri boshiga nisbatan gektariga 3,5-5,5 ming tupgacha kamayganligi kuzatildi. Amal davri oxiri ko‘chat soni ko‘proq bo‘lgan variantlarda ko‘chatlarning nobud bo‘lishi biroz ko‘proq bo‘ldi.

Amal davri oxirida ko‘chatlarni nobud bo‘lishiga ko‘chat qalinligini ta‘siri kuzatilib, ko‘chat soni oshib borishi bilan ko‘chatni nobud bo‘lishi ham 1,7-2,0 ming tupgacha oshib borishi kuzatildi. Ya‘ni, o‘rta tolali g‘o‘za navida nazariy ko‘chat soni 90-100 ming tup/ga bo‘lganda amal davri oxirida ko‘chatlarni nobud bo‘lishi gektariga 3,5-3,7 ming tup bo‘lsa, nazariy ko‘chat soni 110-120 ming tup/ga bo‘lganda nobud bo‘lgan ko‘chatlar 5,3-5,5 ming tup/ga bo‘lganligi kuzatildi.

Ingichka tolali g‘o‘za navida ham amal davri oxirida nobud bo‘lgan ko‘chat soni 3,9-5,2 ming tup/ga bo‘lib, “Surxon-103” g‘o‘za navi nazariy ko‘chat soni gektariga 120-130 ming tup bo‘lganda nobud bo‘lgan ko‘chatlar soni 3,9-4,0 ming tup/ga bo‘lgan holda ko‘chat qalinligi gektariga 10-20 ming tupga oshirilishi bilan nobud bo‘lgan ko‘chatlar soni ham 1,0-1,3 ming tup/ga oshib 5,0-5,2 ming tup/ga ni tashkil etdi.

Demak, Surxondaryo viloyatining taqir o‘tloqi tuproqlari sharoitida o‘rta va ingichka tolali g‘o‘za navlari maqbul ko‘chat qalinligida parvarishlanganda, g‘o‘zaning o‘sish va rivojlanishi normal me‘yorda bo‘lishi, hashorat va kasalliklarga chidamliligi oshishi hisobiga amal davri oxirida ko‘chatlarning nobud bo‘lishi kamroq bo‘lib mo‘l paxta hosili olinadi.

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THE DAMAGE CAUSED BY PLANT-EATING BEETLES TO COTTON YIELD ELEMENTS AND ITS CONSEQUENCES

***Abstract.** This article examines the damage caused by plant-eating bugs to cotton yield elements and the effect of seedling density and pruning methods on the number of pests and the degree of damage. The study found that increasing seedling density leads to a rise in pest numbers and an increase in the damage to yield elements. Furthermore, pruning methods have been shown to be effective in reducing the damage caused by pests.*

***Keywords.** Cotton, plant-eating beetles, yield elements, damage, seedling density, thinning, agro-technique, Entozhean, agro-technical measures.*

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ЎСИМЛИКХЎР ҚАНДАЛАЛАРНИ ҒЎЗА ҲОСИЛ ЭЛЕМЕНТЛАРИГА ЕТКАЗГАН ЗАРАРИ ВА УНИНГ ОҚИБАТЛАРИ

***Аннотация.** Ушбу мақолада, ўсимликхўр қандалаларнинг ғўза ҳосил элементларига етказган зарари ва бу зарарнинг кўчат қалинлиги ва чилпиш усулларига боғлиқлиги ўрганилган. Тадқиқотда ғўза навларининг турли кўчат қалинлиги шароитида ўсимликхўр қандалаларнинг ҳосил элементлари сонига ва зарарланиш даражасларига таъсири таҳлил қилинган. Маълумотларга кўра, кўчат қалинлиги ошиши билан қандала сони ва ҳосил элементларининг зарарланиши ортади. Шунингдек, чилпиш усулларининг қўлланилиши зарарни камайтиришида самарали бўлиши мумкин.*

***Калим сўзлар:** Ғўза, ўсимликхўр қандалалар, ҳосил элементлари, зарар, кўчат қалинлиги, чилпиш, агротехника, Энтозҳеан, агротехник тадбирлар.*

Ўсимликхўр қандалалар қирқдан ошиқ ҳар хил оилага мансуб бўлган ўсимликларни зарарлайди. Қандала сўрувчи ҳашоратлар гуруҳига мансуб бўлиб, ўсимликларни санчиб сўради ва кучли зарарлайди. Қандаланинг сони ўсимликлар турига, ҳаво ва тупроқ намлиги ҳамда ҳароратига, ўсимликнинг ёшига ҳамда қўлланилган агротехник тадбирларга боғлиқ бўлади.

Ўтказилган тадқиқот натижаларига кўра, агротехник тадбирлардан кўчат қалинлиги ва чилпиш усулларини ўсимликхўр қандалаларнинг сонига ҳамда ғўзага етказган зарарига ҳар-хил таъсир кўрсатиши кузатилди.

Тажрибада ғўзанинг ўрта толали “Бухоро-102” нави (90-100 ва 110-120 минг туп/га) ҳамда ингичка толали “Сурхон-103” нави (120-130 ва 140-150 минг туп/га) 2 хил кўчат қалинлигида экилиб, ғўзага чилпиш ўтказилмаган, қўлда чилпиш ўтказилган ва энтожеан препарати ёрдамида кимёвий чилпиш ўтказилган вариантларда 15.08; 30.08 ва 15.09. саналарда ўсимликхўр қандала билан зарарланиш даражаси бўйича кузатувлар олиб борилди (2.2.1-жадвал).

Олинган маълумотларга кўра, август ойининг 15 санасида ўтказилган кузатувда ўрта толали “Бухоро-102” ғўза навида ҳосил элементлари сони 20,6-28,5 донани ташкил қилиб, шундан 0,8-2,1 донаси қандала билан зарарланган. Энг кўп зарарланиш ўсимлик 110-120 минг туп/га кўчат қалинлигида чилпиш ўтказилмаган 4-вариантда кузатилиб, бир туп ўсимликдаги ҳосил элементларнинг 2,1 донаси қандала билан зарарланган. Август ойининг 30 санасида ўтказилган фенологик кузатув натижаларига кўра, ғўза туп сони гектарига 90-100 минг туп бўлганда ҳосил элементлари сони 25,6-30,5 дона бўлиб, 110-120 минг туп/га кўчат қалинлигига нисбатан 2,4-4,5 донага кўп ва қандала билан зарарланиш даражаси эса 1,2-3,2% гача кам бўлди.

Ингичка толали ғўза навида ҳам юқоридаги қонуният такрорланиб, ингичка толали “Сурхон-103” ғўза навида 15 сентябр ҳолатида ўсимлик гектарига 120-130 минг туп экилганда ҳосил элементлари 20,0-23,0 дона бўлиб, шундан 1,3-2,1 донаси ёки 5,6-10,5 фоизи қандала билан зарарланган. Кўчат қалинлиги гектарига 10-20 минг тупга оширилганда ҳосил элементлари сони 16,3-20,5 донани ва зарарлангани 1,3-2,4 донани ташкил этиб, кўчат қалинлиги камроқ бўлган вариантларга нисбатан 0,7-4,2 фоиз кўпроқ қандала билан зарарланган. Яъни, кўчат қалинлигини ошиши ғўзада ҳосил элементлари сони камайиб, қандалалар сони ва зарарлаш фоизи кўпайишига сабаб бўлган.

Ўсимликхўр қандалани ғўза ҳосил элементларни зарарланиш даражасига кўчат қалинлиги билан бирга чилпиш усулларини ҳам таъсири ўрганилди. Ўрта толали “Бухоро-102” ғўза нави гектарига 90-100 минг туп кўчат қалинлигида турли чилпиш усулларида парваришланганда 15 – сентябр ҳолатида ҳосил элементлари 23,4-28,3 дона бўлиб шундан 2,0-3,4 донаси қандала билан зарарланган бўлиб, чилпиш ўтказилмаган назорат вариантыда зарарланиш даражаси 14,5 фоизни ташкил этган. Қўлда чилпиш ўтказилган вариантда қандала билан зарарланиш 8,4 фоиз бўлса, энтожеан ёрдамида кимёвий чилпиш ўтказилганда 7 фоиз ҳосил элементлари зарарланиб назорат вариантыга нисбатан 7,4 фоиз кам қандала билан зарарланган. Ингичка толали ғўза навида ҳам чилпишни ғўза ҳосил элементларини қандала билан зарарланишига таъсири ўрганилганда юқори даражада зарарланиш чилпиш ўтказилмаган назорат вариантыда кузатилди. Ғўза ривожланишида Энтожеан препарати ёрдамида кимёвий чилпиш ўтказилган вариантда ғўза ҳосил элементларини қандала билан зарарланиш даражаси 5,6 фоиз бўлиб, назорат вариантыга нисбатан 4,9 фоиз кам зарарлангани кузатилди.

Демак, Сурхондарё вилоятининг тақир типик тупроқлари шароитида юқори пахта ҳосили олиш ва уни қандала зарарига бардошлигини ошириш

учун ўрта толали навларни гектарига 90-100 минг туп; ингичка толали ғўза навларини эса 120-130 минг туп кўчат қолдириб, Энтожеан препарати ёрдамида кимёвий чилпиш ўтказиш мақсадга мувофиқдир.

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RESULTS OF STUDIES ON VARIOUS TOPPING METHODS AND PLANTING DENSITY IN THE CONDITIONS OF SURXONDARYO REGION

***Abstract.** The article examines the impact of planting density and topping methods on the growth and yield of medium- and fine-fiber cotton varieties in the conditions of the Surxondaryo region. The experiments utilized both chemical (using "Entogean" preparation) and manual topping methods. Results indicate that optimal selection of planting density and topping methods can enhance the number and quality of yield elements and shorten the cotton maturation period.*

***Keywords.** Cotton planting density, Topping methods, Yield, Entogean preparation, Medium- and fine-fiber varieties*

Cotton growth and development are influenced by soil fertility, irrigation, fertilization, sowing dates and methods, soil cultivation, pruning methods and timing, and pest and disease management. Experiments have been conducted to study the impact of plant density and pruning methods on cotton growth and development. Pruning is considered one of the most crucial agronomic practices. Timely and effective pruning accelerates growth and development, reduces the shedding of yield elements, increases the number of flowers and bolls, mitigates pest damage, hastens boll maturation by 5-10 days, and boosts yield by 3-4 quintals per hectare, sometimes up to 6-8 quintals.

Pruning can be performed manually, mechanically, or chemically using substances like Sojean and Entojean. Depending on the characteristics of the cotton variety, pruning is recommended when the plant develops 13-14 fruiting branches in fertile soils, 12-13 branches in moderately fertile soils, and 11-12 branches in less fertile soils. In double-row plantings, pruning is done when 10-11 branches form.

Manual pruning involves pinching the topmost 1-2 cm of the main stem, which is typically light in color. Incorrect pruning, such as removing 5-10 cm of the stem, negatively affects the plant and reduces yield by 3-5 quintals per hectare due to the loss of buds and flowers.

Mechanical pruning is performed using devices mounted on cultivators to trim the top of the cotton plant.

Chemical pruning is effective for enhancing growth and yield. It involves applying Sojean or Entojean at 250-300 liters per hectare mixed with water, either 5-7 days before or after irrigation. The chemicals are absorbed through the leaves, uniformly distributed, and inhibit cell division. This stops vertical and lateral growth, giving the plant a compact, conical shape, improving air circulation, and creating a favorable microclimate. This results in the development of 3-4 large bolls

at the top, accelerates maturation by 7-8 days, increases the first harvest by 6-7 quintals per hectare, and enhances overall yield by 3-8 quintals or more.

Entojean is a growth regulator composed of 98% mepiquat chloride. It prevents excessive vegetative growth, promoting the formation of bolls in the lower parts of the plant, which mature earlier and boost yield. Proper application of Entojean can increase yield by 5-10 quintals per hectare.

Recommended Entojean dosages vary based on the growth stage and plant density. For mid-fiber "Bukhara-102" varieties with a density of 90-100 thousand plants per hectare, 90 g/ha is applied; for 110-120 thousand plants/ha, 95 g/ha. For fine-fiber "Surkhan-103," with a density of 120-130 thousand plants/ha, 100 g/ha is used, and 140-150 thousand plants/ha require 105 g/ha.

Research shows no significant differences among variants in early phenological observations in June. However, after pruning, differences were observed. In September, the height of "Bukhara-102" mid-fiber plants with 90-100 thousand plants per hectare was 93.0-105.2 cm, while 110-120 thousand plants/ha resulted in heights of 95.0-109.0 cm. Without pruning, heights increased by 10-15 cm. Denser planting reduced fruiting branches and yield elements per plant but increased overall yield. Chemical pruning generally outperformed manual pruning.

Similar trends were observed for "Surkhan-103" fine-fiber cotton. With 120-130 thousand plants per hectare, plant heights ranged from 95.0-110.2 cm, increasing to 100.6-115.0 cm with 140-150 thousand plants/ha. Without pruning, heights increased by 11-15 cm.

In July, the number of damaged yield elements was counted. For "Bukhara-102," 20.4-26.6 elements formed, with 5-9 shedding. For "Surkhan-103," 6-8 elements shed.

In conclusion, in the loamy soils of Surkhandarya region, reducing plant density and timely chemical pruning increases the number of fruiting branches and yield elements, enhancing cotton productivity.

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LANGUAGE INTERFERENCE AS A CAUSE OF LANGUAGE ERRORS: TEACHING EXPERIENCE AT THE NON-LINGUISTIC FACULTY OF A UNIVERSITY

Abstract:

This article examines interlanguage and intralanguage interference as key causes of language errors identified in English classes, focusing on both the oral and written speech of students from the Faculty of Chemistry. It provides examples of different interference-related errors, such as lexical, word-formation, grammatical, and stylistic mistakes, and highlights how the specific nature of the material studied by non-linguistic students contributes to these errors. The article concludes that interference is an inevitable result of underlying linguistic mechanisms but also posits that the native language can serve as a valuable resource for metalinguistic reflection. Methods for organizing classroom activities and exercises to prevent common language errors are also proposed.

Keywords: *Interlanguage interference, foreign language, native language, language errors, metalinguistic reflection.*

The demands of modern life and the development of society require professionals to possess, alongside in-depth knowledge of their specific fields, proficiency in at least one foreign language. Increasingly, English is favored as the global lingua franca, a tool for international communication. Many scholars agree that linguistic knowledge is indispensable for personal, social, and even national development [Putra, 2020], making the study of foreign languages an essential part of university curricula.

One of the most effective ways to master a foreign language is the communicative approach, which emphasizes immersion in the language and minimizes the use of the native language in instruction. However, some researchers argue that successful language acquisition requires a combination of communicative and structural-functional methods tailored to the individual needs of students [Nikulicheva, 2014: 8]. Our experience teaching English at the Faculty of Chemistry at KARIEI supports this view. Most students enter university with a basic level of foreign language competence and seek to deepen their knowledge by drawing analytical parallels between the structures of their native and foreign languages. This reflective approach helps in identifying and preventing common language errors.

Guided by practical considerations, we have collected and analyzed typical language mistakes made by students whose native language is Uzbek and who are learning English as a foreign language. As I.G. Ovchinnikova rightly points out,

language interference is the primary factor causing language errors [Ovchinnikova, 2021]. Interference, or interlanguage transfer, has long been a subject of linguistic inquiry, studied by scholars such as L.S. Vygotsky, V.G. Kostomarov, L.V. Shcherba, and others. In simple terms, interference occurs when previously acquired linguistic knowledge in one language is applied to solve similar problems in another language. Interference manifests even at advanced levels of foreign language proficiency, though research suggests it decreases as proficiency increases [Abhishek, 2022].

While interference is often viewed negatively, it can also have a constructive role. The ability to compare languages, identify linguistic universals, and draw interlanguage parallels fosters linguistic competence [Samarskaya, 2017]. Thus, interference-induced errors can serve as valuable material for refining language instruction practices.

Types of Language Errors and Interference

1. Lexical Errors:

Interlanguage interference often leads to errors in word choice. For instance, students might use "opening" to mean "scientific discovery," transferring the Uzbek word's broader meaning to the English lexeme "discovery." Similarly, students may use "end" instead of "expire" when discussing the expiration of a document like the Montreal Protocol. These errors arise from the transfer of meaning from the native language to the foreign language, where the concepts are similar but not identical.

2. Intralanguage Interference:

Errors also result from intralanguage interference, where confusion arises within the target language itself. For example, students may mix up similar-sounding or similarly spelled words, such as "search" and "research" or "pure" and "poor." This phenomenon is known as extraversive paronymy, where phonetic similarities cause errors in word usage [Kuznetsova, 2010: 61].

3. Word-Formation Errors:

Students often incorrectly form adjectives using the wrong prefixes, such as "*uneffective*" instead of "ineffective" or "*unlegal*" instead of "illegal." These errors are particularly common when dealing with complex scientific texts, as students may struggle with less frequent prefixes like "in-" in words such as "inconclusive" or "inexhaustible."

4. Grammatical Errors:

Grammatical interference occurs when the grammatical rules of the native language are applied to the foreign language. Common examples include using gendered pronouns for inanimate objects (e.g., referring to water as "she") or forming plurals for uncountable nouns in English. Additionally, errors in subject-verb agreement and preposition use often stem from interference [Weinreich, 1999].

5. Stylistic Errors:

Stylistic interference is most evident in students' written work, particularly

in their attempts to write abstracts for scientific articles. Uzbek-speaking students tend to produce long, complex sentences with multiple subordinate clauses, which are characteristic of formal Uzbek writing but cumbersome in English. This often leads to the violation of English academic writing conventions, which favor shorter, more direct sentences.

Addressing Language Interference in teaching

To correct interference-related errors, instructors can employ a variety of exercises focused on word formation, lexical choice, and grammatical transformation. Analyzing language errors provides insight into the cognitive processes behind speech production and opens new avenues for psycholinguistic research. Encouraging students to reflect on their errors as part of metalinguistic analysis can foster a more conscious approach to language learning.

Viewing interference not merely as a negative phenomenon but as a potential learning resource enriches both the teaching process and students' linguistic development. It allows for structural and typological comparisons between languages, expanding the pedagogical toolkit available to educators and enhancing students' overall linguistic competence.

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ECONOMIC LOCATION AND NATURAL RESOURCES OF KONGIROT AND MUYNAK DISTRICT

***Abstract:** This article explores the economic location and natural resources of Kongirot and Muynak districts. It examines the geographical positioning, transportation infrastructure, primary economic activities, and available natural resources of both districts. The study highlights how these factors contribute to the regional development and economic potential of the areas. Recommendations are provided to enhance the economic capabilities and sustainable management of natural resources in Kongirot and Muynak.*

***Keywords:** Kongirot District, Muynak District, economic location, natural resources, transportation infrastructure, regional development, agricultural sector, industrial resources*

Introduction: Kongirot and Muynak districts are two of Uzbekistan's strategically significant regions, each contributing uniquely to the country's economic landscape and regional development. Situated in distinct geographical areas, these districts boast diverse natural resources and robust economic infrastructures that play pivotal roles in fostering local and national economic growth. Understanding the economic location and natural resources of Kongirot and Muynak is essential for policymakers, investors, and stakeholders aiming to leverage these districts' potential for sustainable development. Kongirot District is located in the southern part of Uzbekistan, bordered by key provinces that facilitate access to major transportation routes and trade corridors. This strategic positioning not only enhances Kongirot's connectivity with other economic hubs but also makes it a critical node in national and regional supply chains. The district's proximity to fertile agricultural lands and water resources supports its agrarian-based economy, enabling high productivity and resilience against climatic fluctuations. Conversely, Muynak District is situated in the northern region, characterized by its arid climate and rich mineral deposits. The district's geographical location near significant mineral reserves has positioned it as a cornerstone of Uzbekistan's mining industry. Muynak's accessibility to transportation networks, including railways and highways, further amplifies its role in the efficient distribution of mined resources both domestically and for export purposes. Both districts benefit from well-developed transportation infrastructures, albeit tailored to their primary economic activities. Kongirot's infrastructure is optimized for agricultural exports, with extensive road and rail networks facilitating the movement of crops, livestock, and agricultural products to markets across the country and beyond. Additionally, the presence of agro-industrial enterprises within Kongirot adds value to raw

agricultural outputs, creating a synergistic ecosystem that enhances economic stability and growth. Muynak's infrastructure, on the other hand, is predominantly geared towards supporting its mining and industrial sectors. The district houses several mining operations that extract valuable minerals such as gold, silver, and other precious metals.

Literature review.

The economic location and natural resources of a region play a crucial role in shaping its development trajectory. Understanding these factors is essential for formulating strategies that promote sustainable growth and regional competitiveness. This literature review examines existing research on the economic geography, natural resource management, and regional development, with a particular focus on studies relevant to Kongirot and Muynak districts in Uzbekistan.

Economic geography explores the spatial distribution of economic activities and how location influences economic performance. According to Smith (2019), the geographical location of a region significantly impacts its access to markets, availability of resources, and connectivity to transportation networks, all of which are pivotal for economic growth. Johnson and Hamidov (2021) further elaborate that strategic locations facilitate trade and investment, enhancing a region's economic potential. These insights are particularly relevant to Kongirot and Muynak districts, which are strategically positioned within Uzbekistan to leverage transportation corridors and resource availability.

Agriculture remains a cornerstone of economic activity in many regions, including Kongirot. Smith (2019) notes that regions with strong agricultural sectors tend to experience stable economic growth due to the consistent demand for food and raw materials. In Kongirot, the emphasis on cotton cultivation and livestock farming not only sustains local livelihoods but also contributes significantly to Uzbekistan's agrarian economy. Karimov (2020) highlights the importance of adopting modern agricultural technologies and sustainable practices to enhance productivity and ensure the long-term viability of the sector.

Industrialization, particularly in the mining sector, is a significant driver of economic growth in resource-rich regions like Muynak. Petrov (2018) examines how the extraction and processing of minerals such as gold and silver have positioned Muynak as a key player in Uzbekistan's mining industry. The establishment of mining operations attracts investments, creates employment opportunities, and stimulates ancillary industries, contributing to overall economic diversification and resilience. Ravshanov (2019) underscores the need for technological innovation and regulatory frameworks to optimize resource extraction while ensuring environmental sustainability.

Analysis and Results.

The economic landscapes of Kongirot and Muynak districts reveal distinct yet complementary profiles that significantly contribute to their respective regional economies and Uzbekistan's overall economic framework. Recent developments up to 2023 have further accentuated the strategic importance of these districts, driven by advancements in infrastructure, resource management, and sector-specific

growth. Kongirot District, strategically positioned in the southern region of Uzbekistan, benefits immensely from its proximity to major transportation corridors, including the Trans-Caspian Railway and the North-South Transport Corridor. This advantageous location facilitates efficient movement of goods and services, enhancing trade opportunities both domestically and internationally. The district's robust transportation infrastructure has been further strengthened by recent investments in road improvements and logistics hubs, aimed at reducing transit times and operational costs for businesses. These enhancements have attracted new investments in the agricultural sector, positioning Kongirot as a pivotal hub for Uzbekistan's agribusiness. Agriculture remains the cornerstone of Kongirot's economy, with recent data indicating a 10% increase in cotton production and a 15% rise in grain yields over the past two years. This growth is attributed to the adoption of modern farming techniques, irrigation technologies, and sustainable agricultural practices promoted by both government initiatives and private sector investments. Additionally, the diversification of agricultural products, including the cultivation of high-value crops such as fruits and vegetables, has bolstered the district's economic resilience against market fluctuations and climatic challenges. In addition to agriculture, Kongirot has seen significant growth in its agro-industrial sector. The establishment of new processing facilities for cotton and grains has not only added value to raw agricultural products but also created numerous employment opportunities, thereby stimulating local economic activity. These developments have contributed to a 12% increase in Kongirot's GDP over the last three years, underscoring the district's growing economic significance. Muynak District, located in the northern part of Uzbekistan, is renowned for its rich mineral resources, particularly gold and silver. The district's mining sector has experienced substantial growth, driven by increased extraction activities and the introduction of advanced mining technologies. Recent explorations have identified new mineral deposits, promising to extend the lifespan of existing mines and attract further investments in the mining industry. As a result, Muynak has witnessed a 20% surge in mining output, positioning it as a key player in Uzbekistan's mineral export portfolio. The economic impact of Muynak's mining activities extends beyond raw material extraction. The development of downstream industries, including mineral processing and metallurgy, has fostered industrial diversification within the district. These industries not only enhance the value chain but also create high-skilled job opportunities, contributing to socio-economic development. Furthermore, the revenues generated from mining operations have been reinvested into local infrastructure projects, such as the expansion of the Muynak Industrial Park and the improvement of utility services, thereby enhancing the overall business environment. Environmental sustainability has become a critical focus for both Kongirot and Muynak districts. In Kongirot, efforts to implement sustainable agricultural practices have led to improved soil health and water conservation, ensuring the long-term viability of the agrarian sector. Similarly, Muynak has adopted environmentally responsible mining practices, including the use of eco-friendly technologies and the establishment of waste management protocols to

mitigate the environmental impact of mining activities. These initiatives are aligned with Uzbekistan's national sustainability goals, promoting balanced economic growth while preserving natural ecosystems. The integration of digital technologies has also played a transformative role in both districts.

Conclusion.

The comprehensive analysis of Kongirot and Muynak districts underscores their pivotal roles in Uzbekistan's economic landscape, driven by their strategic geographical locations and abundant natural resources. Kongirot District, with its advantageous position in the southern region, leverages robust transportation infrastructure to bolster its agricultural and agro-industrial sectors. The district's significant advancements in cotton production and grain yields, supported by modern farming techniques and sustainable practices, highlight its contribution to national agrarian productivity and economic stability. Furthermore, the integration of digital technologies has enhanced agricultural efficiency and market accessibility, positioning Kongirot as a key player in Uzbekistan's agribusiness. Conversely, Muynak District's northern location and rich mineral deposits, particularly gold and silver, have established it as a cornerstone of the country's mining and industrial sectors. The district's thriving mining activities, supported by advanced extraction technologies and comprehensive transportation networks, have not only driven economic growth but also attracted substantial investments. The development of downstream industries within Muynak has diversified its economic base, created employment opportunities and fostered socio-economic development.

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THE ROLE OF INNOVATIVE METHODS IN EARLY DIAGNOSIS OF INTRADUCTAL NEOPLASIA OF THE MAMMARY GLAND

***Abstract.** Our work examined the role of early diagnosis in breast cancer screening in women with nipple discharge. In order to study early diagnosis, 132 women aged 35 to 65 years, who were undergoing outpatient treatment by a mammologist, were examined at the Andijan Branch of the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology, who were examined from 2019 to 2022*

***Key words:** neoplasia, mammary gland, intraductal neoplasia of the mammary gland, diagnosis.*

Introduction.

Recently, the structure of mammary gland pathology has undergone changes. There is an increase in breast cancer, and due to its difficult to diagnose forms - intraductal cancer, which accounts for 70-85% of tumors in this location [1]. In this regard, intraductal pathology of the mammary glands belongs to a high-risk group and requires identification at the early stages of its development [2]. Intraductal diseases of the mammary glands are characterized by a high risk of transformation into breast cancer. Difficulties in diagnosing intraductal formations are associated with a single symptom - the appearance of pathological discharge from the nipple of the mammary gland. Screening studies have shown that various intraductal proliferations develop into cancer at different rates in situ and invasive cancer (from simple ductal hyperplasia to invasive breast cancer is 1.5%, from atypical ductal hyperplasia - 4–5%, and cancer in situ develops in 8–10% of cases) [3]. For the first time in the reports of 1911 and 1912. V.M. Mintz [4] presented evidence that not only palpable cancer and breast papilloma can manifest themselves as serous and bloody discharge from the nipple. Also, as it turned out later, the cause of secerating mammary glands can be: intraductal papillary growths, fibrocystic mastopathy, malignant neoplasms, etc. V.M. Mintz (1911 y) [4] by pathological discharge means serous and bloody discharge that occurs spontaneously and for a long time. R.E. Targamadze (1971) [4] considered all discharges not associated with feeding a child to be pathological.

Ultrasound has less value in visualizing minimal cancer than mammography and cannot compete with it. A significant number of false negative results indicate difficulties in interpreting echograms. So, the system for diagnosing diseases of the secerating mammary gland is a complex process. The need for earlier detection and

selection of the correct treatment tactics requires the creation of an accessible and simple system of diagnostic measures, including more informative, modern techniques. The accumulation of information about the possibilities of radiation methods, the feasibility and algorithms for their use in patients with different localizations of primary formations is a prerequisite for the creation of an effective diagnostic program.

PURPOSE OF SCIENTIFIC RESEARCH.

To study the early diagnosis of tumors of the mammary ducts in patients with pathological discharge from the mammary glands and the improvement of treatment methods.

Materials and research methods

The study was based on the results of a clinical, laboratory and instrumental examination of 132 women with pathological discharge from the milk ducts, identified during screening and sent to the Andijan Branch of the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology for a targeted examination. By screening, patients with bloody and serous discharge from the mammary gland were selected and a cytological examination of pathological discharge was performed. These women underwent contrast ductography and elastography, as well as determination of tumor markers CA 15-3.

RESULTS AND ANALYZES

With neoplasia of the mammary tract, serous discharge was detected in 6 patients (5.8%), intraductal papilloma of the mammary gland - in 93 patients (91%), and FCM disease - in 3 patients (2.9%).

It was found that in 18 patients (20%) the presence of bloody discharge with neoplasia of the mammary gland occurs with cancer, in 72 patients (80%) with intraductal papilloma of the mammary gland, and it was found that there is no bloody discharge with FCM.

The sensitivity of the ductography method was 75% for cancer and 76% for intraductal papilloma of the mammary gland in 132 patients. (Table 1.)

Table 1.

Clinical data revealed by ductography

No.	Histologically detected disease	If quality	Uneven contours, filling defect	Smooth contours, filling defect	Narrowing of the milk ducts	Deformation of the milk ducts	Sensitivity of the ductography method
1	Cancer	12	9	3			75%
2	Intraductal papilloma	117	9	90	12	6	76%
3	FCM	3				3	
	Total	132	18	93	12	9	

The change in CA 15.3 in 132 female patients showed a high index of 11.0 U/ml for cancer; the lowest value was 8.2 (normal 0-34.0 U/ml). High index of mammary

gland papillomatosis – 30.4 U/ ml; the low value was 2.5 U/ml. High index for FCM disease – 13.1 U/ ml; the lowest value was 11.2 U/ml. In the examined 132 patients with nipple discharge, the following results were obtained: - 3 of them had FCM (2.2%); of them, 117 had breast papillomatosis (88.6%); and in 112 of them a histological conclusion about breast cancer was obtained (9%).

Conclusions

1. During screening examinations (cytological examination, ductography and elastography), the presence of pathological discharge in the mammary glands (bloody and serous) is identified, confirmed and sent for targeted studies.
2. With bloody discharge from the nipple, in 80% (72 examined) cases it is intraductal papilloma, in 29% (38 examined) cases it is breast cancer. In 2.9% (4 patients) the serous discharge was FCD, in 91 % (120 patients) it was intraductal papilloma, in 5.8% (8 patients) it was breast cancer.
3. With early diagnosis of mammary gland neoplasia, no changes in the amount of CA 15-3 were observed.
4. According to the histological conclusions obtained from the results of the study, 2.2% (3 patients) of mammary gland neoplasia are FCD, 88.6% (117 patients) are intraductal papillomas, 9% (12 patients) are cancerous diseases.

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TEACHING ENGLISH TO ADULTS: KEY ASPECTS OF MOTIVATION AND THE EDUCATIONAL PROCESS

Annotation

Teaching English to adults has become a pressing issue in contemporary education. This article addresses both external and internal motivational factors, presenting statistical data on why English has become a primary focus for learners worldwide. By understanding the motives behind adult English learning, educators can design more effective educational strategies, leading to the development of communicative competence, the main objective of such learning. The success of language acquisition relies on well-structured lessons, teacher expertise, course organization, assessment methods, and alignment with learners' needs.

Keywords: adult education, motivational factors, communicative competence, educational interaction, assessment methods, language for specific purposes, vocabulary development, classroom practices

Adult education, particularly in foreign languages, is a global priority. In modern Uzbekistan, there is a growing interest in learning various world languages, especially Oriental languages. However, globalization and the opening of international and cultural borders have placed English at the forefront of language learning efforts.

Various online surveys show reasons that drive adults to learn English, with the most common ones being:

1. The vast number of native English speakers, making international communication easier.
2. English as a key tool in business, which is now essential in the global professional landscape.
3. English as the language of technological advancement.
4. English as the dominant language of the internet and virtual communication, linking people from different cultures worldwide.

Current trends suggest that economic motivations are the strongest driving force behind adult English learning. A recent study revealed that nearly 60% of senior executives in Uzbekistan believe it is crucial to improve their employees' English skills for successful integration into global business. Moreover, countries experiencing rapid economic growth increasingly value professionals with strong English proficiency. Notably, China, India, Indonesia, Pakistan, Brazil, and several African nations are leading in English language education, followed by countries like Russia and Uzbekistan.

Despite business and economic goals being prevalent, adults also pursue English for personal reasons, such as traveling, reading English literature, assisting

children with their education, or improving job prospects. For some, learning English is also a fulfilling way to spend their free time. In summary, English learning is not just about acquiring knowledge but also about building self-confidence and opening doors to success.

Swiss economist Bruno Fry emphasized the importance of intrinsic motivation, stating that people are not motivated solely by external rewards. In adult education, understanding the learner's deeper motivations is crucial to developing effective programs. Barvenko (2004) highlighted that adult learners, driven by specific interests and pragmatic goals, require an approach that integrates their educational needs into their life contexts.

Recent publications in Uzbekistan on adult education systems for foreign language learning identify three common models:

1. Corporate models, designed by large companies to enhance employee skills.
2. Specialized models, such as professional training institutes or specialized courses.
3. Virtual models, using digital and online learning technologies.

These models coexist and often complement one another. In Uzbekistan, short-term, intensive courses have become particularly popular, with many adults opting for four-week English courses, attended by about 65% of learners aged 21 and older. There has also been significant growth in private language schools. Like in many countries, the government in Uzbekistan is increasingly involved in adult language education, with postgraduate education receiving attention. The Russian government has also emphasized the importance of English proficiency for civil servants.

Western and Russian research on adult English education underscores several critical aspects:

- Adult education requires an understanding of specific psychological principles, making the study of andragogy relevant.
- Course design must align with the learners' goals, focusing on the development of communication skills.
- The bulk of learning happens in the classroom, where educators must be prepared to meet high intellectual and physical demands.
- Learning materials should maximize classroom time efficiency, as adult learners often face time constraints.
- Teaching methods should activate language use and meet student needs, with motivation being a key driver of progress.
- Vocabulary development should be prioritized to encourage practical language use in speaking and writing.
- Many adult learners study English for specific professional purposes, requiring specialized teaching strategies.
- Teachers should be prepared to work with students of varying language levels, with an effective assessment system that motivates learners through regular feedback.

Adults, as a demanding audience, often expect quick results, which places a significant responsibility on both teachers and learners. The success of adult language learning hinges on the use of modern teaching methods, technologies, and communicative competence. However, adult education is still an evolving field, often based on outdated university teaching methods, which are not always effective. The role of the teacher is critical in shaping the educational interaction and maintaining motivation, making the professional development of teachers a key priority.

Conclusion. Teaching English to adults requires a nuanced approach that recognizes their unique motivations, challenges, and learning preferences. Adults often approach language learning with clear goals, whether for professional growth, personal development, or cultural integration. Harnessing this motivation through relevant, goal-oriented instruction is critical for fostering engagement and success.

The educational process for adult learners should prioritize practical and communicative methods, drawing on their life experiences and providing real-world applications. Flexibility in instructional design, coupled with personalized feedback and a supportive learning environment, can help overcome common barriers such as time constraints, anxiety, and varied language proficiency levels.

Moreover, integrating technology and diverse resources into lessons can enhance accessibility and enrich the learning experience. By combining these strategies with an understanding of adult learning theories, educators can empower their students to achieve linguistic competence while building confidence and independence in using English.

In sum, effective teaching for adult learners hinges on a balance between motivation and tailored pedagogy, ensuring that the learning journey is both meaningful and impactful.

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TYPES OF FLUFFY FABRICS, REQUIREMENTS TO THEM AND INNOVATIVE TECHNOLOGIES

Anntotion: This article provides information on the requirements for the production of fluffy fabric, the production standards of its types depending on the purpose of its use, and the current innovative technologies.

Key words: Towel fabric, baby clothes, fluffy fabrics, GOST standards, pattern, robes, pattern structure.

The increasing demand for various types of clothes and goods in the world and the use of new techniques and technologies in the implementation of these demands occupy one of the leading positions in the textile industry. Among the textile products produced in our country, fluffy fabrics are one of the products with a high export index. Fluffy textiles are the most used and frequently changed products in our daily life.[1]

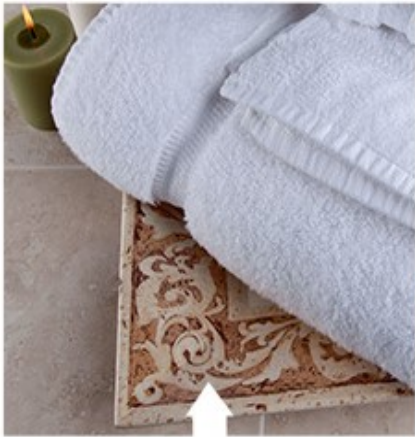
Fluffy fabrics are divided into the following types depending on the field of use: there are towel fabrics, baby clothes, robes and other types.

Towel fabrics

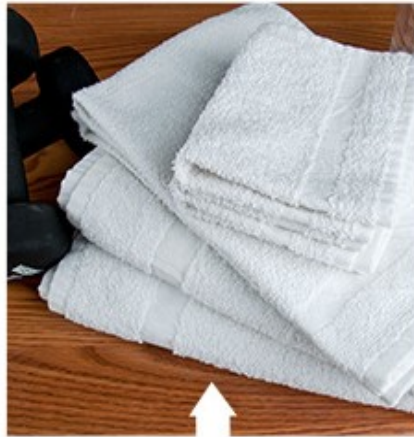
When choosing a thread for towel production, the following requirements should be considered: high moisture absorption, softness, good dyeability, strong color retention, no change during washing, and the price should be affordable. Considering these facts, cotton fiber is used as the most used fiber in the world in the production of towels. In addition, bamboo, complex, microfiber and silk are widely used.[2]

Depending on the type of usage, the most commonly used towels are:

- | | | |
|---------------------|------------------------|----------------------|
| <i>1.Bath towel</i> | <i>4.Gym towel</i> | <i>7.Beach towel</i> |
| <i>2.Hand towel</i> | <i>5.Kitchen towel</i> | <i>8.Foot towel</i> |
| <i>3.Face towel</i> | <i>6.Spa towel</i> | <i>9.Tea towel</i> |



SPA TOWELS



REGULAR BATH TOWELS



POOL TOWELS

Baby clothes

Baby clothes are designed to be gentle on delicate skin. Manufacturers pay special attention to the selection of materials, opting for soft, breathable fabrics like organic cotton. Learn about the importance of choosing hypoallergenic materials and the steps taken to ensure that the fabrics are free from harmful chemicals, making them safe for your little one.

No garment leaves the manufacturing facility without undergoing rigorous quality control checks. Delve into the measures taken to ensure that each baby outfit meets the highest standards of safety, durability, and comfort. Learn about the various tests conducted, such as color fastness, seam strength, and sizing accuracy.[3]



Robes

Different types of robes have different uses. The kind of robe material you should get for your next purchase depends on various factors:

- **Weight:** Weight dictates how cool and comfortable your robe will be and affects every other criterion in the book. If you're living in a cooler climate, you may want a heavy fabric which has great insulating properties (like flannel and wool bathrobes). A thinner fabric (like bamboo) is a better fit if you live in a warmer location.

- Upkeep: Certain fabric types (like cashmere, which needs to be dry cleaned) require a bit more care and are best used for special occasions. You may opt to choose a lower-maintenance fabric for everyday use.
- Absorbency: Choose a fabric with a high absorption capacity if you plan to take it with you to the bathroom or swimming pool. Satin and silk robes don't absorb a lot of water so they're better off for lounging around at home.[4]



Standard requirements for baby clothes

Requirements for the production of clothes for newborns and children:

- materials and accessories used for the production of products must comply with the requirements of regulatory documents.
- external and decorative elements made of synthetic materials should not come into direct contact with the child's skin.
- synthetic lace trims are allowed to be used only on envelopes, elegant sheets, and sets for strollers.
- products for premature babies should not have seams in places that put pressure on the head or body, buttons should not be close to the body, and it is also unacceptable to make products that are worn over the head.
- warm soles are made of flannel-type materials with surface density of 170-190 g/m²;
- light soles - made of calico and madapolam type materials with a surface density of 94-106 g/m²;
- household bleached or hard (non-technical) surface density 45-60 g/m² made of calico-type materials with a surface density of 80-90 g/m² and gauze.

Conclusion: Uzbekistan's ability to export light industrial products is increasing day by day, which is a proof that the products produced in our country are in line with world standards and are competitive. Therefore, it is an urgent task to apply and create new technology and design in the production of fluffy fabrics

(towels, robes, newborn babies and children), which are considered light industrial products

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BOSHLANG‘ICH TA’LIMDA TABIIY FANLARNI O‘QITISH

***Annotatsiya.** Ushbu maqola boshlang‘ich ta’limda tabiiy fanlarni o‘qitishning ahamiyatini va usullarini ko‘rib chiqadi. Tabiiy fanlar bolalarda tadqiqotchilik va mantiqiy fikrlashni rivojlantiradi. Interaktiv tajribalar, loyiha asosidagi o‘qitish va ochiq darolar kabi amaliy usullar taqdim etiladi. O‘qituvchilar va ota-onalarning roli ham ta’kidlanadi, bu esa bolalarning ekologik mas’uliyatini oshirishga yordam beradi. Maqola tabiiy fanlar ta’limida zamonaviy yondashuvlarni o‘z ichiga oladi.*

***Kalit so‘zlar.** Boshlang‘ich ta’lim, tabiiy fanlar, tadqiqotchilik, mantiqiy fikrlash, interaktiv tajribalar, ochiq darolar, ekologiya.*

BASIC EDUCATION IN TEACHING NATURAL SCIENCES

***Annotation.** This article examines the importance and methods of teaching natural sciences in primary education. Natural sciences develop children’s research skills and logical thinking. Practical methods are presented, such as interactive experiments, project-based learning, and open lessons. The role of teachers and parents is also emphasized, which contributes to increasing children’s ecological responsibility. The article includes modern approaches to teaching natural sciences.*

***Keywords.** Primary education, natural sciences, research activities, logical thinking, interactive experiments, open lessons, ecology.*

Boshlang‘ich ta’lim — har bir insonning bilim va ko‘nikmalarini shakllantirishda muhim bosqichdir. Bu davrda tabiiy fanlarni o‘qitish, bolalarda olimlik, kashfiyot va tadqiqotga qiziqishni uyg‘otish uchun juda muhim ahamiyatga ega. Tabiiy fanlar, masalan, biologiya, fizika va kimyo, bolalarga atrof-muhitni tushunishga yordam beradi va ularning analitik fikrlash qobiliyatini rivojlantiradi. O‘qituvchilar uchun tabiiy fanlarni o‘qitish jarayonida qiziqarli va samarali metodlarni qo‘llash, shuningdek, bolalar bilan yaqin aloqa o‘rnatish juda muhimdir.

Tabiiy fanlarni o‘qitish bolalarga quyidagi ko‘nikmalarni rivojlantirishda yordam beradi:

1. Tadqiqotchilik qobiliyati: Bolalar tabiatni o‘rganish jarayonida savollar berishni, tajriba o‘tkazishni va natijalarni tahlil qilishni o‘rganadilar. O‘qituvchi bolalarga yangi g‘oyalar va kashfiyotlarni qo‘llab-quvvatlash orqali tadqiqot jarayonini rag‘batlantirishi mumkin.

2. Mantiqiy fikrlash: Tabiiy fanlar matematik va mantiqiy fikrlash ko'nikmalarini rivojlantiradi. Masalalarni hal qilish jarayonida bolalar tahlil va mulohaza qilishni o'rganadilar. Masalan, fizika fanida sodir bo'layotgan hodisalarni tushuntirishda, bolalar mantiqiy munosabatlarni o'rganadilar.

3. Atrof-muhitga qiziqish: Tabiiy fanlar orqali bolalar atrof-muhitga bo'lgan qiziqishini oshiradilar, bu esa ularni ekologik mas'uliyatli fuqarolar bo'lishga tayyorlaydi. O'zgarayotgan iqlim va ekologik muammolar haqida bilim berish, bolalarda tabiatga nisbatan mas'uliyatni rivojlantirishga yordam beradi.

4. Ijodiy fikrlash: Tabiiy fanlar bolalarning ijodiy fikrlash ko'nikmalarini rivojlantirishda muhim ahamiyatga ega. O'qituvchilar ijodiy loyihalar va tadqiqotlar orqali bolalarga yangi g'oyalar yaratishni o'rgatishlari mumkin.

Tabiiy fanlarni boshlang'ich ta'limda samarali o'qitish uchun quyidagi usullarni qo'llash mumkin:

1. Interaktiv tajribalar: tajribalar orqali o'qitish, bolalarning qiziqishini oshiradi va nazariy bilimlarni amaliyotda qo'llash imkonini beradi. Masalan, oddiy kimyoviy reaksiyalarni yoki o'simliklarning o'sishi jarayonini kuzatish orqali bolalar tajriba o'tkazish ko'nikmalarini rivojlantiradilar. Interaktiv tajribalar bolalar uchun ko'ngilochar va qiziqarli bo'lib, bilimlarni mustahkamlashga yordam beradi.

2. Loyihalar: mavzularni chuqur o'rganish uchun loyihalar tashkil etish, bolalarga jamoaviy ishlashni o'rganishga va birgalikda muammolarni hal qilishga yordam beradi. Masalan, o'simliklar ekish loyihasi orqali bolalar nafaqat biologiya fanini o'rganadilar, balki jamoaviy ish va mas'uliyatni ham o'zlashtiradilar.

3. Ochiq tabiat o'quv darslari: tabiatda o'qitish bolalarga yangi tajribalar, kuzatish va tadqiqot imkoniyatlarini taqdim etadi. O'rmon, bog' yoki parkda o'tkaziladigan darslar, tabiat bilan yanada yaqin tanishishga yordam beradi. Bu jarayon bolalar uchun yangi muhitda faoliyat yuritish va qiziqarli tajribalar orttirish imkonini beradi.

4. Texnologiyalardan foydalanish: zamonaviy texnologiyalarni qo'llash, tabiiy fanlarni o'qitishda muhim rol o'ynaydi. Kompyuter dasturlari, interaktiv taqdimotlar va video materiallar yordamida o'qituvchilar bolalar uchun murakkab tushunchalarni yanada sodda va tushunarli qilib taqdim etishlari mumkin.

O'qituvchilar tabiiy fanlarni o'qitishda muhim rol o'ynaydi. Ular bolalar bilan samarali muloqot qilish, ularni rag'batlantirish va qo'llab-quvvatlash orqali bilim olish jarayonini qiziqarli va samarali qiladilar. Ota-onalar ham bolalarning ta'limida faol ishtirok etishlari zarur. Ular bolalarga tabiatni o'rganishda yordam berishlari, tajribalar o'tkazishda birga bo'lishlari va yangi g'oyalarni qo'llab-quvvatlashlari kerak. Ota-onalarning faolligi bolalarning qiziqishini oshiradi va bilim olish jarayonini kuchaytiradi.

Boshlang'ich ta'limda tabiiy fanlarni o'qitish, bolalarda qiziqish, tadqiqotchilik va analitik fikrlash qobiliyatlarini rivojlantirishda muhim rol o'ynaydi. Zamonaviy pedagogik usullarni qo'llash orqali o'qituvchilar bolalar uchun tabiiy fanlarni qiziqarli va foydali qilib ko'rsatishi mumkin. Tabiatni o'rganish, nafaqat bilim berish, balki bolalarning hayotga bo'lgan munosabatini shakllantirishda ham muhimdir. Tabiiy fanlar o'qitilishi bolalar uchun qiziqarli va

foydali tajriba bo'lib, ularni kelajakda ilm-fan va tadqiqot sohasida faol ishtirok etishga tayyorlaydi.

O'qituvchilar, ota-onalar va ta'lim muassasalari tabiiy fanlarni o'qitishga e'tibor berishlari, shuningdek, bolalarga qiziqarli va qamrab oluvchi tajribalar taqdim etishlari zarur. Fikr almashish, tajribalar o'tkazish va ijodiy yondashuvlar orqali boshlang'ich ta'limda tabiiy fanlarni yanada samarali o'qitish mumkin.

Ushbu yondashuvlar yordamida bolalar o'z bilimlarini chuqurlashtirib, hayotiy ko'nikmalarini rivojlantiradilar. Tabiiy fanlar ta'lim jarayonida amalga oshirilishi, nafaqat bilim berish, balki bolalarning kelajagini yanada porloq qilishda muhim omil bo'ladi.

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GEOGRAPHICAL CHARACTERISTICS OF THE DEATH INDICATORS ACCORDING TO DIFFERENT DISEASES OF THE POPULATION (EXAMPLE OF KASHKADARYA REGION)

***Abstract:** This article presents the demographic indicators of Kashkadarya region: births, deaths due to various causes, including death rates related to infectious and parasitic diseases. According to the relief structure of the regional administrative units, the division into plain, hilly, and mountainous regions, and the number of cities and districts corresponding to these regions, the number of inhabitants, and the percentage share of the population are given.*

***Keywords:** Population, birth, death, disease, infectious-parasitic disease, circulatory system diseases, relief, national structure, demographic index.*

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AHOLINI TURLI KASALLIKLARGA KO'RA O'LIM KO'RSATKICHLARINING GEOGRAFIK XUSUSIYATLARI (QASHQADARYO VILOYATI MISOLIDA)

***Annotatsiya:** Ushbu maqolada Qashqadaryo viloyatining demografik ko'rsatkichlari: tug'ilish, turli sabablarga ko'ra o'lim holatlari, Jumladan, yuqumli-parazitar kasalliklari bilan bog'liq o'lim ko'rsatkichlari keltirilgan. Viloyat ma'muriy birliklarining relyef tuzilishiga ko'ra tekislik, qir, tog'oldi, tog'li hududlarga bo'linishi va shu hududlarga to'g'ri keladigan shahar va tumanlar soni, aholi soni, aholining foiz hisobidagi ulushi keltirilgan.*

***Kalit so'zlar:** Aholi, tug'ilish, o'lim, kasallik, yuqumli-parazitar kasallik, qon aylanish tizimi kasalliklari, relyef, milliy tarkib, demografik ko'rsatkich.*

The permanent population of Kashkadarya region as of January 1, 2024, is 3,560.6 thousand people, having increased by 78.3 thousand, or 2.2%, since the beginning of 2023. Specifically, the urban population is 1,524.2 thousand (42.8% of the total population), while the rural population is 2,036.4 thousand (57.2%). The

area of the Kashkadarya region is 28,570 square kilometers, and there are notable differences in its relief structure [1,2]. These variations are also significantly reflected in the national composition and distribution of the population. The diversity of the relief and geographical conditions affects the lifestyle, economic activities, and social issues of the inhabitants. Additionally, the presence of various ethnic groups in the region creates differences related to their cultural and traditional characteristics.

The demographic composition of the population of Kashkadarya region is somewhat complex. The majority are Uzbeks (91.2%), but representatives of Tajik, Turkmen, Russian, Kazakh, Ukrainian, Azerbaijan, Korean, Kyrgyz, Turk, Belarusian, Tatar, and other nationalities also reside here. As of 2024, the average population density is 124.6 people per km².

The population distribution in Kashkadarya region shows significant differences based on elevation. The Mirishkor and Muborak districts are located at an elevation of 200-300 meters, with a population of 223,000 (6.27%). The area with an elevation of 300-500 meters includes the city of Karshi and several districts, housing 1,259,400 people (35.37%). The foothill region, at an elevation of 500-1000 meters, includes the districts of Chirokchi, G‘uzor, and Ko‘kdala, with a population of 678,800 (19%). Finally, the mountainous area, above 1000 meters, comprises the city of Shakhrisabz and several districts, where 1,399,400 people (39.30%) reside. This data illustrates the relationship between population distribution and natural conditions in the region. (**table 1**).

The population distribution in Kashkadarya Region shows significant variations, primarily influenced by natural geographical conditions (such as riverbanks and streams). Additionally, economic and social factors also affect population distribution. These factors include the level of employment, the presence of industrial enterprises, and the extent of resource extraction, all of which significantly influence the population’s settlement patterns.

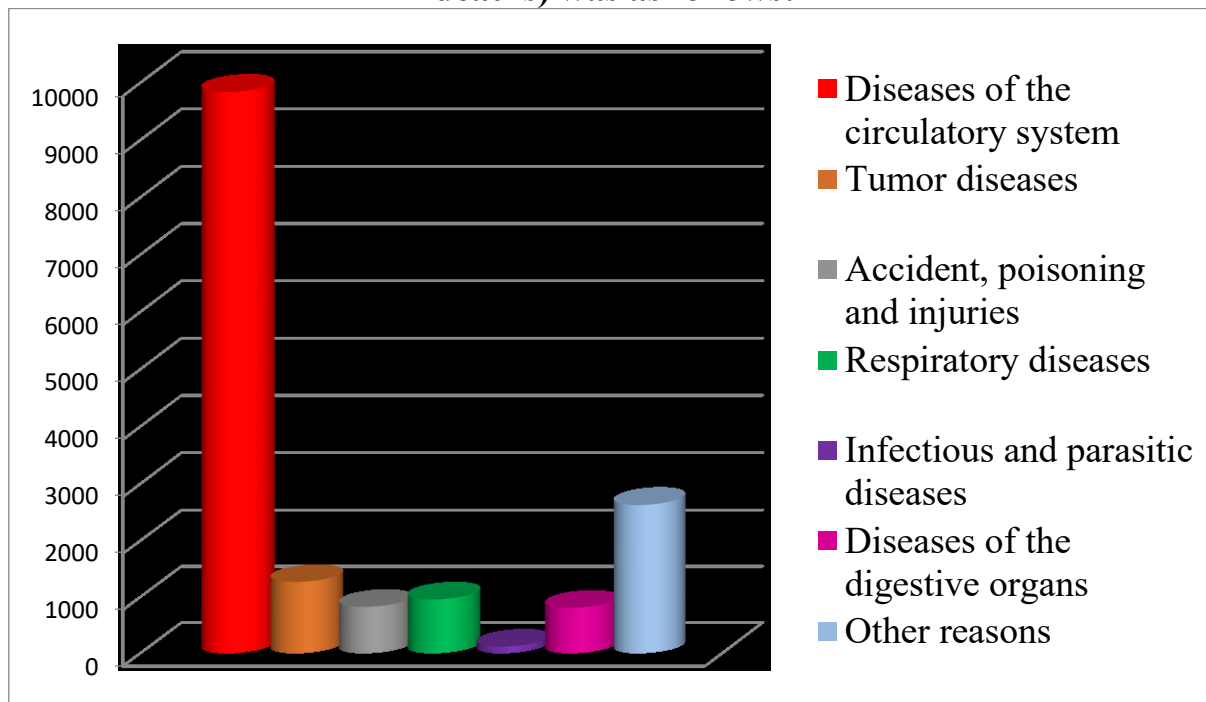
Table 1: Population Distribution in Kashkadarya region by Elevation Zones

Elevation (meters)	Cities and Districts	Number of Cities and Districts	Population	Percentage of population
up to 200-300 meters (plain)	Mirishkor, Muborak	2	223 000	6,27
300-500 (hilly)	Karshi city, Koson, Kasbi, Karshi, Nishon	5	1 259 400	35,37
500-1000 (Foothill)	Chirokchi, Guzor, Kokdala	3	678 800	19,0
Above 1000 (mountain)	Shakhrisabz city, Shakhrisabz, Kitob, Yakkabog, Kamashi, Dehkonobod	6	1 399 400	39,30
Total:	16	16	3 560 600	100

Source: Compiled by the author based on data from the websites <https://ru-ru.topographic-map.com> and the Kashkadarya Region Statistics Department [3].

One of the most important demographic indicators is the mortality rate. In Kashkadarya Region, various reasons contribute to the reported mortality rate. In the period from January to December 2023, the number of deaths was 16,424, a decrease of 593 individuals or 3.5% compared to the same period in 2022 (17,017). Accordingly, the mortality coefficient was 4.7 per mille, down from 4.9 per mille in January to December 2022.

In 2023, the distribution of deaths by major causes (as a percentage of total deaths) was as follows:



The highest mortality rate among the administrative units of the region is in the Chirokchi district, where it reached 1,769 individuals. Following this, Karshi city recorded 1,347 deaths, and the Kamashi district reported 1,292. The mortality rate related to circulatory system diseases is also highest in the Chirokchi district, accounting for 954 deaths. This figure is 768 in the Koson district and 751 in the Kamashi district [4,5,6].

In conclusion, it can be said that the demographic potential of Kashkadarya Region is quite significant, and ensuring its participation in enhancing production is essential. There are also notable differences in population distribution across the region, and the mortality rate varies sharply due to the impact of relief and temperature on the causes of death.

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THE IMPORTANCE OF PSYCHOLOGICAL FACTOR IN THE PROCESS OF COMMUNICATION

Abstract: This article contains thoughts and opinions about the importance of the psychological factor in the process of interaction between a manager (boss) and a subordinate, a teacher and students.

Key words: communication, identification, reflection, stereotyping, pedagogical communication, authoritarian style, democratic style, liberal style, verbal influence, paralinguistic influence, non-verbal influence.

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ПСИХОЛОГИК ОМИЛНИНГ МУЛОҚОТ ЖАРAYONIDAGI АҲАМИYATI

«Yozganing agar o‘zingni yig‘latmasa, kuldirmasa,
o‘zgani ham yig‘latmas, kuldirmas».
Abdulla Qodiriy

Annotatsiya: Mazkur maqolada rahbar (boshliq) va bo‘ysunuvchi, pedagog va tinglovchilar o‘rtasidagi o‘zaro muloqot jarayonida psixologik omilning ahamiyatiga doir masalalar to‘g‘risida fikr va mulohazalar yuritilgan.

Kalit so‘zlar: muloqot, identifikatsiya, refleksiya, stereotipizatsiya, pedagogik muloqot, avtoritar uslub, demokratik uslub, liberal uslub, verbal ta‘sir, paralingvistik ta‘sir, noverbal (nutqsiz) ta‘sir.

Insonning uni o‘rab turgan olamga o‘zaro ta‘siri har qanday real guruhlarda paydo bo‘ladigan ob‘ektiv munosabatlar va aloqalar tizimida namoyon bo‘ladi. Guruh a‘zolarining bu ob‘ektiv o‘zaro munosabatlari sub‘ektiv shaxslararo munosabatlarda aks etadi. Har qanday faoliyat odamlarning o‘zaro birlashishini talab qiladi. Hech bir kishilik jamiyati, agar unda odamlar bilan munosabat o‘rnatilmasa, ular bir-birini to‘g‘ri tushunmasdan to‘laqonli birgalikdagi faoliyatni tashkil eta olmaydi.

Muloqot odamlar amalga oshiradigan faoliyatlar ichida yetakchi o‘rinni egallab, u insondagi eng muhim ehtiyojni – jamiyatda yashash va o‘zini shaxs deb hisoblash bilan bog‘liq ehtiyojini qondiradi. Shuning uchun ham uning har bir inson uchun ahamiyati kattadir. Bunga yaqqol misol sifatida hammaga tanish badiiy asar personaji Robinzon Kruzoning hayoti va sarguzashtlari eslash kifoya.

Muloqot – odamlarning birgalikdagi faoliyatlari ehtiyojlaridan kelib chiqadigan turli faolliklari mobaynida bir-birlari bilan o‘zaro munosabatlarga kirishish jarayoni.

Bir qarashda osonga o‘xshagan shaxslararo muloqot jarayoni aslida juda murakkab jarayon bo‘lib, unga odam hayoti mobaynida o‘rganib boradi. Muloqot psixologik jihatdan juda murakkab jarayondir. Psixologik adabiyotlarda ko‘rsatilishicha, muloqotga bir vaqtning o‘zida quyidagilar kiradi:

- a) individlarning o‘zaro ta’sir jarayoni;
- b) individlar o‘rtasidagi axborot almashinuvi jarayoni;
- v) bir shaxsning boshqa shaxsga munosabati jarayoni;
- g) bir kishining boshqalarga ta’sir ko‘rsatish jarayoni;
- d) bir-birlariga hamdardlik bildirish imkoniyati;
- ye) shaxslarning bir-birlarini tushunishi jarayoni va h.k.

Muloqot har bir shaxsning jamiyatda bajaradigan faoliyatlari (harbiy xizmat, mehnat, o‘qish, o‘yin, ijod qilish va boshqalar) o‘zaro munosabat va o‘zaro ta’sir shakllarini o‘z ichiga oladi. Chunki har qanday ish odamlardan bir-birlari bilan til topishishni, bir-birlariga turli xil ma’lumotlarni uzatishni, fikrlar almashinuvi kabi murakkab hamkorlikni talab qiladi. Shuning uchun ham har bir shaxsning jamiyatda tutgan o‘rni, ishlarining muvaffaqiyati, obro‘si, nufuzi uning muloqotga kirisha olish qobiliyati bilan bevosita bog‘liqdir. Har bir shaxsning jamiyatda tutgan o‘rni, ishlarining muvaffaqiyati, obro‘si uning muloqotga kirisha olish qobiliyati bilan bevosita bog‘liq bo‘ladi.

Pedagogik muloqot ofitserning pedagog sifatida o‘z bo‘ysunuvchilari bilan ta’lim, tarbiya, rivojlantirish maqsadlariga qaratilgan kasbiy muloqotidir. Bu ofitser (boshliq, komandir, o‘qituvchi, yo‘riqchi, murabbiy)ning va bo‘ysunuvchining ta’lim-tarbiya jarayonidagi professional muloqoti bo‘lib, unda o‘zaro axborot almashinadi va bo‘ysunuvchilarga o‘quv-tarbiyaviy ta’sir o‘tkaziladi. Pedagogik ta’sirning samarali kechishi uchun o‘zaro hurmat va ishonchga asoslangan ikki yoqlama muloqot yuzaga kelishi lozim.

Pedagogik muloqot murakkab hodisadir. Ofitser pedagogik muloqotga kirishishdan oldin quyidagilarni aniqlab olishi (muloqotni modelashrishi) lozim:

- ✓ muloqot mavzusi;
- ✓ muloqot o‘tkazishdan maqsad;
- ✓ muloqot vaqti;
- ✓ muloqot joyi;
- ✓ muloqot ob’ektining individual xususiyatlari (yoshi, jinsi, bilimi darajasi, xizmat mavqei, xizmat va hayotiy tajribasi va b.).

Boshqaruv tizimida bo‘lgani kabi, pedagogik muloqotda ham keng tarqalgan avtoritar, demokratik va liberal uslublardan foydalaniladi.

Avtoritar uslub. Barcha ko‘rsatmalarni ishchanlik ruhida aniq, ravshan, keskin ohangda xodimlarga yetkazadi. Muloqot jarayonida ham hodimlarga nisbatan do‘q-po‘pisa, keskin ta’qiqlash kabi qat’iy ohanglardan foydalaniladi. Uning asosiy maqsadlaridan biri - nima bilan bo‘lsada, o‘z xukmini o‘tkazish. Uning nutqi ham aniq va ravon, doimo jiddiy tusda bo‘ladi. yakka xokimi - shuning uchun ham bu

yerda «mening odamlarim», «mening ishim», «mening fikrim bo'yicha» qabiladagi iboralar tez-tez ishlatib turiladi.

Demokratik uslub. Bo'ysunuvchilarga mustaqillik, erk berish tarafdori. Ishni ishchilarning shaxsiy qobiliyatlarini hisobga olgan xolda taqsimlaydi buyruq yoki topshiriq, odatda taklif ma'nosida beriladi. Nutq oddiy, doimo osoyishta, sokin, unda o'rtoqlarcha, do'stona munosabat sezilib turadi. Biror kishini maqtash, unilavozimini oshirish yoki ishdagi kamchilikka ko'ra, ishiga baho berish doimo jamoa a'zolarining fikri bilan kelishilgan xolda amalga oshiriladi. Jamoada tanqid va o'z-o'zini tanqid shunday yo'lga qo'yilganki, uning oqibatidan hech kim aziyat chekmaydi.

Liberal uslub. Bu rahbarning kayfiyatini, ishga munosabatini, ishdan mamnun yoki mamnun emasligini bilish qiyin. Unda ta'qiqlash, po'pisa bo'lmaydi, uning o'rniga ko'pincha, ishning oxirgi oqibati bilan tanishish bilangina cheklanadi xolos. Jamoada hamkorlik yo'q. Boshliq jamoaning muammolarini ishning baland-pasti bilan qiziqmaydiganday, go'yoki boshqa «koinotda» yurganga o'xshaydi. Aniq ko'rsatmalar bermaydi. Uning o'rniga norasmiy liderlar yoki o'ziga yaqin kishilar orqali qilinishi lozim bo'lgan topshiriqlar bajaruvchilarga yetkaziladi. uning nazarida, xodimlar uchun ish sharoitini yaxshilash, ishdagi kamchiliklarni bartaraf etish, kerakli maxsulotlar, xomashyo kabilarni topib kelish, majlislarda qatnashish va xokazolardan iborat.

Olimlarning fikricha, bunday rahbar ishi olib borgan jamoada barcha ko'rsatkichlar doimo orqada, qo'nim ham yo'q. Liberal rahbar ishda anarxiyani qilib qo'yib, ko'p turmay, boshqa yerdan ish qidirishga xarakat qiladi.

Imperativ muloqot – muloqotning avtoritar, direktiv shakli. Bu shakldagi muloqotning asosiy maqsadi muomalaga kirishuvchilarning xatti-harakatlarini, hayotiy ustanovkalarini va fikrlarini nazorat qilish, uni ma'lum harakatlar yoki qarorlar qabul qilishga majbur etishdan iborat.

Manipulyativ muloqot – bunda muloqot davomida o'z maqsadiga erishish uchun, yashirin tarzda ta'sir etishga asoslangan muloqotdir (ya'ni, o'qituvchi ta'lim oluvchiga yashirin holda ta'sir etadi, manipulyatsiya qiladi). Imperativ muloqotda bo'lgani kabi, manipulyativ muloqotda ham o'qituvchi ta'lim oluvchini ob'ektiv idrok etishga, uning aqliy faoliyatini va xatti-harakatlarini nazorat qilishga erishishga intiladi.

Dialogik muloqot – bunda o'zini va bir-birlarini tushunishlarini maqsad qilgan, teng huquqli «sub'ekt – sub'ekt» tarzidagi muloqotidir. Dialogik muloqot har ikkala tomonning bir-birlarini chuqurroq tushunishlariga, imkoniyatlarini bilishga, yangi qirralarining ochilishiga, shaxs sifatida kamol topishlariga imkon yaratadi.

Psixologik ta'sir bu turli vositalar yordamida insonlarning fikrlari, hissiyotlari va xatti-harakatlariga ta'sir ko'rsata olishdir.

Muloqot jarayonida muloqotning to'g'ri va samarali uslubini tanlay bilishi lozim. Har bir uslubning o'z o'ni bor. Faqat avtoritar uslubga tayanib qolish suhbatdoshning imkoniyatlarini, qobiliyatlarini, bilim, malaka va ko'nikmalarni egallashdagi tashabbuskorligini cheklab qo'yishi mumkin. Shu sababdan muloqot jarayonida eng optimal munosabatni tanlay olishi zarur.

Muomalaga kirishuvchi tomonlarning o‘zaro bir-birlarini tushunishga olib keluvchi yo‘l yoki marom o‘z navbatida o‘sha shaxslarning o‘zaro bir-birlarini mavqe bo‘yicha bilishni ta‘minlaydi. Muloqotning psixologik tizimiga ko‘ra uni uch asosiy qismga bo‘lish mumkin:

1. *Muloqotning kommunikativ tomoni*, ya‘ni ma‘lumotlar almashinuvi funksiyasi (muomala sub‘ektlarining o‘zaro bir-birlari bilan axborot, ma‘lumotlar, hissiy kechinmalar va fikr almashuvi jarayoni).

2. *Muloqotning interaktiv tomoni*, ya‘ni xulq-atvorni boshqaruv funksiyasi (muloqotga kirishuvchi tomonlarning o‘zaro bir-birlarining xulq-atvorlariga ta‘sir jarayoni).

3. *Muloqotning perseptiv tomoni*, ya‘ni hissiyotlar almashinuvi funksiyasi (muloqotga kirishuvchi tomonlarning bir-birlarini to‘g‘riroq, aniqroq idrok qilish va baholashlarini ta‘minlovchi jarayon).

Birgalikdagi faoliyat jarayonida shaxslarning bir-birlarini to‘g‘ri tushunishlari va aniq idrok qilishlari muloqotning samarali bo‘lishini ta‘minlaydi. Olimlarning aniqlashlariga ko‘ra, odamlarning bir-birlarini idrok qilishlari identifikatsiya, refleksiya va stereotipizatsiya mexanizmlaridan iborat bo‘ladi.

Identifikatsiya – muloqot jarayonida suhbatdoshlar bir-birlarini to‘g‘ri idrok qilish maqsadida o‘zidagi bilimlar, tasavvurlar, xislatlar orqali boshqa birovni tushunishga harakat qilish, o‘zini birov bilan solishtirish, o‘zlarini bir-birining o‘rniga qo‘yib ko‘rishdir.

Refleksiya – muloqot jarayonida suhbatdoshining pozitsiyasida turib, o‘zini tasavvur qilish, o‘ziga birovning ko‘zi bilan qarashga intilishdir.

Stereotipizatsiya – odamlar ongida muloqotlar mobaynida shakllanib o‘rnashib qolgan, ko‘nikib qolingan obrazlardan shablon sifatida foydalanish hollaridir.

Muloqot jarayonida sub‘ekt sifatida boshqalarga psixologik ta‘sir etadi. Psixologik ta‘sir bu turli vositalar yordamida insonlarning fikrlari, hissiyotlari va xatti-harakatlariga ta‘sir ko‘rsata olishdir. *Psixologik ta‘sirning uch vositasini ko‘rsatish mumkin:*

1. *Verbal ta‘sir* bu so‘z va nutq orqali ko‘rsatiladigan ta‘siridir. Bunday asosiy vositalar so‘zlar hisoblanadi. Nutqiy so‘zlashuv o‘zaro muloqot jarayoni bo‘lib, so‘zlar uning vositasi sifatida xizmat qiladi. Og‘zaki nutqning turidan qat‘i nazar (monologik nutq bo‘ladimi yoki dialogik nutqmi) muloqotga kirishuvchi kishi o‘zining lug‘at boyligidan kelib chiqqan holda boshqalarga ta‘sir etadi.

2. *Paralingvistik ta‘sir* – bu bevosita so‘zlar bilan emas, balki bu so‘zlarning ta‘sir kuchini oshirishga yoki kamaytirishga qaratilgan qo‘shimcha vositalar (to‘xtashlar, duduqlanish, yo‘tal, nutqning baland yoki past tovushda ifodalanishi orqali nutqni bezash, uni kuchaytirish yoki susaytirish)dan foydalanish.

3. *Noverbal (nutqsiz) ta‘sir* – mimika (yuz ifodasi), pantomimika (tana harakati), poza (tana holati), jistikulyatsiya (qo‘llar holati, harakati), ko‘z qarashlari, qiliqlar, tashqi qiyofa, so‘z ohangi, kulgu, pauza va shu kabilar orqali ta‘sir etish. Ularning barchasi muloqot jarayonini yanada ko‘chaytirib, suhbatdoshlarning bir-birlarini yaxshiroq idrok qilishlariga yordam beradi.

Professor V.Karimovaning fikricha, professional tinglash texnikasiga quyidagilar kiradi:

Aktiv holat. Tinglayotganda yotib olmaslik, suhbatdoshning yuzidan tashqari joylariga qaramaslik, mimika, bosh chayqash bilan unga qiziqishni bildirish;

Suhbatdoshga samimiy qiziqish bildirish. Bu nafaqat suhbatdoshni o'ziga jalb qilish, balki keyin navbat kelganda o'zining har bir so'ziga uni ham ko'ndirishning samarali yo'lidir.

O'ychan jimlik. Bu suhbatdosh gapirayotgan paytda yuzda mas'uliyat bilan tinglayotganday tasavvur qoldirish orqali o'zingizning suhbatdan manfaatdorligingizni bildirish yo'li.

Demak, tinglash madaniyati muloqot jarayonining samarali bo'lishida muhim ahamiyatga ega. Shuning uchun biz suhbatdoshimizni diqqat bilan tinglashimiz, unda o'z-o'ziga hurmatni tarbiyalashimiz, uni ilhomlantirishimiz, ruhlantirishimiz kerak. Sub'ektning so'zlari ob'ekt tomonidan yaxshi tinglansagina muloqot samarali bo'ladi.

Shaxsni muloqoti jarayonini boyitishda ma'naviy-ma'rifiy bilim va ko'nikmlarning ahamiyati ham muhim hisoblanadi. Xalqimiz boy tarixiy, madaniy va ma'naviy merosga ega bo'lib, ularni o'rganish milliy o'zligimizni anglash, ulardan samarali foydalanish fuqarolik jamiyati va huquqiy demokratik davlat barpo etish, milliy iftixor va milliy ruh hamda qadriyatlarimizni yuksaltirishning asosi hisoblanadi⁶. Madaniy va ma'naviy merosga ega bo'lish, ularni o'rganish milliy o'zligimizni anglash har bir shaxsning muloqot qilishida o'zining ijobiy natijalarini ko'rsatadi

Xulosa o'rnida aytish mumkinki, muloqot jarayoni samaradorligini ta'minlashda ham, kundalik hayotda bo'ladigan munosabatlarda muloqotning psixologik va milliy xususiyatlarini yodda saqlashi lozim. Rahbarlik vazifasini bajarishda unda pedagogik mahorat, muomala malakalari va o'z kasbiga xos bilim, ko'nikma va malakalar shakllangan bo'lishi kerak.

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⁶ Шохакимов А.Р. Процессы повышения национального духа в понимании национальной идентичности. «Экономика и социум» №11(90)-2 2021 www.iupr.ru 686с

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OZIQ-OVQAT SANOATIDA MAHSULOT QIYMAT ZANJIRI SAMARADORLIGINI BAHOLASH

***Annotatsiya:** Ushbu maqolada oziq-ovqat sanoatida mahsulot qiymati zanjirini baholashning samaradorligi tahlil qilinadi. Asosiy e’tibor qiymat zanjirining barcha bosqichlarida samaradorlikni oshirishga yo‘naltirilgan zamonaviy usullar va yondashuvlarga qaratilgan. Shuningdek, ushbu sohadagi ishlab chiqarish jarayonini takomillashtirish bo‘yicha tavsiyalar taqdim etiladi.*

***Kalit so‘zlar:** oziq-ovqat sanoati, qiymat zanjiri, samaradorlik baholashi, zamonaviy usullar, ishlab chiqarish jarayoni.*

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ASSESSING THE EFFICIENCY OF THE PRODUCT VALUE CHAIN IN THE FOOD INDUSTRY

***Abstract:** This article examines the assessment of value chain efficiency in the food industry. The focus is on modern methods and approaches aimed at enhancing efficiency across all stages of the value chain. Recommendations for improving production processes in this field are also provided.*

***Keywords:** food industry, value chain, efficiency assessment, modern methods, production processes.*

Kirish. Birlashgan Millatlar Tashkilotining Oziq-ovqat va qishloq xo‘jaligi tashkiloti (FOA) hamda Jahon sog‘liqni saqlash tashkiloti (JSS) ma‘lumotlariga ko‘ra, hozirgi vaqtda dunyoda deyarli har to‘qqiz odamning biri to‘yib ovqatlanmayapti, sayyoramiz aholisining 30 foizidan ziyodi to‘laqonli ravishda ovqatlanmaslik, eng asosiy mikroelement va vitaminlar yetishmasligi muammosini boshidan kechirmoqda.

Agrosanoat majmuasi sohalarida modernizatsiyalash jarayonlari davlat va hududiy jihatdan yirik tadbirlar hisoblanib, bu tadbirlarni o‘z muddatida va sifatli amalga oshirilishi natijasida oziq-ovqat mahsulotlarini ta‘minlash, iste‘molchilar talabini qondirish, ichki va tashqi bozorga xaridorbop va raqobatbardosh mahsulot

ishlab chiqarishni yo'lga qo'yish, iqtisodiyotning real sektorini samarali faoliyat ko'rsatishi va shu kabi boshqa ijobiy natijalarga erishish imkoniyatini yaratadi. Oziq-ovqat mahsulotlarini ta'minlashga erishish mamlakatimizda qishloq xo'jaligi, ijtimoiy ko'mak, barqaror iqtisodiy o'sishga qaratilgan ko'p tomonlama strategiyalarni ishlab chiqish va amalga oshirishni talab qiladi.

Respublikada amalga oshirilayotgan islohotlar va qo'llanilayotgan chora-tadbirlar natijasida oziq-ovqat sanoati ishlab chiqarishining iqtisodiy samaradorligi oshib bormoqda. Ishlab chiqarish samaradorligi qanday narx, qanday xarajatlar va resurslarning qanday miqdori evaziga olinganini aniqlash hamda foyda va zararlar o'rtasidagi farqni aniqlash orqali namoyon bo'ladi. Ishlab chiqarish samaradorligi oziq-ovqat sanoati korxonalarini rivojlantirishni ta'minlovchi ko'rsatkich, mezon, omil va zarur shartlarda o'z ifodasini topadi.

Oziq-ovqat sanoati ishlab chiqarishining iqtisodiy samaradorlikni aniqlash belgisi sifatida mezonlar uning mazmuni va sifatga xos tomonlarini aks ettirishi lozim. Mezon esa, samaradorlik o'lchovi sifatida tegishli miqdorni aniqlash xususiyatiga ega bo'lishi lozim.

Oziq-ovqat sanoati ishlab chiqarishining iqtisodiy samaradorlik mezonining mohiyatini turli xil talqin qilish mumkin va bu ko'plab fikrlarni keltirib chiqaradi.

Oziq-ovqat sanoati ishlab chiqarishining iqtisodiy samaradorlik mezonini asoslashda, ko'pchilik olimlar mezonga hodisa va jarayonlarning ajratib turuvchi belgisi, baholashning o'lchovi deb yondashishgan. Shu bilan birga, ko'pchilik iqtisodchilar tomonidan ushbu dastlabki shartlar qo'llanilmaydi, bu samaradorlik mezonlari mazmunini aniqlashga turlicha yondashuvlarning shakllanishiga sabab bo'lgan.

Oziq-ovqat sanoati ishlab chiqarishining iqtisodiy samaradorligi uning natijadorligini bildirib, ishlab chiqarish maqsadlariga erishish uchun mo'ljallangan resurslardan oqilona foydalanish darajasi bilan tavsiflanadi. Oziq-ovqat sanoati ishlab chiqarishining iqtisodiy samaradorlik oziq-ovqat sanoati rivojlanishining tanlangan ko'rsatkichlariga erishish darajasi, ya'ni natijadorlik nuqtai nazaridan ko'rib chiqilgan. «Ishlab chiqarish samaradorligi» oziq-ovqat sanoati kompaniyalarining raqobatbardoshligini tavsiflovchi ko'rsatkichlarni o'z ichiga oladi. Mintaqadagi kompaniyalar aktivlarining mehnat unumdorligi hamda rentabelligi ularning muvaffaqiyatli va barqaror rivojlanishini tavsiflaydi.

Oziq-ovqat sanoati korxonalarini samaradorligini baholashda samaradorlik ko'rsatkichlarini o'rtacha ko'rsatkichlar bilan taqqoslashga asoslangan yondashuv ham keltirilgan. Samaradorlikni baholash va nazorat qilish, korxonalar faoliyatining turli tomonlarini tavsiflovchi va birgalikda korxonalar iqtisodiy samaradorligining har tomonlama tavsifini tashkil etuvchi xususiy ko'rsatkichlar majmui shakllantiriladi.

Ushbu nuqtai nazarga ko'ra, iqtisodiy samara sifatida qo'shimcha mahsulot (sof daromad) ko'rib chiqiladi. Sof daromad milliy daromadning bir qismi bo'lgani tufayli har qanday yondashuvda mazkur kategoriyaning mazmuni va ishlab chiqarish munosabatlari sharoitida uning aniq miqdorining shakllanish xususiyatlarini inobatga olish zarur. Korxonalarda mahsulot ishlab chiqarishning iqtisodiy samaradorligini aniqlash maqsadida natural ko'rsatkichlar va qiymat

ko'rsatkichlaridan foydalanish mumkin. Natural ko'rsatkichlardan ko'ra, qiymat ko'rsatkichlarida samaradorlikni hisoblash muhim hisoblanadi. Bunda moddiy va mehnat xarajatlarini bilish zarur, chunki ushbu xarajatlarning ulushi yuqori bo'lib, moddiy resurslar va mehnatning sifatiga ham katta e'tibor qaratish lozim. Qiymat ko'rsatkichlari bu natijaning puldagi ifodasidir.

Oziq-ovqat sanoati ishlab chiqarish korxonalarida iqtisodiy samaradorlik ko'rsatkichlari sifatida quyidagilarni keltirish mumkin:

- yalpi yoki sof foyda;
- rentabellik;
- tannarx;
- mehnat unumdorligi;
- fond qaytimi;
- fond sig'imi.

Oziq-ovqat sanoati ishlab chiqarishining iqtisodiy samaraga erishishda ishlab chiqarishda resurslar yoki xarajatlarga alohida e'tibor qaratish juda muhim hisoblanadi. Ilmiy izlanishlarda samara va resurslardan foydalanish nuqtai nazaridan samaradorlikni hisoblashning quyidagi usullaridan foydalaniladi. Hisoblashning dastlabki usulida samara (yalpi foyda) summasi resurslar va xarajatlarga bo'lish bilan topiladi. Ushbu hisoblash usulidan korxonalarda samaradorlik ko'rsatkichlarini tahlil qilishda foydalaniladi. Lekin, bu usul ishlab chiqarish hajmini aniq ko'rsatmaydi.

Oziq-ovqat sanoati ishlab chiqarishining iqtisodiy keyingi usuli samaraning miqdoridan uni yaratish uchun sarflangan xarajatlarni chegirib tashlashdan iborat bo'ladi. Hajmli ko'rsatkichlari bo'lmish yalpi yoki sof foyda, mahsulotlarni sotishdan sof tushum va boshqalar shu yo'l bilan hosil qilinadi. Lekin ularda mustaqil baholarga ega bo'lgan va iste'mol qilingan resurslar (moddiy xarajatlar, ish haqi, amortizatsiya)ning bir qismi aks ettiriladi va yaratilgan ishlab chiqarish zaxiralari hisobga olinmaydi.

Oziq-ovqat sanoati ishlab chiqarishining iqtisodiy «Samaradorlikni aniqlashning muhim variantlaridan biri samaraning amaldagi massasini mavjud resurslar sharoitida muayyan bo'g'in tomonidan uning yaratiladigan miqdorining normativi bilan taqqoslashdan iborat.

Oziq-ovqat sanoati ishlab chiqarishining iqtisodiy Samara va resurslarni taqqoslash asosida baholashning bunday usuli afzalliklari quyidagilarda ko'rinadi:

- samarani resurslar bilan taqqoslagan holda o'lchash mumkinligi, bu amaldagi narxlarda ular faoliyatning samaradorligini birmuncha aniq tavsiflaydi;
- mavjud resurslar bilan samarani solishtirishning yuzaga kelishi;
- samaradorlik ko'rsatkichlarining natural miqdorlari va nisbiy ko'rsatkichlarini solishtirish mumkinligi.

Bundan tashqari, yalpi foyda bo'yicha ham samaradorlikni aniqlash mumkin. Shu bilan xom ashyo mahsulotlariga mavjud narx darajasida yalpi foyda, samaradorlikning real miqdorlarida katta tafovutlar bo'lishiga olib keladi. Shuning uchun meyoriy va amaldagi pirovard mahsulot hajmini taqqoslash haqiqatga yaqin bo'ladi. Ishlab chiqarish xarajatlari va natijalarining taqqoslash mumkin bo'lgan

holdagi miqdorlarini hosil qilish uchun ishlab chiqarilgan turli xil mahsulotlar hajmini iqtisodiyotdagi samaraning narxlari bo'yicha qiymat shakliga o'tkazish lozim.

Oziq-ovqat sanoati ishlab chiqarishining iqtisodiy umumiy iqtisodiy samaradorlikni aniqlashda har bir baholash obyekti bo'yicha foydaning umumiy qiymati va meyori hisoblab chiqiladi.

Texnologiyalar, mashina va uskunalarni iqtisodiy baholashning qo'shimcha ko'rsatkichlariga quyidagilar kiradi:

- qiymat ko'rsatkichlari – bir martalik kapital qo'yilmalar va ularning tarkibiy tuzilishi, fond qaytimi va fond sig'imi, mahsulot ishlab chiqarish tannarxi, jami ishlab chiqarilgan tovar mahsulotining hajmi va ishlab chiqarish maydoni birligiga to'g'ri keladigan miqdori;
- mehnat ko'rsatkichlari – mahsulotning mehnat sig'imi, mehnat unumdorligi, ishchilarga bo'lgan ehtiyojning qisqarishi;
- moddiy ko'rsatkichlar – baholanayotgan variantlar mahsulot birligining solishtirma massasi yoki material sig'imi;
- energiya ko'rsatkichlari – energetik samaradorlik, solishtirma energiya sig'imi, elektr sig'imi;
- sifat ko'rsatkichlari – mahsulotning o'sishi.

Oziq-ovqat sanoati ishlab chiqarishining iqtisodiy samaradorlikni baholashda texnika va texnologiyalarning umumiy (mutlaq) va qiyosiy samaradorligi aniqlanadi. Umumiy samaradorlik yangi texnologiyani qo'llash maqsadga muvofiqligini ko'rsatdi, qiyosiy samaradorlik esa, bazis variantga nisbatan eng samarali bo'lgan texnologiyalardan qaysibirini qo'llash lozimligini aniqlash imkonini berdi.

Oziq-ovqat sanoati korxonalari faoliyatiga zamonaviy texnika va innovatsion texnologiyalarni joriy etish mahsulot ishlab chiqarish hajmi va samaradorligini oshiradi.

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TA'LIMNING MAZMUNI, SIFATI: MUAMMO VA YECHIMLAR

***Annotatsiya:** Maqola sirtqi va kunduzgi va masofaviy ta'lim shakllarning samaradorligini solishtirishga bag'ishlangan bo'lib, o'qitishning turli shakllarining xususiyatlari ko'rib chiqilgan va uzluksiz ta'lim tizimidagi sirtqi ta'limda o'z-o'zini tarbiyalash ko'nikmalari hamda qobiliyatlarni rivojlantirish zarurati sirtqi ta'limni samarali amalga oshirish uchun asos sifatida keltirilgan.*

***Kalit so'zlar:** sirtqi, kunduzgi, masofaviy ta'lim, uzluksiz ta'lim, samaradorlik, bilimlarni nazorat qilish*

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CONTENT AND QUALITY OF EDUCATION: PROBLEMS AND SOLUTIONS

***Abstract:** The article is devoted to the comparison of the effectiveness of distance and full-time and distance forms of education, discusses the characteristics of different forms of teaching and self-education in distance learning in the system of continuing education. The need to develop skills and abilities is cited as the basis for the effective implementation of distance learning.*

***Keywords:** part-time, full-time, distance learning, continuing education, efficiency, knowledge control*

Har bir ota-ona, farzandining kelajaggi haqida o'ylab, qaysi ta'lim shaklida o'qitishni xususida turli o'y-fikrlarga duch keladi. Ya'ni, kunduzgimi yoki sirtqi ta'lim afzalroq?

Ta'limning kunduzgi, sirtqi (kechki), sirtqi va masofaviy o'qitish kabi ta'lim shakllari mavjud bo'lib, kunduzgi ta'lim talabning ta'lim jarayoniga to'liq sodiqligini nazarda tutadi. Darslar odatda haftaning besh-olti kunida o'tkaziladi. Ular nazariy va amaliy turlarga bo'linadi. Ma'ruza deb nomlangan nazariy mashg'ulotlarda talabalar mavzuni tinglaydilar. Keyin material amaliy muammolarni hal qilish, seminarlarda laboratoriya ishlarini bajarish orqali mustahkamlanadi. Kunduzgi mashg'ulotlar etarli miqdordagi amaliy mashg'ulotlarni nazarda tutadi, bu talabaga mavzudagi bilimdagi bo'shliqlarni o'z vaqtida aniqlashga va imtihonlar boshlanishidan oldin ularni yo'q qilishga imkon beradi. Bundan tashqari, talabalar o'qituvchilar bilan doimiy muloqotda bo'lishlariga imkon beradi.

Sirtqi ta'lim shakli talabaga ish va o'qishni birlashtirish imkoniyatini beradi. Ko'pgina universitetlarda darslar ish kunining kechqurunlari va dam olish kunlari o'tkaziladi. Bu darslarga astoydil qatnashish bilan sifatli bilim olishga erishish mumkin. Talabalar yiliga ikki marta bir- birlari bilan uchrashadilar. Bir necha hafta davomida katta miqdordagi materiallarni o'zlashtiradilar, so'ng imtihonlar topshirildi.

Masofaviy shakl internet orqali o'qitishni nazarda tutadi. Barcha topshiriqlar elektron pochta orqali yuboriladi.

Ta'limning turli shakllarining kamchiliklari:

Kunduzgi ta'lim - bu klassik o'quv turi bo'lib, unda talaba butun semestr davomida ma'ruza va seminarlarga metodik ravishda qatnashadi, so'ngra sessiyada imtihonlarini topshiradi.

Kunduzgi o'qishdagi yakuniy baho joriy ballar va imtihon ballari yig'indisidan tuzilishi mumkin yoki faqat imtihonda olingan bahodan iborat bo'lishi mumkin.

Masofaviy ta'lim - davriy. Talaba unga berilgan materiallardan foydalanib o'zini tayyorlaydi, so'ngra bir oy davomida o'qiladigan ma'ruzalar kursiga qatnashadi. Masofaviy o'qitishda eng muhimi, semestr davomida asosan mustaqil ravishda tayyorgarlik ko'rgan, vaqti- vaqti bilan dars mashg'ulotlari olib borgan o'qituvchilar bilan maslahatlashgan.

Sirtqi ta'limda tahsil oladigan talaba uchun semestrning eng yuqori nuqtasi imtihon hisoblanadi.

Sirtqi ta'lim odatda kunduzgi vaqtdan kam davom etadi, chunki u uchun qisqartirilgan dasturlar taqdim etiladi, chunki ko'p sonli sirtqi talabalar shu tarzda ikkinchi ma'lumot olishadi. O'qish muddati kunduzgi bo'linga qaraganda uzoqroq. Bu ham bakalavriat, ham mutaxassislik darajalariga taalluqlidir.

Lekin, xorijiy tillarni o'rganish doimiy amaliyot va malakalarni takomillashtirishni talab qiladiganligi sababli, ba'zi bir mutaxassisliklar, masalan, xorijiy tillar va tarjima nazariyasi yo'nalishlari sirtqi o'qish orqali o'zlashtirilishi mumkin emas deb hisoblanadi, shuning uchun ko'pgina universitetlarda til mutaxassisliklari uchun sirtqi ta'lim mavjud emas.

Kunduzgi va masofaviy o'qitish o'rtasidagi aniq farqlar:

- Kunduzgi ta'lim - bu uzluksiz o'qishni nazarda tutadigan standart ta'lim shakli, sirtqita'lim esa davriydir;
- Kunduzgi va sirtqi ta'lim semestr davomida o'quv jarayonini tashkil etishda farq qiladi;
- Masofaviy ta'lim talabalarga parallel ravishda bir nechta faoliyat turlari bilanshug'ullanishga imkon beradi, bu kunduzgi ta'limda juda qiyin;
- Ba'zi mutaxassisliklar, masalan, tibbiyot yoki xorijiy til, deyarli sirtqi shaklida taqdimetilmaydi.

Sirtqi va masofaviy ta'limning ijobiy va salbiy tomonlari:

Agar biror kishi malakali mutaxassis bo'lishga intilsa, kelajakdagi kasbini mukammaltushunishni istasa, u holda masofaviy ta'lim unlarga mos kelmaydi. Darsliklardan deyarli mustaqilo'rganish samarali emas. Bu ayniqsa umumiy o'rta ta'limni tugatganlar uchun albatta.

Sirtqi ta'lim kimlarga mos keladi?

Ko'pincha ishlaydiganlar sirtqi bo'limlarga xujjat topshiradilar. Odatda, ular 25 yoshdan oshgan. Har kimning maqsadi har xil. Keling, bir misol keltiraylik. Siz fabrikada oddiy ishchi sifatida ishlaysiz, faqat o'rta maxsus ma'lumotingiz bor. Professional darajada o'sishni istagi bor edi. Demak, sizga sirtqi ta'limda o'qish ayni muddao. Yoki, yosh onalar, ko'p bolali otalar uchun? Bu sizga bir vaqtning o'zida o'qish, ishlash yoki oilaviy biznesni yuritishda yordam beradigan ta'lim shaklidir. Ba'zilar allaqachon ixtisoslikka ega bo'lib, qo'shimcha ikkinchi oliy ma'lumot mutaxassislik uchun olish uchun sirtqi ta'limni tanlaydilar. Shuning uchun, ular uchun ish va o'qishni birlashtirish foydali bo'ladi.

Shunday ekan, kunduzgi ta'lim shaklida o'qiyotgan talabalar turli vaziyatlar tufayli kunduzgi ta'limda o'qish imkoniyat bo'lmasa, unda sirtqi ta'lim haqida o'ylashlari kerak.

Sirtqi ta'limning asosiy ustunligi shundaki, talaba mehnat va o'qishni birlashtira oladi. Ishlayotganlar uchun sirtqi bo'lim ish beruvchiga muhr bilan tasdiqlangan guvohnoma-chaqiriq berishi kerak. Shunda sirtqi ta'lim talabasi sessiya kunlarida ish joyiga kelishga majbur bo'lmaydi. Talaba olingan ko'nikma va bilimlarni amalda qo'llash imkoniyatiga ega bo'ladi.

Masofaviy ta'limning ijobiy tomoni oilaviy sharoiti yoki sog'lig'i bilan bog'liq muammolar tufayli juda ko'p bo'sh vaqtlari bo'lmaganlar uchun qulaydir hamda ishlash uchun imkoniyat bor, shaxsiy vaqtga ham ega bo'ladilar.

Ijobiy va salbiy tomonlariga qaramay, har bir inson o'zi uchun istalgan ta'lim shaklida o'qishni o'zi hal qilishi kerak.

Shunday ekan, sizni qaysi ta'limni shaklni tanlashingiz unchalik muhim bo'lmasada, asosiysi ta'lim olish, o'rganish istagi hech qachon tark etmasin.

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OLIV TA'LIMDA MAKTABGACHA TA'LIMIY YO'NALISHLARI TA'LIM TIZIMINISLOH QILISH TARAQQIYOT OMILI SIFATIDA

Annotatsiya. Oliy ta'limda maktabgacha ta'lim yo'nalishi talabalariga maktabgacha ta'lim tizimini yanada takomillashtirish, barkamol avlod ta'lim-tarbiya jarayonini tarbiyachilar tomonidan to'g'ri yo'lga qo'yilishini ta'minlash hamda ularning malakasini oshirish jarayonini samarali tashkil etish xususida so'z yuritiladi.

Kalit so'zlar: ta'lim, tarbiya, talaba, metod, maktab, dastur, davlat, nodavlat, texnologiyalar, dasturlar.

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PRE-SCHOOL EDUCATIONAL DIRECTIONS IN HIGHER EDUCATION AS A DEVELOPMENT FACTOR IN REFORMING THE EDUCATIONAL SYSTEM

Annotation. Students of the direction of preschool education in higher education are told about further improvement of the pre-school education system, ensuring the correct implementation of the educational process of the harmonious generation by educators, as well as effective organization of the process of their professional development.

Keywords: education, education, student, method, school, program, state, non-state, technology, programs.

O'zbekiston Respublikasida uzluksiz ta'lim kadrlar tayyorlash tizimining asosi, ijtimoiy iqtisodiy taraqqiyotni ta'minlovchi, shaxs, jamiyat va davlatning, ilmiy-texnikaviy va madaniy ehtiyojlarini qondiruvchi ustuvor soha bolib, ijodkor, ijtimoiy faol, ma'naviy boy shaxsning shakllanishi va yuqori malakali raqobatbardosh kadrlarning jadal tayyorlanishi uchun zarur shart- sharoitlarni yaratadi.

Mavzuning dolzarbligi. Darhaqiqat, uzluksiz ta'limjarayoni shaxsning har tomonlama qaror topishi uchun eng qulay davr sanaladi. Mazkur davrda shaxs fan asoslari hamda kasb-hunar ma'lumotlarini o'zlashtiradi, yuksak ma'naviy-axloqiy sifatlarga ega shaxs va malakali kadr sifatida kamol topib boradi. Unda muayyan dunyoqarash shakllanadi. Ma'lumki, ta'lim – tarbiya insonga borliqni anglash sir asrorlarini tushunish, tinimsiz rivojlanayotgan dunyoga moslashish, jamiyatni insonparvarlantirishga hissa qo'shish imkonini yaratadi. Har qanday davlatning qudrati va rivojlanish darajasini aynan ta'lim

tizimi aniqlab beradi. Davlatning ushbu tizimga munosabati, uning kelajagini belgilaydi.

Bugungi kunda O'zbekiston Respublikasida uzluksiz ta'limquyidagi ta'lim turlarini o'z ichiga oladi: maktabgacha ta'lim va tarbiya, umumiy o'rtava o'rtamaxsus ta'lim, professional ta'lim, oliy ta'lim, oliy ta'limdan keyingi ta'lim, kadrlarni qayta tayyorlash va ularning malakasini oshirish, maktabdan tashqari ta'lim. Ta'lim to'g'risidagi qonunning yangi tahriri aynan sakkizinchi moddasi Maktabgacha ta'lim va tarbiya to'g'risida bo'lib, maktabgacha ta'lim va tarbiya bolalarni o'qitish va tarbiyalashga, ularni intellektual, ma'naviy-axloqiy, etik, estetik va jismoniy jihatdan rivojlantirishga, shuningdek bolalarni umumiy o'rtata'limga tayyorlashni ko'zda tutadi.

Asosiy qism. O'zbekiston Respublikasida ta'lim tizimining bunday turlarining har bir bosqichida katta ishlar amalga oshirilmoqda. Bunday ishlarni tarixan qisqa davr uchun misli ko'rilmagan rivojlanish sifatida baholash mumkin.

So'zimizning isboti sifatida bugungi kunda jadal rivojlanayotgan Maktabgacha ta'lim va tarbiyaga e'tiborni qaratishni lozim topdik.

Barchamizga ayonki 2019-yil 16-dekabrda -Maktabgacha ta'lim-tarbiya 595-sonli O_RQ qabul qilindi. Bu qonun 11-bob, 58-moddadan iborat bo'lib 17-moddasida -Maktabgacha ta'lim tashkilotining turlari keltirilgan.

Umumiy turdagi maktabgacha ta'lim tashkilotining umumiy rivojlantirish yo'nalishidagi guruhlarida maktabgacha ta'lim va tarbiyaning davlat ta'lim dasturi amalga oshirilishi ta'minlanadi.

Ko'p tarmoqli ixtisoslashtirilgan maktabgacha ta'lim tashkilotida rivojlanishida jismoniy yoki ruhiy nuqsonlari bo'lgan bolalar uchun maktabgacha ta'lim va tarbiyaning davlat ta'lim dasturi amalga oshirilishi ta'minlanadi

Inklyuziv guruhlarga ega maktabgacha ta'lim tashkilotida bolalarning alohida ta'lim olish ehtiyojlari va individual imkoniyatlarini hisobga olgan holda, ularni sog'lom muhitga uyg'unlashtirish orqali ta'lim va tarbiya olishi uchun teng imkoniyatlar ta'minlanadi. (O'z.Res.2019yil 16-dekabrda Maktabgacha ta'lim -tarbiya 595-sonli O_RQ)

Sh.M.Mirziyoyev ilk marotaba O'zbekiston Respublikasi Prezidenti lavozimining ilk faoliyatidayoq maktabgacha ta'lim tizimini isloh qilish yuzasidan bir qancha ishlarni amalga oshirdi.

Davlatimiz rahbari Shavkat Mirziyoyevning —*Maktabgacha ta'lim tizimi uzluksiz ta'limning birlamchi, eng asosiy bo'g'ini hisoblanadi. Kelgusi 3-4 yilda 5-6 yoshdagi bolalarni barcha maktabgacha ta'limga to'liq qamrab olishga erishmog'imiz shart. Bu ertangi kunimiz hal qiladigan masala va biz buni albatta amalga oshiramiz*», - degan hayotiy da'vati har birimizning, otalar va keng jamoatchilikning ongi hamda qalbidan mustahkam o'rinegalladi. Bu sohada olib borilayotgan keng miqyosli ishlar, xususan,

ta'lim-tarbiya bo'yicha qabul qilingan umummilliy dasturlarni mantiqiy yakuniga yetkazish, yosh avlodga puxta ta'lim berish, ularni jismoniy va ma'naviy yetuk insonlar etib tarbiyalash eng muhim vazifa ekanini alohida ta'kidlaydi. O'zbekiston Respublikasi Vazirlar Mahkamasining –Maktabgacha ta'lim tashkilotlari faoliyatini yanada takomillashtirish chora-tadbirlari to'g'risida"gi 391-sonli 2019-yil 13-maydagi qarori maktabgacha ta'lim tizimini isloh qilinishida davlat hamda nodavlat tarmog'ini kengaytirishga turtki bo'ldi. Qarorda 4 ta Nizom ilova qilingan bo'lib, 1-ilova –Umumiy tipdagi davlat va nodavlat maktabgacha ta'lim tashkilotlari to'g'risidagi Nizom hisoblanadi;

maktabgacha ta'lim tashkiloti -umumiy tipdagi davlat va nodavlat maktabgacha ta'lim tashkiloti;

davlat maktabgacha ta'lim tashkiloti-davlat tomonidan boshqariladigan hamda moliyalashtiriladigan ilk va maktabgacha yoshdagi bolalar rivojlanishiga qoyiladigan Davlat talablariga muvofiq maktabgacha ta'lim xizmatlarini ko'rsatadigan tashkilot;

nodavlat maktabgacha ta'lim tashkiloti- qonun hujjatlarida belgilangan tartibdalsenzya asosida faoliyat yuritadigan ilk va maktabgacha yoshdagi bolalar rivojlanishiga qoyiladigan Davlat talablariga muvofiq maktabgacha ta'lim xizmatlarini ko'rsatuvchi yuridik shaxs;

bolaning qonuniy vakillari – bolaning ota-onalari va ularni o'rnini bosuvchi shaxslar (O'z. Res. Vazirlar Mahkamasining –Maktabgacha ta'lim tashkilotlari faoliyatini yanada takomillashtirish chora-tadbirlari to'g'risida"gi 391-sonli 2019-yil 13-may qarori).

Nodavlat maktabgacha ta'lim tashkilotlari quyidagi qarorlar asosida tashkil etiladi

- Nodavlat maktabgacha ta'lim muassasalari tashkil etish chora-tadbirlari to'g'risida O'z. Res. Prezidentining 2017-yil 15-sentabrdagi PQ-3276-sonli qarori.
- Davlat xususiy sheriklik asosida nodavlat maktabgacha ta'lim muassasalari tashkil etish to'g'risida O'z. Res. Prezidentining 2018-yil 5-apreldagi PQ-3651-sonli qarori
- Oilaviy nodavlat maktabgacha ta'lim muassasalari faoliyati bo'yicha ruxsatnoma berish tartibi to'g'risidagi 595-sonli 2018-yil 30-iyuldagi Vazirlar Mahkamasining qarori
- Maktabgacha ta'lim sohasida davlat-xususiy sheriklik shakllarini yanada kengaytirish chora-tadbirlari to'g'risidagi 944-sonli 2018-yil 23-noyabrdagi Vazirlar Mahkamasining qarori.

Soha rivojlanishiga asosiy sabab va bugungi kunda maktabgacha ta'limda amalga oshirilayotgan sezilarli o'zgarishlar O'zbekiston Respublikasi Prezidentining 2017-yil 30-sentabrdagi PQ-3305-son –O'zbekiston Respublikasi Maktabgacha ta'lim vazirligi faoliyatini tashkil

etish to'g'risidagi qarori hamda, 2016-yil 29-dekabrda PQ-2707-son -2017-2021- yillarda maktabgacha ta'lim tizimini yanada takomillashtirish chora-tadbirlari to'g'risidagi qaroriga muvofiq Vazirlar Mahkamasining 2017-yil 21-noyabrda 929-son -O'zbekiston Respublikasi Maktabgacha ta'lim vazirligi to'g'risidagi Nizomi maktabgacha ta'limda bolalarni sifatli tayyorlash, maktabgacha ta'lim tashkilotlarida moddiy texnika bazasini mustahkamlash, maktabgacha ta'lim tashkilotlarining davlat va nodavlat tarmog'ini kengaytirish va shu orqali maktabgacha ta'limga bola qamrovini oshirish va sohaga ilg'or xorij tajribalarini tadbiiq qilish imkonini beradi. Bu xususida O'zbekiston Respublikasi Maktabgacha ta'lim tizimini 2030-yilgacha rivojlantirish kontsepsiyasi (O'zbekiston Respublikasi Prezidentining 2019-yil 8- maydagi PQ-4312-sonli qarori)da ham ko'rsatib o'tilgan.

Bu albatta davlat rahbarining maktabgacha ta'lim sohasida chiqarayotgan qarorlari va e'tiborlari natijasidir. Shu o'rinda haqli bir savol tug'iladi. Qanday qilib ta'lim jarayonini mushkullikdan quvonchli jarayonga aylantirsa bo'ladi? Shuni aytib o'tish joizki, sifatli ta'lim birinchi navbatda ta'lim beruvchi tarbiyachi, pedagogning kasbiy mahoratiga bog'liqdir.

Albatta mashg'ulotlar tarkibiga yangiliklarni kiritish, ilg'or ish uslublari va metodlarni qo'llash ta'lim sifatini oshirishga olib keladi. Bu esa o'z o'rnida pedagogdan kasbiy mahorat talabetadi. Davlat hamda nodavlat maktabgacha ta'lim tashkilotlarida ta'lim-tarbiya jarayoni Davlat standartiga muvofiq ilk va maktabgacha yoshdagi bolalar rivojlanishiga qo'yiladigan Davlat talablari va ilk qadam davlat dasturi asosida rejalashtiriladi. (Davlat standarti.2020-yil.22- dekabr).

Bunga ko'ra 2020-2021-o'quv yili yakunida maktabgacha ta'lim tizimi to'g'risidagi qator qaror va farmonlar ijrosini joylarda qo'llanilishi, tashkil etilgan davlat hamda nodavlat tashkilotlar hisobidan maktabgacha ta'limga bolalarni qamrab olinishi 62%ni tashkil etdi.

O'zbekiston Respublikasi Prezidenti Sh.Mirziyoyev 2020-yil 29-dekabrda Oliy majlis Murojaatnomasida 2023-yilgacha maktabgacha ta'limda bola qamrovini 75%ga yetkazish uchun 600mlrd som sub'sediya ajratiladi deb aytib o'tdilar. Bu bilan maktabgacha ta'limga bo'lgan e'tibor yanada oshirildi. 2 mingta nodavlat bog'cha tashkil etilib xususiy sector ulushi 25%ga yetkaziladi. 2021yilda maktabga tayyorlashning bepul tizimi bilan 560ming nafar 6 yoshli bolalar yoki ularning 82% qamrab olinadi. Uzoq qishloqlarda maktabgacha ta'limning muqobil shakllari yanada ko'chaytiriladi. Bunga YUNISEF hamda jahon banki bilan hamkorlik cheklangan bolalar uchun maktabgacha ta'limni uyda berish modeli ham yo'lga qo'yiladi. (O'z. Res. Prezidenti Sh.Mirziyoyev 2020-yil 29-dekabrda Oliy majlis Murojaatnomasi)

Xulosa o'rnida shuni aytish joizki, maktabgacha ta'lim tashkilotlari davlat va nodavlat tarmoqlarini yanada kengaytirish bugungi kun talabidir. Davlat va nodavlat maktabgacha ta'lim tashkilotlari sonini ortishi sog'lom

raqobat muhitini shakllantirishda turtki bo`ladi. Tarbiyachining bilimi, mahorati maktabgacha ta`lim tashkilotida zukko bolalar safini oshiradi. Endigi pirovard maqsadimiz, bolalarni har tomonlama intellektual, axloqiy, estetik va jismoniy rivojlantirish sharoitlarini yaratish, maktabgacha ta`lim sifatini oshirish, maktabgacha ta`lim tashkilotlarida bolalarni maktabga sifatli tayyorlashda zamonaviy ta`lim dasturlari va texnologiyalarni joriy etishdan iboratdir. Joylarda maktabgacha ta`lim tashkilotlarining yangi shakllarini joriy etish, sharoitlarini yaxshilash, maktabgacha ta`lim tashkiloti tarbiyachilar salohiyatini oshirish bugungi kunning dolzarb vazifalaridan biri hisoblanadi.

Foydalanilgan adabiyotlar:

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2. O`z.Res.2019yil 16-dekabrda||Maktabgacha ta`lim -tarbiya|| 595-sonli O__RQ
3. O`z. Res. Vazirlar Mahkamasining –Maktabgacha ta`lim tashkilotlari faoliyatini yanada takomillashtirish chora-tadbirlari to`g`risida"gi 391-sonli 2019-yil 13-may qarori.
4. Nodavlat hamda Davlat xususiy-sheriklik asosida NMTTitashkil etish 944-sonli qaror23.11.2018.
5. O`zbekiston Respublikasi Maktabgacha ta`lim tizimini 2030-yilgacha rivojlantirishkontseptsiyasi. 2019-yil 8-maydagi PQ-4312-sonli qarori.
6. O`z.Res. Prezidenti Sh.Mirziyoyev 2020-yil 29-dekabdagi Oliy majlis Murojaatnomasi.

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ZAHARLI O'RGIMCHAKLARNING TABIATDA TARQALISHI

Annotatsiya: Ushbu maqolada zaharli o'rgimchalar, ularning tarqalishi ularning tabiyatdagi ahamiyati, o'rgimchaklar zaharining ta'sir etishi, va ularni o'rganish metodlari keltirilgan.

Kalit so'zlar: Zaharli o'rgimchaklar, zahar turlar, Qoraqurt, Soxta qoraqutr, Bo'ri o'rgimchak, Metodlar

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THE SPREAD OF VENOMOUS SPIDERS IN NATURE

Abstract: This article presents poisonous spiders, their distribution, their importance in nature, the effect of spider venom, and methods of their study.

Key words: Venomous spiders, types of venom, black widow, false widow, wolf spider, methods.

Zaharli o'rgimchaklarni o'rganish ular ekotizimlarning muhim a'zolari sifatidagi rolini tushunish uchun muhim ahamiyatga ega ekanligini bilish mumkin. Hozirgacha bu organizmlarning tur tarkibi, biologiyasi, ekologiyasi, xulq-atvori, ko'pgina boshqa jarayonlari, biologik faoliyati to'g'risida to'liq ma'lumotlar yo'q. Respublikamizning tabiiy iqlim sharoitlarining xilma-xilligi o'rgimchaklar, jumladan, zaharli o'rgimchaklarning boy faunasining mavjudligini belgilaydi. Hozirgi kunda tabiiy resurslarning jadal o'zlashtirilishi va texnikalarning taraqqiyoti davrida hayvonlarning ko'plab turlar soni keskin kamaymoqda, yaylovlar, cho'l va yarim cho'l yerlarining o'zlashtirilishi munosabati bilan zaharli o'rgimchaklarning ko'plab turlari ularning yashash joylari va yo'q bo'lib ketish xavfi ostida. Hozirgi vaqtda Xalqaro o'rgimchalar katalogining ma'lumotiga ko'ra ushbu turkumning 129 oila, 4234 urug'ga mansub 49791 turi mavjud. [5] Odam hayoti uchun xavfli bo'lgan o'rgimchak turlari dunyo bo'yicha 200 dan ortiq turi bor.

O'rgimchaklar zahri asosan o'lja tutish va himoyalani sh vositasi hisoblanadi. O'rgimchaklarning zahar ta'siri ikki xil bo'ladi:

Birinchi ta'siri nekrozga uchratuvchi ta'sir. Bunday zaharga ega o'rgimchaklar chaqqanda zararlangan joydagi to'qima va hujayralarda shish, toshmalar toshishi va to'qimalarning nekrozga uchrash holati kuzatiladi.

Ikkinchi ta'sirda esa neyrotoksik ta'sirga ega. Bunday zaharga ega o'rgimchaklar chaqqanda asosan nerv sistemasiga ta'sir etadi. Ulardagi bog'lanish sinapslarni buzadi. Bunday zararlanishda nerv sistemasi bilan bog'liq muammolar kelib chiqadi, ba'zi o'rgimchaklarning zahri 2 xil ta'sirga ega bo'lishi ham mumkin.

O'rgimchakning o'lja tutishi 2 xil usulda amalga oshadi: ba'zi turlari to'r to'qish orqali oziq tutsalar, boshqalari o'ljani poylab yoki ta'qib qilib tutadilar. Tabiatda shunday turlar borki, ular boshqa o'rgimchaklar bilan oziqlanadi. Ular o'rgimchaklarni tutishda hiyla ishlatadilar. Ular o'rgimchak to'riga borib xuddi to'rga tushgan kichik hashoratdek to'rni oyoqlari bilan tepaga va pastga silkitadilar va o'zlarini o'ljadek ko'rsatadilar, shu tarzda ular boshqa o'rgimchaklarni ovlaydilar[4].

Material va metodikasi

O'rgimchaklardan namuna yig'ish jarayonida quyidagi metodlardan foydalaniladi: Marshrut metodi: bunda material yig'ish uchun joylar belgilab olinib, materiallar yig'iladi. Material yig'ish jarayonida o'rgimchaklarni ushlashda albatta himoya qo'lqoplarini kiygan holda ishlash kerak. Agar o'rgimchakni qo'lda ushlash imkoni bo'lsa, uni qo'lqop yordamida ushlash mumkin. Tungi hayot tarzida yashaydigan o'rgimchaklarni yig'ishda **Barbera** tuzog'idan foydalaniladi. Bunda yerga chuqur plastik idish ko'mib qo'yiladi va uning ichiga o'rgimchaklarni jalb qilish uchun o'lja solinadi. Unga tushgan o'rgimchak chiqib keta olmaydi. Tuzoqqa tushgan o'rgimchakni ehtiyotkorlik bilan olish mumkin.



1-rasm. Barbera tuzog'i yordamida o'rgimchak tutish

Matrab (sachok) bilan tutish metodi. Bunday usulda bir yarim metrlik tutqich yordamida yirik o'rgimchaklar ushlanadi.

O'rgimchaklarni farqlashda С.О.Высодская metodidan ham foydalaniladi [2]. Bu metod asosan o'rgimchaklarni aniqlashdagi taksonomik metodlardan hisoblanadi. Bu metod bilan o'rgimchaklarning morfologik belgilari yordamida tur aniqlanadi. Ularning ko'z soni va joylashuvi oyoqdagi tirnoqlar kabi belgilar bilan aniqlanadi.

O'rgimchaklarni yig'ishda uning yashash tarziga e'tibor berish kerak. Kunduzi hayot kechiradigan o'rgimchaklar asosan tuproq ustida yurishadi yoki o'zlari to'qigan to'r atrofida uchraydi. Tunda yashovchi o'rgimchaklar esa kunduzi toshlar yoki biror chuqurlarga kirib olishadi.

Bo'ri o'rgimchak *L. praegrans* (CL Koch, 1836)

Zaharli o'rgimchaklarning yana bir turi - bu bo'ri o'rgimchak. U O'zbekistonda cho'l, dasht va tog' tizmalarida yashaydi, garchi uni shaharlarda, ayniqsa, o'simliklari ko'p bo'lgan bog'larda va yerlarda ham kuzatish mumkin. Ularni o'tloqzorlarda ham cho'llarda ham uchratish mumkin, ular to'r to'qishmaydi, shu sababli ochiq yerlarda ko'proq uchraydi. Ular tungi hayvon hisoblanib, asosan, tik inlarda kunduzi bekinib, kechalari ov qiladi. Tana tuzilishi ancha yirik o'rgimchak hisoblanib tez harakatlanadi. Shu sababli o'ljalarni ovlab tutadi.

Ko'zlari 8 ta, 2 jufti yirik, qolganlari mayda. Yirik ko'zlar tunda ov qilish jarayonida qo'l keladi. Ular yirik hasharotlar bilan oziqlanishadi Surxondaryo viloyatining ko'plab hududlarida uchraydi. Sherobod, Qiziriq Qumqo'rg'on, Boysun tumani hududlarida keng tarqalgan, naslga g'amxo'rlik kuchli rivojlangan [4].

O'zbekiston hududida zaharli o'rgimchaklarning 9 ta avlod va 6 ta oilaga mansub 18 ta turi aniqlandi. [3] Ular ichida *Latrodectus* urug'i vakillari o'zining kuchli zahri va yashash tarzi bilan ajralib turadi. O'zbekistonda zahri kuchliligi jihatdan xavf soluvchi 3 ta turi alohida o'rin tutadi. Bular *Theridiidae* oilasiga kiruvchi oq qoraqurt (*L. pallidus* Cambridge, 1872), Dal qoraqurti (*L. dahli* Levi, 1959) va qoraqurt (*L. tredecimguttatus* Rossi, 1790) turlaridir [1]. Bu turlar O'zbekistonning janubiy hududlarida keng tarqalgan bo'lib, asosan cho'l va adirlarda, tog' yonbag'irlarida ko'p uchraydi. Bu turlar orasidan eng keng tarqalgani *L. tredecimguttatus* hisoblanadi [3].

Qoraqurt (*L. Tredecimguttatus*). Qoraqurtlarning urg'ochisining zahari erkaginikidan 160 barobar kuchli hisoblanadi. Bu inson hayoti uchun juda xavflidir. Odamlar ba'zan zaharli o'rgimchaklar bilan unga o'xshash ammo xavfsiz o'rgimchaklarni adashtrishadi. O'rgimchaklar orasida mimikriya hodisasi yaxshi shakllangan bo'lib, shulardan biri soxta qoraqurt nomi bilan ataluvchi *Theridiidae* oilasiga mansub *Steatoda paykulliana* turi. U qoraqurtga o'xshaydi lekin uning qorin qismi orqa tomonida qorqurtda uchramaydigan yorqin sariq dog'i bor. Uning zahri ancha kuchsiz bo'lib odamga ta'sir qilmaydi chaqqanda ari chaqqandek ta'sir qiladi.[1]

Xulosa. Bizning tadqiqot natijalarimizga ko'ra, Surxondaryo hududidagi zaharli o'rgimchaklar yetarli darajada o'rganilmaganligi va turlar soni aniqlanmaganligi ma'lum bo'ldi.

Ularning tabiatdagi o'rni va tibbiyotdagi ahamiyati juda muhim hisoblanib ularning zahridan tibbiyotda keng miqyosda foydalanish mumkin. Bizning taqdidotlarimizning asosiy vazifasi Surxondaryo faunasidagi o'rimchaksimonlarni to'liqroq o'rganishdan iborat.

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VALERIANA OFFICINALIS O'SIMLIGINING BIOKIMYOVIY TARKIBI VA FARMAKOLOGIK XUSUSIYATLARI

Anotatsiya: Maqolada Valeriana officinalis L. o'simligining dorivorlik xususiyatlari va shifobaxshligi turli adabiyotlar taxlili asosida yoritib berilgan. Tabobatda yurak va qon-tomir kasalliklarini oldini olish hamda davolashda, ayniqsa asab sistemasini tinchlantirishda dorivor o'simliklar va ulardan olinadigan dori vositalari keng miqyosda ishlatiladi.

Kalit so'zlar: Valeriana officinalis, Valeriana ko'chatlari, hidi, dorivorligi, tarkibi, navlari, tarqalish maydoni, biologiyasi

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THE BIOCHEMICAL COMPOSITION AND PHARMACOLOGICAL PROPERTIES OF THE PLANT VALERIANA OFFICINALIS

Annotation: The article highlights the medicinal properties and healing potential of the plant Valeriana officinalis L., based on an analysis of various literature sources. Medicinal plants and medicines obtained from them are widely used in medicine for the prevention and treatment of heart and blood vessel diseases, especially for calming the nervous system.

Keywords: Valeriana officinalis, Valeriana seedlings, smell, medicinal properties, composition, varieties, distribution area, biology.

Valeriana L. ko'p yillik o'tlar turkumi bo'lib, kaprifoliaceae oilasiga mansub, ildizi va ildizpoyalari dori sifatida ishlatiladi. Ularning ildizlari va ildizpoyalari o'ziga xos hid va ozgina achchiq ta'm beradi. Hozirgi vaqtda butun dunyoda valeriananing 200 dan ortiq turlari topilgan. Yovvoyi yoki madaniy turlarning aksariyati Germaniya, Gollandiya, Fransiya, Belgiya, Sharqiy Yevropa, Hindiston, Yaponiya, Meksika, Xitoy va AQShda tarqalgan. Biroq, tibbiy tadqiqotlar yoki klinik qo'llanmalarda faqat bir nechta turlar keng tarqalgan. Misol uchun, Valeriana officinalis L (V. officinalis) uzoq vaqt davomida Evropa va Qo'shma Shtatlarda engil va o'rtacha uyqusizlikni davolash uchun ishlatilgan. Xitoyda valeriananing 17 turi va ikkita turi mavjud bo'lib, ularning aksariyati shimoli-sharqdan janubi-

g'arbgacha bo'lgan mintaqalarda tarqalgan (Xitoy Fanlar akademiyasi, 2004). Ulardan *V. officinalis*, *Valeriana amurensis* P. Smirn turlari. sobiq Kom. (*V. amurensis*), *Valeriana jatamansi* Jons (*V. jatamansi*), *Valeriana hardwickii* Wall. (*V. hardwickii*), *Valeriana alternifolia* Bunge (*V. alternifolia*) va *Valeriana fauriei* Briq. (*V. fauriei*) *Rhizoma et Radix Valerianae* (RERV) ning Xitoy materia tibbiyoti sifatida ishlatilgan. Aksincha, *V. officinalis*, *Valeriana wallichii* DC. (*V. wallichii*) va *Valeriana edulis* Nutt. (*V. edulis*) qo'llaniladigan asosiy dorivor turlar hisoblanadi

Valerian ildizi - ko'p yillik o'simlik (Valerianaceae oilasi) qadimgi davrlardan beri terapiyada keng qo'llaniladi. Ko'pgina mamlakatlarda (ayniqsa Evropada) valerian ildizi engil asabiy taranglik va uyqu buzilishlarini bartaraf etish uchun mashhur dorivor o'simlik mahsuloti hisoblanadi. Biroq, valerian ildizi ekstrakti odamlarda tinchlantiruvchi ta'sir ko'rsatadigan dalillar ko'p. Ushbu dorivor o'simlik insonda uyqu sifatini yaxshilashi uxlab qolish kechikishini kamaytirishi va ijtimoiy stressli vaziyatda somatik qo'zg'alish hissiyotlarini kamaytirishi ko'rsatilgan. Bundan tashqari, *V. officinalis* L. ekstrakti benzodiazepinga o'xshash boshqa xususiyatlarga ega bo'lmasa-da, markaziy benzodiazepin retseptorlari bilan bog'laydigan moddalarni o'z ichiga olganligi aniqlandi.

Toksikologik nuqtai nazardan, farmatsevtika o'simlik mahsulotlari tarkibidagi og'ir metallar aralashmalarini nazorat qilish juda muhim muammodir. Tuproqdagi dorivor o'simlik mahsulotining turli xil bio-mavjudligi tufayli ularning xom ashyo (o'tlar)dagi darajasi sezilarli darajada farq qilishi mumkin.

Valeriananing ba'zi turlari an'anaviy dori-darmonlar sifatida ishlatilgan, qo'rquvni tinchlantirish va ongni tinchlantirish, qonni rag'batlantirish, qon aylanishini faollashtirish va hayz ko'rishni tartibga solish, og'riqni yengillashtirish uchun qon aylanish oqimini tartibga solish, ovqat hazm qilishni rag'batlantirish va asab, yurak-qon tomir va ovqat hazm qilish tizimlari, yallig'lanish, ginekologiya va boshqalar kasalliklarini davolash. Farmakologik tadqiqotlar Valeriananing 150-200 ga yaqin kimyoviy tarkibiy qismlardan shuningdek, markaziy asab tizimida faol bo'lgan flavonoidlar va lignanlardan iborat. Valeren kislotasi asosiy tarkibiy qism sifatida qabul qilinadi. *V. officinalis*ning ildizlari va ildizpoyalari ikkita asosiy guruhga ega: uchuvchi moyning sesquiterpenlari (valeren kislotasi va uning boshqa hosilalari, valeranon, valeranal va kessil efirlari) va valepotriatlar (valtrat, didrovaltrat, atsevaltrat va izovaleratlar), flavonoidlar, triterpenlar, lignanlar va alkaloidlar kabi boshqa tarkibiy qismlarga kengayishi. sedativ, gipnoz, antispazmodik, og'riq qoldiruvchi, antidepressant, anksiyolitik, antikonvulsant, antiepileptik, neyroprotektiv, antibakterial, antiviral, sitotoksik va antitumor ta'sirini, shuningdek, yurak-qon tomir va miya tizimini yaxshilashni aniqladi. Valerianadan 800 dan ortiq birikmalar ajratilgan yoki aniqlangan, jumladan iridoidlar, lignanlar, flavonoidlar, sesquiterpenoidlar, alkaloidlar va efir moylari. Neyroprotektiv, yallig'lanishga qarshi, sitotoksik va sedativ ta'sirga ega bo'lgan tarkibiy qismlar ham aniqlangan. Biroq, hozirgi vaqtda Valerianadan ishlab chiqilgan dorilar etarli darajada emas. Valeriananing an'anaviy klinik qo'llanilishi bilan bevosita bog'liq bo'lgan farmakologik ta'sirlarni, samarali tarkibiy qismlarni

va mexanizmlarnimisol keltirish mumkin, Tibbiy amaliyotda valeriana yumshoq sedativ, spazmolitik va safro haydash xususiyatlari uchun qadrlanadi. Unga asoslangan dorilar dunyoning ko'plab mamlakatlarida uyqusizlik, asabiy qo'zg'alish, yurak-qon tomir tizimining nevrozi, astma, epilepsiya, OIT va qalqonsimon bez kasalliklarini davolashda qo'llaniladi. ammo bazi turlari va ularning tarkibidagi efir moylari uyqusizlikni davolash uchun yaxshi rivojlanganligini aniqlangan. Resurslardan samarali foydalanishni rag'batlantirish uchun ko'proq valeriana turlari va ularning turli xil dorivor qismlari kelgusida tegishli tadqiqotlar markazida bo'lishi kerak.

Xulosa. Asab, yurak-qon tomir va ovqat hazm qilish tizimlari, yallig'lanish va ginekologiya kasalliklarini davolashda foydalanishni osonlashtirish va oldini olish maqsadida valeriananing an'anaviy samaradorligiga asoslangan klinik tadqiqotlar o'tkazilishi nihoyatda zarur, chunki hozirgi kunda insonlarda vujudga kelayotgan ko'pgina kasalliklarni davolashda mana shu o'simlik davbo bo'lishi kutilmoqda. Kelajakdagi tadqiqotlar, shuningdek, neyrodegeneratsiya, yurak-qon tomir va serebrovaskulyar, yallig'lanish va o'smalar bilan bog'liq kasalliklarni davolash uchun yangi dorilarga Valeriananing samarali fraktsiyalari yoki faol birikmalarini ishlab chiqishga qaratilgan.

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SOYA O'SIMLIGINI PARVARISHLASHNING O'ZIGA XOS XUSUSIYATLARI

***Annotatsiya.** Mazkur maqolada soya o'simligini parvarishlashning asosiy bosqichlari, agrotexnik tadbirlarning ilmiy asoslari va o'ziga xos xususiyatlari o'rganiladi. Shuningdek, cheklangan namlik sharoitida samaradorlikni oshirishga qaratilgan innovatsion yondashuvlar va usullar haqida fikr yuritiladi. Ushbu tadqiqot Surxondaryo viloyati misolida soya o'simligini parvarishlash bo'yicha istiqbolli yondashuvlarni ko'rsatib beradi.*

***Kalit so'zlar:** Soya, agrotexnik tadbirlar, cheklangan namlik, tuproq unumdorligi, Surxondaryo sharoiti, dukkakli ekinlar, mineral o'g'itlar, sho'rlanish, takroriy ekinlar, sug'orish, parvarishlash texnologiyasi.*

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SPECIFIC FEATURES OF SOYBEAN PLANT CARE

***Abstract:** This article explores the main stages of soybean cultivation, the scientific basis of agronomic practices, and their unique characteristics. It also discusses innovative approaches and methods aimed at increasing efficiency under limited moisture conditions. This study highlights promising approaches to soybean cultivation, using the Surkhandarya region as an example.*

***Key words:** Soybean, agronomic practices, limited moisture, soil fertility, Surkhandarya conditions, leguminous crops, mineral fertilizers, salinization, secondary crops, irrigation, cultivation technology.*

Soya dunyo miqyosida muhim qishloq xo'jalik ekini sifatida tanilgan bo'lib, uning oziq-ovqat va sanoat sohalaridagi ahamiyati yildan-yilga ortib bormoqda. Ushbu o'simlik yuqori oziqaviy qiymati, tuproq unumdorligini yaxshilash xususiyati hamda biologik xilma-xillikni ta'minlashdagi o'rni bilan alohida ajralib turadi. Shu bilan birga, soya o'simligini muvaffaqiyatli yetishtirish ko'plab ekologik va agrotexnik omillarga bog'liq. Ayniqsa, iqlimi qurg'oqchil, tuproqlari

sho'rlanishga moyil bo'lgan hududlarda soyadan yuqori va barqaror hosil olish qiyinchilik tug'diradi. Ushbularni inobatga olgan holda Surxondaryo viloyati tuproq-iqlim sharoitlarida istiqbolli soya navlarini yetishtirish agrotexnologiyasini qarab chiqamiz.

Soyani ekish. Urug'larni ekishda muddatlarni va meyorlarini to'g'ri tanlash, maysalarning qiyg'os unib chiqishini ta'minlaydi. Surxondaryo sharoitida o'rganilgan soya navlarini ekishning maqbul muddatlari aprel oyining ikkinchi yarmi hisoblanadi. Soyani takroriy ekin sifatida ekilganida esa kuzgi bug'doydan bo'shagan yerlarga iyun oyining birinchi yarmida, ertapishar navlarini esa iyulning birinchi yarmidan kechiktirmasdan ekiladi. Soya issiqsevar va mezofit o'simlik bo'lganligi sababli yaxshi namlantirilgan tuproqlarga ekish zarur.

Shuni unutmaslik kerakki soya urug'lari ularning hajmidan kelib chiqib ekish bir xil chuqurlikka bo'lishi zarur, yani chuqurlik 4-5 sm dan o'tkazib yubormaslik kerak, bunda urug'larni nam tuproq qatlamiga bo'lishiga e'tibor berish zarur. Shuningdek urug'larni ekishda urug'ning massasiga va sifatidan kelib chiqib ekish usuli tanlanadi. Soya urug'larini qatorlab ekkanda 45sm yoki 60 sm (bazan qo'shqatorlsb ekkanda 90sm) va yalpi ekish mumkin. Viloyat sharoitida 60 sm li qatorlab ekish soya don hosildorligi uchun eng maqbuldir. Soyaning donini olish uchun ekish me'yori – bir gektar yerga tup soni 300-400 ming(o'rtacha 60 kg urug'), ko'k massa olish uchun esa 450-500 ming hisoblanadi. Takroriy ekin sifatida soya ekilganida eng maqbul ekish me'yori bir gektar yerga 300 mingta unuvchan urug' hisoblanadi. O'simliklarning ko'chat qalinligi ularning yorug'lik, namlik va ozuqa moddalari bilan ta'minlashiga ta'sir qilib, biometrik va morfo-fiziologik ko'rsatkichlari keskin o'zgaradi.

Soyani parvarishlash. Soya o'simligini parvarishlash tuproq namligini ta'minlash (uchinchi barg hosil bo'lishi, shoxlanishi va g'unchalash davrlarida - 70 %, gullash va dukkaklar hosil bo'lish davrida - 80 %, urug' to'lishish davrida - 70 %)begona o'tlarni mexanik va kimyoviy vositalar yordamida yo'qotish, turli kasallik hamda zararkunandalardan kimyoviy usullar bilan himoyalash, navlarning mineral o'g'itlarga bo'lgan talabini hisobga olgan holda oziqlantirish sharoitlarni yaxshilash (ildiz orqali va qo'shimcha barglar orqali) kabi tadbirlarni o'z ichiga oladi

Birinchi kultivatsiya soya maysalarining yoppasiga unib chiqqanda shu bilan birga birinchi uchtalik barg shakllanmasdan avval amalga oshiriladi. Kultivatsiya tig'li hamda strelkali panjalar bilan olib boriladi, ikkinchi kultivatsiya esa birinchisi kultivatsiyadan 15-20 kun o'tkanda 6-8 sm chukurlikda qilinadi. Bundan tashqari, soya navlari tuproq sug'orilgan(yomg'ir)dan so'ng qatqalog'ini yumshatish maqsadida ham kultivatsiya o'tkaziladi.

Soya donini yig'ish. Soya donini yig'ish vaqti soya donlarining yo'qotilishi va saqlanishiga katta ta'sir ko'rsatadi. O'simlikda namlikning kamayishi bilan chatnashlar paydo bo'la boshlaydi. O'rim-yig'im paytida soya namlik miqdori o'rtacha 13% bo'lishi, mexanik shikastlanishni kamaytirish uchun maqbuldir. Soya donini yig'ish uchun kunning vaqti ham muhim ahamiyatga ega bo'lib, bunda havo namligi past va harorati esa yuqori bo'lgan tush vaqtida hosilni yig'ish yaramaydi,

erta tongda yoki kechqurun yuqori namlik vaqtida yig'ish orqali mexanik shikastlanishni kamaytirishi mumkin.

Soya navlarini dukkaklari pishish fazasiga kelib barglari sarg'aya boshlaydi, to'la pishganda esa barglarining barchasi to'kila boshlaydi, bundan tashqari, poyasi va dukkaklari och sariq, kulrang sariq, och qo'ng'ir va qo'ng'ir qoramtir rangga kiradi. Soya donini o'z muddatlarida yig'ib olish zarur, o'z vaqtida yig'ib olinmaganda dukkaklarning chatnashi hisobiga hosilning bir qismi yo'qotilishi mumkin. Yig'ib olingan soya donlari quruq va shamollatiladigan binolarda saqlanadi.

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IMPACT OF LIMITED MOISTURE AVAILABILITY ON THE LEAF WATER REGIME AND ADAPTIVE MECHANISMS IN DIFFERENT SOYBEAN VARIETIES

Annotation: *The research work was aimed at determining the characteristics of the parameters of the water regime in soybean varieties in drought conditions. The parameters of the water regime in plant leaves were determined under conditions of irrigation and drought. According to the values of the water holding capacity, it is possible to judge whether plants withstand drought.*

Key words: *soybean varieties, water regime, water retention capacity*

Enter. Soybean (*Glycine max L.*) proteins, fats and mineral elements natural source has been legumes of crops main from the representatives is one It is food, fodder and technical purposes wide is used and valuable food is a plant. Grain, corn with alternately planting possible Soybean soil that is nitrogen with enriches because it is natural nitrogen in circulation participation is enough But the end in years fertile of varieties creation and of productivity to increase although abiotic and biotic stress factors with depends losses are also observed [1].

of plants to drought durability early diagnosis to do development resistant varieties and forms in choosing big important have [3]. Therefore, Surkhandarya to the climate special was to a drought-tolerant soybean plant of influence physiological and biochemical aspects learning is a priority issue. Water mode parameters learning of plants to drought durability determination for is the basis. This feature the first next, water storage ability is considered

Research object and methods. Research work was carried out in the conditions of field and vegetation experiments. The researches were carried out during the years 2019-2023 in the 3rd contour of the central experimental field of the Ingichka fiber cotton research institute (ITPITI), Termiz district, on an area of 0,15 ha. 4 promising (domestic Baraka, To'maris MAN-60, Ustoz MM-60 and foreign Vilana) soybean varieties were used as objects of research. Experimental experiments were carried out in field conditions in four-reverse, 24 m² fields.

The ability of assimilating organs to store water was studied by the method of AANichiporovich [4].

Mathematical and statistical processing of the obtained experimental data was carried out using modern computer programs.

Dynamics of soil moisture in the constant water balance and during the vegetation period by the thermostatic - gravity method at a depth of 1,5 m was determined [2].

The purpose of the study is to determine the characteristics of the water regime parameters of soybean leaves under limited and optimal moisture conditions.

Research results and its discussion. According to the results of the research, it was found that the leaves of the studied mesophytic plant - soybean varieties have average water retention properties, that is, soybean varieties are resistant to drought. When we compared the water retention properties of the studied soybean cultivars, we found that the water retention properties of the soybean leaves grown under limited moisture conditions were reduced.

The ability of soybean leaves to retain water depends on the growing season, air temperature during the day, and soil moisture. The water retention capacity of the leaves of soybean varieties decreases according to the phases of the plant's development. The highest rate of water holding capacity under optimal moisture conditions was observed in the V₁ phase of Tomaris MAN-60 variety, which was 66,5%, while the lowest rate was observed in the R₃ phase of Vilana variety, which was 57,1%. In the conditions of limited moisture, the highest rate was observed in the V₁ phase of the Ustoz MM-60 variety, which was 48,6%. The lowest rate was also observed in the R₃ phase of the Vilana variety, which is 22,7%, as well as under optimal moisture conditions.

In conditions of optimal water supply, the average index of water retention capacity in plant leaves was in the range of 59,75-63,05%, while in conditions of limited humidity, this index was 44,9- It was observed that 25,9%. It was observed that the strong development of water storage capacity has a positive effect on plant development, and in drought conditions, the reduction of the total amount of water in the leaves to varying degrees leads to a violation of the water balance in plants (Table 1).

1 - table

Water retention capacity of leaves of different soybean cultivars

Soybean varieties	Development phase				Average
	V ₁	V ₃	R ₁	R ₃	
Optimal humidity					
Baraka	65,8±0,72	64,4±0,72	62,3±0,66	59,7±0,67	63,05
To'maris MAN-60	66,5±0,86	64,5±0,73	63,2±0,66	60,5±0,67	63,7
Ustoz MM-60	63,9±0,85	62,4±0,76	59,9±0,65	58,6±0,67	61,2
Vilana	61,8±0,81	60,7±0,79	59,4±0,68	57,1±0,67	59,75
Limited humidity					
Baraka	43,4±0,82	41,8±0,76	38,4±0,64	37,7±0,64	40,3
To'maris MAN-60	43,8±0,84	41,2±0,77	40,5±0,65	37,6±0,66	40,8
Ustoz MM-60	48,6±0,79	45,3±0,75	43,7±0,66	42,3±0,64	44,9
Vilana	29,4±0,72	26,3±0,74	25,2±0,62	22,7±0,62	25,9

Because soybean is a warm climate crop, it is usually grown in irrigated areas. Since the soybean plant's water needs are particularly high during the flowering and fruiting periods, adequate irrigation is required during these periods. The water retention properties of the leaves of the studied soybean varieties are also low during

these periods of their ontogenesis. This may be related to active metabolic processes and the formation of reproductive organs during these periods, as a large amount of water is required for their implementation.

Summary. The values of the rate of moisture release from the leaves of the studied varieties are different. For example, Vilana variety has 59,75% under optimal moisture conditions, but limited moisture is 25,9% under wet conditions, which is reduced by 33,3%, which indicates its sensitivity to drought conditions. The lowest effectiveness was observed in Ustoz MM-60 variety, its indicator was 16,3%.

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O'SIMLIKLARNING HARAKATLANISHI: TROPIZM, FOTOTROPIZM VA GEOTROPIZM ASOSLARI

***Annotatsiya:** Maqolada o'simliklarning tropizmlari va fototropizmlari, geotropizm va xemotropizm ko'rib chiqiladi. Laboratoriya sharoitida ularning xatti-harakatlari ham tahlil qilindi. O'simliklar hayvonlar kabi faol ravishda joydan joyga ko'chib yurmasada, ularning o'ziga xos harakatlanish turlari mavjud. Bu harakatlar odatda o'simliklarning atrof-muhit sharoitlariga moslashishi va yashashini ta'minlash uchun zarur. Ular yorug'lik, suv, tortishish kuchi va mexanik ta'sir kabi omillarga javoban turli xil harakatlar qiladilar.*

***Kalit so'zlar:** Kalit so'zlar: tropizm, fototropizm, geotropizm, o'simlik, xemotropizm, gidrotropizm.*

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MOVEMENT OF PLANTS: FUNDAMENTALS OF TROPISM, PHOTOTROPISM, AND GEOTROPISM

***Annotation:** The article discusses the tropisms and phototropisms of plants, as well as geotropism and chemotropism. Their behaviors were also analyzed under laboratory conditions. While plants do not actively move from place to place like animals, they do exhibit specific types of movement. These movements are usually essential for the plant's adaptation to environmental conditions and for its survival. In response to factors such as light, water, gravity, and mechanical influences, plants perform various types of movement.*

***Keywords:** Tropism, phototropism, geotropism, plant, chemotropism, hydrotropism.*

Kirish. O'simliklar harakatlari orasida o'simliklarga ham, boshqa vakillariga ham xos bo'lgan harakatlarni ajratib ko'rsatish mumkin. Bularga sitoplazma va unda joylashgan organoidlarning harakati, shuningdek, odatda lokomotor deb ataladigan flagella yordamida harakatlar kiradi.

Sitoplazmaning harakati. Hujayralardagi sitoplazma doimiy harakatda. Bunday harakat sikloz deb ataladi. Ushbu harakatni ikkita kontraktil oqsil - aktin va

miyozin ta'minlaydi. Ular o'simlik hujayralarida hayvon hujayralariga qaraganda ancha kam, ammo ular sitoplazmaning harakatini ta'minlaydi.

Lokomotor harakatlar. Butun organizmning kosmosda qulay, hayotiy omilga yoki aksincha, salbiy omilga o'tishi taksis deb ataladi. Ushbu turdagi harakat o'simliklarning o'sishi bilan bog'liq emas va bir hujayrali suv o'tlarida, ularning jinsiy hujayralari va sporalarida, spora o'simliklarining spermatozoidlarida kuzatiladi. Masalan, xlamidomonas yorug'lik manbai tomon harakat qiladi. Ushbu harakat ijobiy fototaksis deb ataladi. Taksisning yana bir turi-xemotaksis. Bu erda tirnash xususiyati beruvchi kimyoviy moddalarning konsentratsiyasi bo'ladi. Xemotaksis organizm uchun maqbul sharoitlarni tanlashga, o'simlik jinsiy hujayralarining birlashishi uchun muhit topishga yordam beradi. Lokomotor harakatlar flagella harakatiga asoslangan. Sitoplazma harakatida bo'lgani kabi, flagella harakatining asosi kontraktil oqsillarning ishlashidir. Shunday qilib, o'simliklar va boshqa tiriklarda keng tarqalgan harakatlarning asosi organizmlar, maxsus kontraktil oqsillarning ishi yotadi. Faqat o'simliklar vakillariga xos bo'lgan harakatlarga o'sish va turgor harakatlari kiradi. Ular o'simlikning tirnash xususiyatini beruvchi moddalar javobiga asoslanadi: issiqlik, yorug'lik, kimyoviy moddalar va boshqalar.

Fototropizm. Tropizmga olib kelishi mumkin bo'lgan barcha omillar orasida yorug'lik insoniyat birinchi bo'lib harakatga e'tibor qaratdi. Yorug'lik kurtaklar va ildizlarning harakat yo'nalishiga ta'sir qiladi. O'simliklar rivojlanib borishi bilan fototropizmi ijobiydan salbiyga va aksincha o'zgartirishi mumkin. Yorug'lik o'zgarganda fototropizm o'zgarishi mumkin: zaif nurda o'simliklarning kurtaklari unga, undan kuchli bo'lsa, unga murojaat qiling. Buning yordamida o'simliklarning kurtaklari yanada qulay pozitsiyani egallashi mumkin va fotosintez paytida yorug'likdan optimal foydalanishga yordam beradigan barg mozaikasi paydo bo'ladi.



1-rasm. Fototropizm hodisasi.

Fototropizm hodisasini tushuntirishga harakat qilgan birinchi olim Charlz Darvin edi. Darvin asosiy ildizning uchini olib tashladi va u egilish qobiliyatini

yo'qotdi va u turgan yo'nalishda o'sishda davom etdi. Darvin, shuningdek, yorug'likni sezishini aniqladi o'qning yuqori qismi, va egri chiziq quyida paydo bo'ladi va yorug'likni sezadigan hujayralar va unga javob beradigan hujayralar bir-biridan uzoqroq degan xulosaga keldi.

Tropizmlarning boshqa turlari. *Gidrotropizm*-organlar bilan bog'liq harakatlar suvning notekis taqsimlanishi. Ildizlar ijobiy gidrotropizmni namoyish etadi. *Aerotropizm*-kislorodning notekis taqsimlanishi bilan bog'liq bo'lgan o'simlik organlarining (asosan ildizlarning) kosmosdagi harakati. *Geliotropizm*-kun davomida Quyosh harakatidan keyin o'simlik organining sharqdan g'arbga harakati. *Tigmotropizm*-bu teginish harakati. Xarakterli misol-Venera flytrapning unga hasharotlar tushganda harakatlanishi.

Geotropizm. Geotropizm-tortishish ta'siri ostida harakatlanish. Agar siz ko'chatni gorizontol ravishda qo'ysangiz, bir muncha vaqt o'tgach, ildiz pastga, poyasi esa yuqoriga egiladi. Geotropizmni yo'q qilish uchun maxsus qurilma - klinostat ishlatiladi. U o'z o'qi atrofida aylanadigan uzun tayoqdan iborat. Ushbu novda har qanday o'rnatish mumkin zamin jonlanish. Tayoqqa vilkadan yasalgan doira qo'yiladi, uning ustiga PIN yordamida joylashtiriladi o'sib chiqqan o'simlik urug'lari. Gorizontol holatda novda asta-sekin aylanayotganda, yosh o'simliklar tajriba boshida berilgan yo'nalishda o'sayotganini ko'rish mumkin, chunki aylananing doimiy aylanishi bilan o'simlikning har bir qismi yuqoriga yoki pastga siljiydi, shuning uchun tortishish unga qarama-qarshi yo'nalishda bir xil vaqt oralig'ida ta'sir qiladi. Shu bilan birga, tortishish kuchi ta'sir qilmaydi. Ushbu tajribalar shuni ko'rsatadiki, ildizlarning egilishi bir tomonga yo'naltirilgan tortishish kuchi bilan bog'liq. Bu pastga egilish ijobiy geotropizmning namoyonidir. Yon ildizlardagi geotropizm asosiy ildizlarga qaraganda zaifroq. Shu sababli, asosiy ildiz vertikal ravishda pastga qarab o'sadi va lateral ildizlar unga burchak ostida joylashgan. Bu o'simlikka tuproqdan suv va mineral elementlarni yaxshiroq singdirishga yordam beradi.

Metodologiya Tadqiqot bilan tanishishda bir nechta kitoblar asosiy adabiy manbalarga aylandi. Avvalo, bu " O'simliklar. V. A. Cymbalning" parallel dunyo " va Reynxold Vaynarning "o'simliklar harakati". Ularda mualliflar har bir bobda o'simliklarga bo'lgan katta muhabbatni ko'rsatib, qiyin savollarni qulay shaklda bayon qiladilar. Shuningdek, "bilimlar mamlakati" yoshlar uchun ilmiy-ommabop jurnalining 2017 yil to'qqizinchi sonidagi " Aqilli harakatlar" maqolasi ham ishlatilgan.

Xulosa. O'simliklarning harakatlanishi ularning oddiy, passiv mavjudotlar emasligini ko'rsatadi. Ular o'ziga xos tarzda tashqi omillarga moslashib, atrof-muhit sharoitlariga javob qaytaradi. Tropizm va nastiyalar o'simliklarning tirik qolishi va muvaffaqiyatli ko'payishida katta rol o'ynaydi. Bu jarayonlarni o'rganish o'simlik biologiyasi va ekologiyasini tushunishda muhim ahamiyatga ega. Shunday qilib, tropizmlar hujayra sitoplazmasining xususiyatlaridan biri-uning tirnash xususiyati, turli xil atrof-muhit omillariga javob sifatida asoslanadi.

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SURXONDARYO VILOYATI SHAROITIDA SOYA YETISHTIRISHNING O'ZIGA XOS XUSUSIYATLARI

***Annotatsiya.** Mazkur maqolada Surxondaryo viloyati tuproq-iqlim sharoitida soya yetishtirishning o'ziga xos agrotexnik xususiyatlari o'rganilgan. Soya navlarining cheklangan namlik sharoitlariga chidamliligini oshirish uchun agrotexnik tadbirlarni ilmiy asosda olib borish zarurligi ta'kidlanadi. Mintaqaning qurg'oqchil iqlim sharoitida yuqori hosildorlikka erishish maqsadida tuproqni ekishga tayyorlash, begona o'tlarni yo'qotish, namlikni saqlab qolish va sho'rlangan yerni yuvish kabi jarayonlar tavsiflanadi. Tadqiqot natijalari asosida istiqbolli soya navlarini ekish muddatlari, me'yorlari va texnologiyalari tavsiya etilgan.*

***Kalit so'zlar:** Soya, Surxondaryo iqlimi, agrotexnika, cheklangan namlik, tuproq sho'rlanishi, hosildorlik.*

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SPECIFIC FEATURES OF SOYBEAN CULTIVATION IN THE CONDITIONS OF SURKHANDARYA REGION

***Abstract:** This article examines the agronomic features of soybean cultivation in the soil and climatic conditions of the Surkhandarya region. The need for scientifically based agro-technical measures to improve the drought tolerance of soybean varieties is emphasized. Processes such as soil preparation for planting, weed removal, moisture conservation, and desalination of saline soils are described to achieve high yields in the arid climate of the region. Based on the study results, the optimal planting times, norms, and technologies for promising soybean varieties are recommended.*

***Key words:** Soybean, Surkhandarya climate, agronomy, limited moisture, soil salinity, yield.*

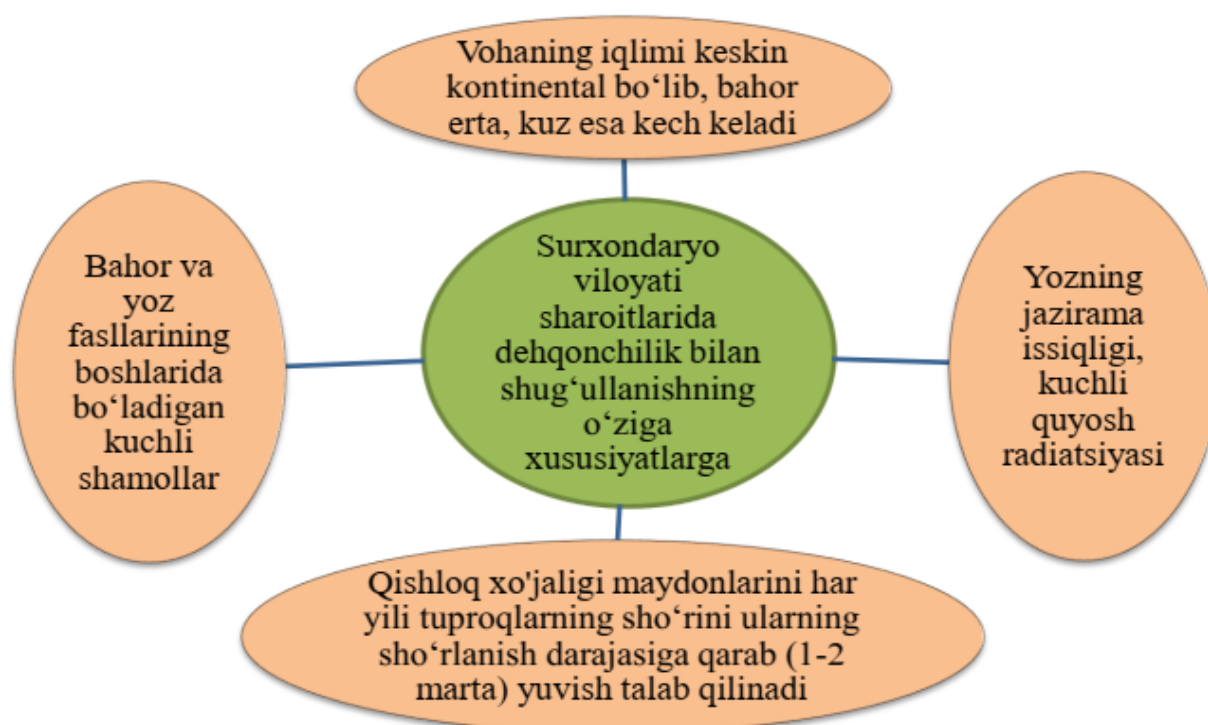
Ma'lumki, tashqi muhitning noqulay omillari sharoitlari qishloq xo'jalik o'simliklari jumladan, soya navlaridan yuqori va barqaror hosildorlikka erishish uchun oddiy ekin maydonlarini kengaytirishning o'zi yetarli emas, balki o'simlik navlarining bioekofiziologik xususiyatlarini hisobga olgan holda, agrotexnik tadbirlarni o'z muddatlarida va sifatli o'tkazish orqali erishish mumkin.

Soya navlaridan yuqori don hosili olishni ta'minlaydigan namlik darajalari aniqlanib, soya navlari hosildorligini oshirishda Surxondaryo tuproq-iqlim sharoitiga mos navlarni ekish va ularni yetishtirish usullarini takomillashtirishda ularning bioekofiziologik va biokimyoviy xususiyatlarni o'rganish, qolaversa ilmiy asoslangan holda ularni yetishtirish texnologiyalarini ishlab chiqish lozim.

Surxondaryo viloyati sharoitlarida dehqonchilik bilan shug'ullanish va yerdan foydalanishning o'ziga xos xususiyatlarga ega(4.8-rasm).

4.8-rasm.

Surxondaryo viloyati sharoitlarida dehqonchilikning o'ziga xususiyatlarga



Mintaqaning iqlimi qurg'oqchil, yozi juda issiq va quruq hamda garmsel (afg'on shamoli) oqibatida qishloq xo'jalik ekinlari, shu jumladan soyaning hosildorligi ham keskin kamayadi. Keyingi yillarda tuproq qurg'oqchiligining salbiy ta'siri, ekinlar salmog'ining keskin kamayishi, ko'plab ekin maydonlarida tuproqdagi gumus va oziqa moddalarining tanqisligi, mavjud suv resurslarining hamda yerlarning sho'rlanish darajasini ortishi kuzatilmoqda. Bundan tashqari, viloyatda cho'llanish jarayonlarining jadallashuvi ham sodir bo'lmoqda. Shu bois mintaqadagi sug'oriladigan yerlarning barchasi turli darajada sho'rlanganligini, suv zahiralarning cheklanganligini va tuproqlar unumdorligining pasayishini hisobga olgan holda qishloq xo'jaligi ekinlarini almashlab ekish va cheklangan namlik sharoitiga moslashuvchanligi yuqori navlarni tanlab, hududlar kesimida to'g'ri

joylashtirish va ularga mos keladigan agrotexnologiyalarni qo'llash o'ta muhim vazifalar hisoblanadi.

Soya o'simligining biologiyasi, yetishtirish agrotexnikasi va biomassasini qayta ishlash usullari yetarli darajada ilmiy asoslanganiga qaramasdan viloyatning o'ziga xos iqlimi, cheklangan namlik sharoitlarida turli soya navlarini yetishtirish yetarlicha o'rganilmagan. Shularni hisobga olgan holda ingichka tolali paxtachilik ilmiy-tadqiqot instituti Surxondaryo stansiyasining eksperimental bazasida istiqbolli soya navlarini yetishtirish agrotexnikasining elementlari tadqiq qilindi. Qishloq xo'jaligiga qo'yiladigan asosiy maqsad yerdan oqilona foydalanib, mo'l va sifatli soya doni va boshqa qishloq xo'jaligi mahsulotlarini yetishtirishdan iborat.

O'zbekiston qishloq xo'jaligi ilmiy ishlab chiqarish markazi Don dukkakli ekinlar ilmiy tadqiqot instituti Toshkent sholi, don va dukkakli ekinlar ilmiy tajriba stansiyasida 2017-yilda Surxondaryo viloyatida soya yetishtiruvchilar va qayta ishlovchi mutaxassislar uchun "Surxondaryo viloyati iqlim – sharoitiga mos agrotexnikasi bo'yicha tavsiyanoma" mavzusida ilmiy ishlanmasi nashr etilgan. Ushbu tavsiyanomada Surxondaryo viloyati tuproq-iqlim sharoitlarida soya yetishtirish va yetishtirilayotgan navlarining biologik xususiyatlarini inobatga olgan holda suv va uning resurslaridan samarali foydalanishni ta'minlovchi soyani parvarishlashda o'tkaziladigan agrotexnik tadbirlarni o'z ichiga oladi. Ammo ushbu tavsiyanomaning o'zi yetarli emas, chunki soya yetishtirishning agrotexnik tadbirlari keng qamrovli bo'lib, qolaversa ayniqsa so'ngi yillarda qurg'oqchilikning ortishi natijasida dehqon, fermer va mutaxassislardan soya yetishtirishda zamonaviy bilim va malakalarni talab qiladi. Albatta, soya navlarining cheklangan namlik(yani qurg'oqchilik)ka chidamliligini asosan fiziologik-biokimyoviy jarayonlarini tahlil qilish va hududning tuproq iqlim sharoitlarini hisobga olgan holda agrotexnik tadbirlarni olib borish barqaror hosildorlikni ta'minlaydi

Yuqorida qayd etilgan texnologiyalarni va amalga oshirilgan tadqiqot natijalarini inobatga olgan holda Surxondaryo viloyati tuproq-iqlim sharoitlarida istiqbolli soya navlarini yetishtirish agrotexnologiyasini qarab chiqamiz.

Xulosa. Surxondaryo viloyati tuproq – iqlim sharoitlarida o'rganilgan soya navlarini asosiy ekin sifatida aprel oyining oxirida ekish maqsadga muvofiqligini, urug'larni ekish me'yori gektariga 300-400 ming (dona), tuproqning yer ostiga ekish sathi chuqurligi 4-5 sm, qatorlar oralig'i 60 sm bo'lishi aniq agrotexnik tadbirlar asosida olib borilishi maqsadga muvofiqdir. Bulardan tashqari ekin ekish maydoni (dala) tuproqlarining namlik ko'rsatkichlari yetarli darajada (dissertatsiya matni yoki dissertatsiya mavzusi doirasida ishlab chiqilgan "Amaliy tavsiyanoma"ga qaralsin) bo'lishi shartligi keltirib o'tiladi.

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GEOGRAFIK AXBOROT TIZIMLARIDAN FOYDALANISHNING IJTIMOIY-HUQUQIY MASALALARI

Annotatsiya: Ushbu maqolada geografik axborot tizimlarining rivojlanishi, boshqa sohalar bilan integratsiyasi hamda qo‘llanilishining ijtimoiy huquqiy masalalari tahlil qilingan.

Kalit so‘zlar: axborot texnologiyalari, geografik axborot tizimlari, huquqiy asos, ijtimoiy talablar.

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SOCIO-LEGAL ISSUES OF USING GEOGRAPHIC INFORMATION SYSTEMS

Abstract: This article analyzes the socio-legal issues of the development, integration with other areas, and application of geographic information systems.

Keywords: information technologies, geographic information systems, legal framework, social requirements.

Kirish. Jahon miqyosida axborot texnologiyalarining rivojlanishi hamda jamiyat hayotining deyarli barcha sohalariga kirib kelishi, resurslarni monitoring qilish, baholash, tahlil qilish, boshqarishda keng qo‘llanilishi natijasida, ulardan

foydalanishning ijtimoiy, axloqiy va huquqiy asoslarini ishlab chiqish ehtiyoji yuzaga kelmoqda. Axborot texnologiyalari rivojlanishi va boshqasohalar bilan integratsiyasi natijasida esa yangi geoinformatsion texnologiyalar kabi yo‘nalishlar shakllandi. Geografik axborot tizimlari fazoviy ma’lumotlarni raqamlashtirish, saqlash, tahrirlash, uzatish, baholash, kartalashtirish, modellashtirish kabi funksional xususiyatlarga ega dasturlar majmuasidir.

Bugungi kunda soha yutuqlari tabiiy, iqtisodiy, ijtimoiy, harbiy masalalarni hududiy jihatlarini tadqiq qilish hamda hukumat boshqaruv tarmoqlarida foydalanilmoqda. Albatta har bir texnologiyadan foydalanishda o‘ziga xos qonun qoidalar, ijtimoiy talablar yoki huquqiy asosga amal qilish talab qiladi.

Asosiy qism. Geografik axborot tizimlarida (GAT) ko‘pincha ma'lumotlar to‘plash, tahlil qilish va bo‘lish jarayonlarida yuridik muammolarni kelib chiqadi. Ushbu muammolar keng doirada bo‘lishi mumkin, masalan, maxfiylik, intellektual mulk huquqlari, ma'lumotlarning aniqligi va GATga oid boshqaruv tizimlari va boshqalar. Quyida GAT texnologiyalarini tadbqiq qilish va uning faoliyati bilan bog‘liq ba’zi huquqiy masalalari tahlil qilinadi (1-rasm).

GAT bilan bog‘liq asosiy yuridik muammolar (masalalar):	Maxfiylik
	Mualliflik va Intellektual mulk huquqlari
	Ma'lumotlarning aniqligi va sifati
	GAT ma'lumotlar bazalariga kirish
	Atrof-muhitni boshqarishning huquqiy asoslari
	Boshqaruvga munosabat
	GATdagi axloqiy masalalar
	Transchegaraviy huquqiy masalalar

1-rasm. GAT texnologiyalaridan foydalanishda yuzaga keladigan huquqiy (yuridik) masalalar

GAT texnologiyasi ko‘pincha geografik ma'lumotlarni to‘plash va tahlil qilishni o‘z ichiga oladi, bu esa shaxslar yoki tashkilotlar bilan bog‘lanishi mumkin. Albatta tasvirlanayotgan geofazoviy ma’lumotlar biron jimoniy yoki yuridik shaxsga oid bo‘lishi mumkin. Bu holat subyektning ma’lumotlari ochiq yoki yopiq ekanligi kabi jihatlar inobatga olinishi lozim bo‘lib, ba’zi ma’lumotlar maxfiy xarakterga ega bo‘ladi. Asosiy maxfiylik bilan bog‘liq muammolar quyidagilardan iborat:

- **Joylashuvni kuzatish:** GPS va mobil texnologiyalarning ishlatilishi shaxslarning harakatlari va faoliyatlarini aniqlashi mumkin. Agar bu to‘g‘ri boshqarilmasa, maxfiylik huquqlarini buzishi mumkin.
- **Geofazoviy ma'lumotlar va shaxsiy ma'lumotlar:** Geofazoviy ma'lumotlarni shaxsiy identifikatorlar bilan birlashtirishda maxfiy

ma'lumotlarning oshkor bo'lishi xavfi mavjud. Masalan, biror kishining uy manzilini yoki kundalik faoliyatlarini karta tasvirlash maxfiylikni zid bo'lishi mumkin.

- **Kuzatuv:** Jamoat va xususiy tashkilotlar GAT texnologiyalarini kuzatuv yoki monitoring maqsadlarida ishlatganda, xususan, rozilik olinmasdan buni amalga oshirishda yuridik muammolar yuzaga kelishi mumkin.
- Ba'zi mamlakatlarda bunday ma'lumotlar **Umumiy Ma'lumotlarni Himoya qilish Regulyatsiyasi (GDPR)** kabi qonunlar bilan himoyalangan, bu esa shaxsiy ma'lumotlarni to'plash, ishlatish va bo'lishish bo'yicha qat'iy qoidalarni belgilaydi.

GAT texnologiyalari ma'lumotlari ko'pincha turli tomonlar (davlat agentliklari, xususiy kompaniyalar yoki ilmiy tadqiqot muassasalari) tomonidan yaratiladi va ularga tegishli bo'ladi. GAT ma'lumotlarini yaratish va ulardan foydalanish bilan bog'liq huquqlar muhim yuridik masala hisoblanib, ular mualliflik, intellektual mulk huquqi, ma'lumotlarning aniqligi va xatoligi uchun javobgarlik kabi shakllada yuzaga keladi:

- **Mualliflik:** GAT ma'lumotlari kim (kimlar) tomonidan yaratilgan va ularni tarqatish huquqi kim (kimlarga) ga tegishli? Jamoat agentliklari yoki xususiy kompaniyalar GAT ma'lumotlarini to'plash va tahlil qilishda, ma'lumotlarga kirish imkoniyatini cheklash, foydalanish uchun to'lovlar talab qilish yoki ma'lum shartlarda bepul tarqatishga ruxsat berishlari mumkin.
- **Intellektual mulk huquqlari:** GAT ma'lumotlari, xaritalar, dasturlar va modellar **mualliflik huquqi** yoki **patentlar** bilan himoyalaniishi mumkin. GAT ma'lumotlarini bo'lish yoki tarqatish paytida foydalanuvchilar litsenziya shartnomalariga rioya qilishlari va yaratuvchilarning intellektual mulk huquqlarini hurmat qilishlari shart.
- **Ma'lumotlarning aniqligi va xatoligi uchun javobgarlik:** Agar GAT mahsuloti xatoliklar (masalan, noto'g'ri xaritalash yoki noaniq geografik ma'lumotlar)ni o'z ichiga olsa, javobgarlik masalasi yuzaga keladi. Agar ma'lumotlar shaharsozlik, favqulodda holatlar boshqaruvi yoki ko'chmas mulk baholash kabi sohalarda qarorlar qabul qilishda ishlatilsa, kim javobgar ekanligi aniq bo'lishi lozim. Masalan, biron ishlab chiqarish obyektini joylashtirishda hududni baholash jarayoni shaffofligi va ma'lumotlarning aniqligiga mutaxassislar javobgar sanaladi.

GAT texnologiyasi geografik ma'lumotlarga asoslanadi, bu ma'lumotlarning aniq va yangilangan bo'lishi kerak. Agar GAT ma'lumotlari xato yoki to'liq bo'lmasa, bu yuridik muammolarga olib kelishi mumkin:

- **Ma'lumotlarning aniqligiga talablar:** Ko'plab davlat agentliklari va biznesmenlar GAT ma'lumotlariga qarorlar qabul qilishda tayanadi, shuning uchun bu ma'lumotlarning sifati va aniqligi juda muhim. Yuridik masala shundaki, noto'g'ri ma'lumotlar foyda yoki zarar keltirishi mumkin, masalan, ekologik baholashlar, yerdan foydalanishni rejalashtirish yoki ko'chmas mulkni baholashlarda.

- **Noaniq ma'lumotlar uchun javobgarlik:** Agar biror kishi GAT ma'lumotlariga tayanib zarar ko'rsa, unda javobgarlik masalasi yuzaga keladi. Bunday xatoliklar uchun kim javobgar ekanligini aniqlash ko'pincha murakkab bo'ladi.

GAT ma'lumotlarining kimga kirish huquqi va ulardan foydalanish huquqi borligini belgilash katta yuridik masala hisoblanadi:

- **Ommaviy va shaxsiy kirish:** Hukumatlar ko'plab GAT ma'lumotlarini yig'adi va saqlaydi va bu ma'lumotlar bepul yoki cheklangan holda bo'lishi turli xil yondashuvlarga ega. Har xil mamlakatlarda bu ma'lumotlarni bo'lishish yoki tarqatish bo'yicha qonunlar bir-biridan farqlanadi.
- **Ma'lumotlar bazalariga erkin kirish huquqi:** Ko'plab mamlakatlarda davlat tomonidan yig'ilgan GAT ma'lumotlariga fuqarolar erkin kirishini ta'minlovchi qonunlar mavjud, Biroq, ba'zi istisnolar mavjud, agar ma'lumotlar strategic ahamiyatga ega bo'lsa yoki maxfiy xarakterli deb hisoblansa.

GAT ko'pincha atrof-muhitni boshqarish, resurslarni taqsimlash, yerdan foydalanish va zonalash jarayonlarida ishlatiladi. Ammo, atrof-muhit bilan bog'liq GAT foydalanishdagi yuridik masalalar mavjud:

- **Yerdan foydalanish va zonalash huquqiy jihatlari:** GAT ko'pincha yer foydalanishini va qurilishni baholashda ishlatiladi. Agar zonalash tartib-qoidalari GAT texnologiyalari asosida tuzilgan xaritalar ma'lumotlari bilan qarama-qarshi bo'lsa yoki yer egalari o'z mulkini chegarasi va boshqarish holati bilan bog'liq masalalar mavjud bo'lsa, bunday jarayonlarda yuridik muammolar yuzaga kelishi mumkin.
- **Ekologik ta'sirni baholash (EIA):** GAT ko'pincha ekologik holatni baholash uchun ishlatiladi, bu esa ba'zi loyihalarni tasdiqlashdan oldin GAT texnologiyalarida baholash mavjud huquqiy asosga mos amalga oshirilishi kerak.. Xato yoki to'liq bo'lmagan ma'lumotlar yuridik da'volarga yoki loyihalarning kechikishiga olib kelishi mumkin.

Hukumatlar ko'pincha GAT ma'lumotlarini yaratish va foydalanish uchun boshqaruv tizimlarini o'rnatadi. Bu boshqaruv tizimlari muayyan sanoatlar yoki qo'llanilishlar uchun aniq bo'lishi mumkin:

- **Xarita standartlari va litsenziyalash:** Masalan, Kartografiya davlat ilmiy ishlab chiqarish korxonasi GAT ma'lumotlari qanday yaratilishi va tarqatilishi kerakligini belgilovchi standartlarga ega bo'lishi mumkin. Ushbu standartlarga rioya qilmaslik yuridik muammolarga olib kelishi mumkin.
- **Federal va davlat qonunlari:** Ba'zi mamlakatlarda GAT ma'lumotlaridan foydalanishga oid maxsus qonunchilik tizimlari mavjud, masalan, jamoat salomatligi, transport yoki favqulodda holatlarni boshqarish sohalarida. Bu qonunlarga rioya qilish yuridik oqibatlardan saqlanish uchun zarur.

Ba'zan global miqyosda GAT texnologiyalari tadbiri qilinshida huquqiy jihatlardan tashqari, axloqiy muammolar ham mavjud. Masalan, GAT ilovalarida ishlatiladigan ma'lumotlar noto'g'ri yoki ijtimoiy tengsizliklarni aks ettirishi mumkin. Misol uchun, shaharsozlik yoki politsiyada qo'llaniladigan GAT

texnologiyalari irqiy yoki iqtisodiy tafovutlarni aks ettirishi mumkin, bu esa huquqiy muammolarga yoki kamsitish bo'yicha da'volarga olib kelishi mumkin.

GAT ko'pincha global miqyosda qo'llaniladi, bu turli milliy qonunlarga rioya qilishda qiyinchiliklarga olib kelishi mumkin.

- **Xalqaro ma'lumotlarni uzatish:** Mamlakatlar o'rtasida geofazoviy ma'lumotlar almashinilganda yoki xalqaro geoma'lumotlar bazalaridan foydalanishda muayyan cheklovlar, talablar asosida faoliyat amalga oshiriladi. Masalan, xalqaro kelishuvlarga asosan mamlakatlar chegaralari, xalqaro qatnov, tranzit yo'llar, umumfoydaliladigan obyektlar va hakoza.
- **Yurisdiksiya masalalari:** GAT ma'lumotlari bilan bog'liq huquqiy nizolar bolsa, qaysi mamlakat qonunlari qo'llanilishini aniqlash qiyin bo'lishi shart. Masalan hududlar bo'yicha nizolar (Melvin yoki Folklend orollari, Kuril orollari) biron hududning nomini ozilishi va boshqa holatlarda xalqaro darajada muammolar yuzaga kelishi mumkin.

Xulosa qilib aytganda, GAT texnologiyalari bilan bog'liq ijtimoiy huquqiy masalalar ko'p qirrali va murakkabdir. Ular maxfiylik muammolari, ma'lumotlarga egalik, intellektual mulk, ma'lumotlarning aniqligi, me'yoriy hujjatlarga muvofiqlik va axloqiy jihatlarni o'z ichiga oladi. GAT texnologiyalari rivojlanishda davom etar ekan, bu muammolar GAT mutaxassislaridan mas'uliyatli, adolatli va amaldagi qonunlarga muvofiq foydalanishni ta'minlash uchun doimiy huquqiy asoslar va himoya choralari talab qiladi.

Foydalanilgan adabiyotlar

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PAXTAOBOD TUMANI MEHNAT RESURSLARI VA ULARNING XO`JALIK TARMOQLARDAGI TARKIBI

***Annotatsiya:** Ushbu maqolada Paxtaobod tumani haqida umumiy ma`limot shuningdek, Paxtaobod tumani mehnat resurslari va ularni xo`jalik tarmoqlardagi tarkibi, tumanning salohiyati va imkoniyati mehnatda band bo`lmagan aholini ish bilan ta`minlash bo`yicha qo`shimcha ish o`rinlarini yaratilyotganligi haqida ma`lumotlar keltirilgan*

***Kalit so`zlar:** mehnat resursi, xo`jalik tarmog`i, agrosanoat, diagnostika, tadbirkorlik.*

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PRODUCTION RESOURCES OF PAKHTAABAD DISTRICT AND THEIR COMPOSITION IN ECONOMIC SECTORS

***Abstract:** This article provides general information about Pakhtaabad district, as well as the labor resources of Pakhtaabad district and their composition in economic sectors, the potential and opportunity of the district to create additional jobs for the unemployed population. information is provided*

***Key words:** labor resource, economic network, agro-industry, diagnostics, entrepreneurship.*

Paxtaobod tumani umumiy tavsifi: Andijon viloyatining shimoliy sharqida joylashgan tuman hisoblanadi. Paxtaobod tumani viloyat markazi Andijon shahridan 24 km shimoliy-sharqda bo`lib, dengiz sathidan 300 metr balandlikda joylashgan. Aholisi 208 700 ming kishini tashkil etadi. Paxtaobod tumanini Qoradaryo, Tentaksoy, Chirtaksoy daryolari kesib o`tadi. Tuman markaziga 1975-yilda Paxtaobod shahri maqomi berilgan. Umumiy yer maydoni 26 ming 33 gektarga teng. Paxtaobod tumani - 1926-yil 29-sentabrda tashkil qilingan.

1962-yil 24-dekabrda Izboskan tumani bilan birlashtirilgan. 1970-yil 7-dekabrda yana yangidan tashkil qilingan. Shimoliy va shimoliy-sharqdan Qirg'iziston Respublikasining Jalolobod viloyati, g'arbdan Izboskan tumani, janubdan Andijon tumani, sharqda (58 km masofada) Qirg'iziston Respublikasi va Jalolquduq tumanlari bilan chegaradosh. Tumanda 1 tabshahar (Paxtaobod), 5 qishloq fuqarolari yig'ini (Bo'ston, Ittifoq, Madaniyat, Paxtakor, Uyg'ur) bor. Markazi - Paxtaobod shahr . Tumanda yetakchi tarmoq qishloq xo'jaligi hisoblanadi. Paxtachilik, g'allachilik, sabzavotchilik, polizchilik, bog'dorchilik, chorvachilik bilan shug'ullaniladi. Paxtaobod tumanida 13 ta shirkat, 406 ta fermer xo'jaligi bor. Tumandagi jami ekin maydoni 17,4 ming ga, shu jumladan, 8,2 ming ga yerga paxta, 6,8 ming ga yerga don, 280 ga yerga kartoshka, 820 ga yerga sabzavot ekiladi. 996 ga yer mevazor, 92 ga yer tokzor bilan band.



**Paxtaobod tumani aholisining ish bilan ta'minlanganlik darajasi
2024-yil 1-yanvar holatiga ko'ra:**

Mehnat resurslari soni	Iqtisodiy faol aholi soni	Band aholi soni	Rasmiy sektorda	Norasmiy sektorda	Chetga chiqib ketganlar	Ishsizlar soni	Ishsizlar darajasi
99.2	75.6	69.8	29.4	26.3	14.1	5.8	7.7

2024-yil 1-iyul holatiga ko'ra:

Mehnat resurslari soni	Iqtisodiy faol aholi soni	Band aholi soni	Rasmiy sektorda	Norasmiy sektorda	Chetga chiqib ketganlar	Ishsizlar soni	Ishsizlar darajasi
66.9	77.1	70.7	31.5	28.6	8.1	3.1	6.4

Paxtaobod tumanida olib borilgan islohotlar natijasida ishsizlik darajasi kamaymoqda

2024-yil 1-yanvar		2024-yil 1-mart	
Ishsizlar soni (birlik)	Ishsizlik darajasi (%)	Ishsizlar soni (birlik)	Ishsizlik darajasi (%)
5789	7.7	3965	7.4
2024-yil 1-iyun		2024-yil 1-dekabr	
Ishsizlar soni (birlik)	Ishsizlik darajasi (%)	Ishsizlar soni (birlik)	Ishsizlik darajasi (%)
2974	7,3	1809	6.1

Paxtaobod tumanida yanvar iyun oylarida horijdan qaytgan migrantlar bandligini ta'minlash bo'yicha olib borilgan ishlar:

Doimiy ishga band qilindi	Jamoat ishlari ga band qilindi	Tadbirkorlik ka jalb qilindi kredit olishga ko'maklashi ldi	Supsid iyadan ajratil di	Kasb-hunara yo'nalti rildi	RTT sifati da ro'yhatdan o'tkazildi	O'z o'zini band qilganlar	Norasmiy sektorda band bo'lganlar
155	63		5	39	2	315	5655

Shu jumladan band qilinganlar:

Mehnat resurslari soni	Iqtisodiy faol aholi soni	Band aholi soni	Rasmiy sektorda	Norasmiy sektorda	Chetga chiqib ketganlar	Ishsizlar soni	Ishsizlar darajasi
99.2	75.6	69.8	29.4	26.3	14.1	5.8	7.7

Mexnat migratsiyasi da qaytganlar soni	Erkak	Ayol	Yoshlar	Bandligi taminlanganlar soni	Jamida ulushi	Erkak	Ayol
6850	1871	4779	2178	6234	91%	4539	1695

Tumanning mavjud imkoniyat va salohiyati:

Birinchiidan, Tumanda Koradaryo, Tentaksoy va Maylisoy daryolari oqib o'tib 1616,7 ming kub qum-shag'allar yuzaga kelgan. Ushbu konlarni viloyatdagi salohiyatli tadbirkorlarga qayta ishlab chiqarish choralarini ko'rish.

Ikkinchiidan, "Xayotbaxsh" maxallasi xududidagi to'qimachilikka ixtisoslashgan kichik sanoat zonasida 55 gekar yerda 10 ta lotlarda tekstil va to'qimachilik ishlab chiqarish xamda 5000 nafardan ziyod ish o'rni yaratish imkoniyati bor.

Uchinchiidan, "Naboxor" maxallasida "2U" MCHJ tomonidan umumiy qiymati 28,5 mln. dollarlik agrosonoat klasterini tashkil etish loyihasini amalga oshirish natijasida 150 ta doimiy, 1 200 ta mavsumiy ish o'rni yaratish imkoni bor.

To'rtinchiidan, "Madaniyat" bojxona chegara posti Qirg'iziston Respublikasining OSH-Bishkek yo'nalishidagi M-41 xalqaro ahamiyatga ega avtoyo'lda. Qirg'iziston Respublikasining poytaxti Bishkek shahriga Andijon viloyatidan boriladigan eng yaqin masofada joylashgan. Qirg'iziston Respublikasining OSH-Bishkek yo'nalishining masofasi 667 km ni tashkil qiladi. Madaniyat-Bishkek (Uzbekiston) yo'nalishining masofasi 491 km ni tashkil etadi. Andijon viloyatidan Qirg'iziston Respublikasiga eksportga yo'naltirilayotgan yuklarni yuritib borish ekspartiyor sarf xarajatlarining kamayishiga, yuklarni tez va o'z vaqtida manziliga yetib borishga xizmat qiladi.

Beshinchiidan, "Yuqori" maxallasi xududida 0,2 gektar yer maydonida "Nazira shifo DDM" MCHJ bilan birgalikda qiymati 15 mlrd. sum investitsiya hisobiga xususiy tibbiy xizmat ko'satish va diagnostika markazi tashkil etish loyihasi amalga oshirilmoqda. Natijada axoliga qoshimcha 8mlrd. so'mlik tibbiy xizmatlar yo'lga qo'yilib, 50 nafar yangi ish o'rni xamda byujetiga 1 mlrd sum qo'shimcha tushum manbaalari yaratiladi.

Qishloq xo'jaligi ko'rsatqichlari: Jami ekin yer maydoni 5 992ga, Sug'oriladigan maydon 15 562 ga, Bo'sh turgan yer maydonlari 52,6 ga shundan (qishloq xo'jaligi yer maydoni-50ga, sanoat yer maydoni-2,6ga) bo'sh turgan bino inshootlar soni 1nafarni tashkil etadi.

Xulosa: Paxtaobod tumanining mehnat resurslari va xo'jaligi tuman iqtisodiyoti uchun asosiy omillardan biridir. Paxta yetishtirish va boshqa qishloq xo'jaligi tarmoqlari tuman aholisining asosiy ish o'rni joylarini tashkil etadi. SHuningdek sanoat va xizmat ko'rsatish sohalaridagi o'sish ham Paxtaobodning iqtisodiy mustahkamligini oshirishga xizmat qilmoqda. Tuman hududida amalga oshirilayotgan rivojlanish dasturlari va innovatsiyalar mehnat

resurslarining samarali ishlatilishi hamda yangi ish o'rinlarining yaratilishiga yordam bermoqda.

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USEFUL APPLICATIONS TO DEVELOP FINANCE STUDENTS' WRITING COMPETENCE: GRAMMARLY, WORDTUNE AND HEMINGWAY

***Abstract.** This article explores the role of digital applications such as Grammarly, Wordtune, and Hemingway in developing the writing competence of finance students. Writing proficiency is essential for finance professionals, who must articulate complex ideas and present data clearly and effectively. This study reviews the features and effectiveness of these tools in addressing challenges faced by finance students, including grammar accuracy, style enhancement, and readability improvement. Drawing on recent scholarship, the research employs a mixed-methods approach to evaluate the impact of these applications on students' writing. The findings highlight the potential of these tools to improve writing competence, particularly when integrated into educational frameworks.*

***Keywords:** Grammarly, Wordtune, Hemingway, writing competence, finance education, digital tools, language learning, academic writing*

Introduction

Effective writing is a critical skill for finance students, as their future roles often involve producing reports, crafting proposals, and explaining complex financial concepts. However, developing writing competence is challenging due to the technical nature of finance and the demand for precision and clarity in written communication. Traditional teaching methods often fall short in addressing individual learners' needs, prompting educators to seek innovative tools that can enhance writing instruction.

Digital applications like Grammarly, Wordtune, and Hemingway have emerged as valuable aids in writing development. These tools provide instant feedback on grammar, style, and readability, enabling students to refine their writing autonomously. Grammarly focuses on grammar and syntax correction, Wordtune offers rephrasing suggestions to enhance clarity and tone, and Hemingway simplifies sentence structure to improve readability. This study examines the utility of these applications in enhancing the writing competence of finance students and discusses their integration into the educational process.

Literature Review

Recent research highlights the growing importance of digital tools in writing education. European scholars such as R.Müller and T.Schmidt emphasize that technology-assisted learning can significantly improve writing skills by providing real-time feedback and personalized learning experiences. [1] Similarly, researchers like P.Ivanov argue that digital tools complement traditional instruction by addressing common issues such as grammatical errors and stylistic inconsistencies.[2]

S.Karimova and A.Tursunov have explored the application of digital tools in higher education, noting their potential to enhance both linguistic and domain-specific writing. However, they caution that these tools must be used judiciously to avoid over-reliance and ensure that critical thinking and originality are not compromised.[3] Collectively, these studies underline the need for a balanced approach to integrating digital applications into writing instruction, especially in specialized fields like finance, where precision and clarity are paramount.

Research Methodology

This study employed a mixed-methods approach to assess the impact of Grammarly, Wordtune, and Hemingway on finance students' writing competence. A sample of finance students from universities in Uzbekistan participated in the study. The research included a pre-test and post-test writing assessment to measure improvement in writing skills over a semester. Additionally, focus group discussions and surveys were conducted to gather qualitative data on students' experiences with these tools.

Quantitative data were analyzed using paired t-tests to determine the statistical significance of score improvements, while qualitative data were analyzed thematically to identify common patterns in students' feedback about the tools.

Discussion

Grammarly:

Grammarly proved effective in addressing grammatical errors and improving sentence structure. Students appreciated its real-time feedback and contextual suggestions, which helped them identify and correct common mistakes. However, some participants noted that the tool occasionally provided overly prescriptive suggestions, limiting stylistic flexibility.

Wordtune:

Wordtune was particularly valued for its ability to rephrase sentences and adjust tone. Finance students found this feature useful for aligning their writing with professional standards, such as crafting persuasive arguments in business proposals. Nonetheless, concerns were raised about the potential for over-reliance on the tool, which could hinder the development of independent writing skills.

Hemingway:

Hemingway was praised for its focus on readability and clarity. Its emphasis on eliminating complex sentence structures and simplifying language was especially beneficial for finance students tasked with explaining intricate financial concepts. However, some students felt that the tool's suggestions occasionally oversimplified technical content, reducing the depth of their arguments.

Analysis and Results

Quantitative analysis revealed a significant improvement in students' writing scores after using these applications, with an average increase of 20% in grammar accuracy and 25% in readability metrics. Wordtune users showed the greatest improvement in tone and clarity, while Grammarly users excelled in error correction. Hemingway users demonstrated enhanced conciseness and readability in their writing.

Qualitative feedback indicated that students valued the autonomy these tools provided. They reported feeling more confident in their ability to produce professional-quality writing, particularly for tasks such as case studies and financial reports. Instructors noted that students who used these tools consistently displayed greater engagement with the writing process and produced higher-quality work.

Conclusion

Digital applications such as Grammarly, Wordtune, and Hemingway offer significant benefits for developing the writing competence of finance students. These tools address key challenges such as grammatical accuracy, clarity, and readability, enabling students to produce professional-quality writing. The study's findings highlight the importance of integrating these tools into educational frameworks to enhance writing instruction and promote independent learning.

However, the research also underscores the need for a balanced approach, ensuring that students do not become overly reliant on technology. Educators should focus on combining these tools with traditional teaching methods and fostering critical thinking and originality in students' writing. Future research could explore the long-term impact of using such applications and examine their applicability in other specialized fields.

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GEOGRAFIYA TO'GARAGINI TASHKIL ETISHNING AYRIM MASALALARI

Annotatsiya. Maqolada geografiya to'garagining tashkil etishning ayrim masalalari muhokama qilinadi. Shuningdek, mazkur maqolada geografiya to'garagining mazmuhi va mohiyati yoritili, ularning barkamol avlodni tarbiyalashdagi roli baholangan.

Kalit so'zlar: Fan va sport to'garaklari, geografiya to'garagi, klub, amaliy mashg'ulot, kuzatish, umumta'lim maktablari, sinfdan va maktabdan tashqari ishlar, o'quvchilar.

SOME ISSUES IN THE ORGANIZATION OF A GEOGRAPHICAL CIRCLE

Annotation. The article discusses some issues of organizing a geographical circle. This article also highlights the content and essence of the geography circle and evaluates its role in educating the mature generation.

Key words: Scientific and sports clubs, geography club, club, practical classes, observation, secondary school, extracurricular activities, students.

Kirish. Umumta'lim maktablari o'quvchilarini har tomonlama yetuk shaxs bo'lib yetishishlarida nafaqat o'quv jarayoni, ya'ni nazariy va amaliy mashg'ulotlar, balki sinfdan va maktabdan tashqari ishlarning o'rni benihayat katta. Ayniqsa, sinfdan va maktabdan tashqari ishlar orasidan – fan va sport to'garaklari, klublar, turli mavzulardagi kechalar, ekskursiya va sayohatlar keng rivojlangan. Mazkur sinfdan va maktabdan tashqari ishlar orasida fan to'garaklari alohida o'rin tutadi.

Asosiy qism. To'garak – bu o'quvchilar yoki shaxslar tomonidan biror bir ma'lum faoliyat yoki qiziqish asosida tashkil etilgan guruhdir. To'garaklar odamlar orasida bilim va ko'nikmalarni oshirish, ma'lum bir sohada tajriba orttirish hamda qiziqarli faoliyatlarni amalga oshirish uchun tashkil etiladi. Odatda to'garaklar maktablarda, oliygohlarda, jamoat joylarida va turli tashkilotlarda faoliyat yuritadilar.

To'garaklarning turli xil yo'nalishlari va shakllari bo'lishi mumkin. Quyidagi to'garaklarning ba'zi turlarini ko'rib chiqamiz:

1. Bilim va ilmiy to'garaklar. Bu to'garaklar o'quvchilarning ilmiy va akademik qiziqishlarini qo'llab-quvvatlashga qaratilgan. Ular, odatda, geografiya, matematika, fizika, kimyo, biologiya va boshqa fanlar bo'yicha bilimlarni oshirishga yordam beradi. Shuningdek, ilmiy tadqiqotlar, tajribalar o'tkazish, tanlovlarga tayyorgarlik ko'rish kabi faoliyatlar bilan shug'ullanishadi. Misol uchun Matematika to'garagi, ilmiy tadqiqot to'garagi, geografiya to'garagi va b.

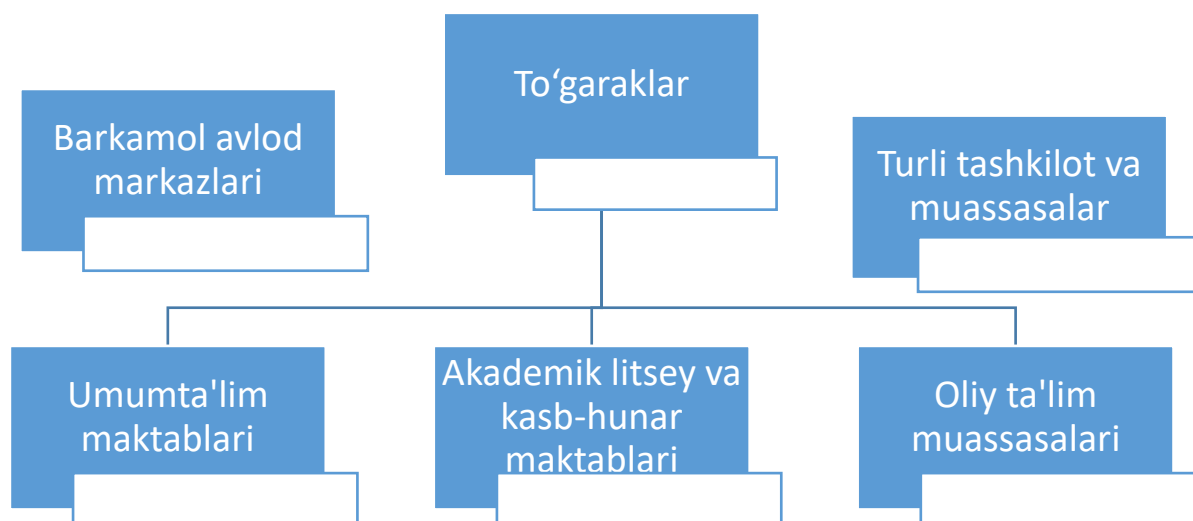
2. San'at va madaniyat to'garaklari. Bu to'garaklar san'at, musiqa, rassomlik, drama va teatr sohalaridagi qiziqishlarga qaratilgan. Ular o'quvchilarga san'atchilik va ijodiy ko'nikmalarni rivojlantirishda yordam beradi. Misol uchun Rassomlik to'garagi, drama to'garagi, musiqa to'garagi (xor, orkestr, folklor) va b.

3. Sport to'garaklari. Bu turdagi to'garaklar sport va jismoniy tarbiya bilan shug'ullanadiganlar uchun mo'ljallangan. O'quvchilar sport bilan shug'ullanish, musobaqalarda qatnashish yoki jismoniy rivojlanishlarini oshirish uchun to'garaklarga a'zo bo'lishlari mumkin. Misol uchun Futbol, basketbol, voleybol, tennis, suzish va b.

4. Yoshlar tashkiloti va ijtimoiy to'garaklar. Ijtimoiy faollikni oshirish, turli ijtimoiy muammolarni hal etish yoki volontyorlik ishlari bilan shug'ullanishga qaratilgan to'garaklar. Bu turdagi to'garaklar o'quvchilarga ijtimoiy mas'uliyatni his qilish, o'zaro yordam va hamkorlikni rivojlantirish imkonini beradi. Misol uchun Yoshlar forumi, ekotashabbus to'garagi, ijtimoiy xizmatlar to'garagi va b.

5. Texnologiya va kompyuter to'garaklari. Texnologiya va informatika sohalarida qiziqish bildirish va o'qish, yangi texnologiyalarni o'rganish hamda dasturlash, robototexnika kabi sohalarida bilim olish uchun tashkil etiladi. Misol uchun Robototexnika to'garagi, dasturlash to'garagi, dizayn va grafik to'garagi va b.

1-rasm. To'garaklar tashkil etiladigan tashkilot va muassasalar



Rasm mualliflar tomonidan tayyorlandi.

6. Til va adabiyot to'garaklari. Bu turdagi to'garaklar o'quvchilarning til bilish va adabiyotga bo'lgan qiziqishini oshirishga qaratilgan. O'quvchilar bu

to'garaklarda til o'rganish, adabiy asarlarni o'qish, yozma va og'zaki nutqni rivojlantirishga yordam beruvchi faoliyatlar bilan shug'ullanadilar. Misol uchun Ingliz tili to'garagi, adabiyot to'garagi, debat to'garagi va b.

7. Tabiat va ekologiya to'garaklari. Tabiatni asrash, ekologik masalalarni o'rganish va ekologik tajribalar o'tkazish orqali o'quvchilarning atrof-muhitga bo'lgan mas'uliyatini oshirishga qaratilgan to'garaklar. Misol uchun Ekologiya to'garagi, tabiiy resurslar himoyasi to'garagi, hayvonlar dunyosi to'garagi va b.

8. Kengaytirilgan yoki fan to'garaklari. Bu turdagi to'garaklar, odatda, o'quvchilarning keng doiradagi qiziqishlarini qamrab oladi, masalan, tarix, astronomiya, geografiya yoki boshqa o'quv fanlari bo'yicha faoliyatlar.

To'garaklar o'quvchilarni o'zlari xohlagan sohada rivojlantirishga yordam beradi, shuningdek, ularni jamiyatda faol va mas'uliyatli fuqarolar sifatida shakllantirishga hissa qo'shadi. Odatda, to'garaklar maktabda yoki boshqa o'quv muassasalarida tashkil etiladi, ammo ba'zi to'garaklar jamoat yoki tijorat tashkilotlari tomonidan ham tashkillashtiriladi.

Mazkur to'garaklar orasida geografiya to'garagining o'rni beqiyos. Geografiya qiziqarli fanlardan biri hisoblanganligi bois, ushbu to'garakga ko'pchilik o'quvchilar qizidishadi. Geografiya to'garagining o'zining mazmun – mohiyati va unda fanga oid nazariy va amaliy bilimlarning berilishi bilan ahamiyatlidir.

Geografiya to'garagi — bu geografiya faniga qiziqqan o'quvchilarni birlashtirgan va ularga geografik bilimlarni chuqurlashtirishga, amaliy ko'nikmalarni shakllantirishga, dunyo va uning tabiiy, iqtisodiy, ijtimoiy jihatlarini o'rganishga qaratilgan didaktik va ilmiy-uslubiy faoliyatdir. Geografiya to'garagi o'quvchilarda geografiyaga nisbatan qiziqish uyg'otish, ularning dunyoqarashini kengaytirish, tabiat va jamiyat o'rtasidagi o'zaro aloqalarni tushunishiga yordam beradi.

Geografiya to'garagining mazmuni va mohiyati:

- 1. Geografik bilimlarni chuqurlashtirish:** Geografiya to'garagida o'quvchilar geografiyaning turli sohalarini o'rganadilar: tabiat geografiyasi, iqtisodiy geografiya, ijtimoiy geografiya, siyosiy geografiya va boshqalar. Bu orqali o'quvchilar tabiat va jamiyat o'rtasidagi o'zaro bog'liqlikni yaxshiroq tushunadilar.
- 2. Tabiat va jamiyatni o'rganish:** Geografiya to'garagi o'quvchilarga tabiiy va ijtimoiy jarayonlarni tahlil qilish imkonini beradi. Bu, o'z navbatida, ekologiya, iqlim, resurslar, iqtisodiy faoliyatlar, aholi va migratsiya kabi mavzularni o'z ichiga oladi.
- 3. Amaliy faoliyatlar:** O'quvchilar geografiya to'garagida turli amaliy mashg'ulotlarda, masalan, xaritalar bilan ishlash, geografik obyektlarni koordinatlarini aniqlash, statistika tahlillari, tabiat va ijtimoiy hodisalarni kuzatish kabi ishlarni bajaradilar.
- 4. Ilmiy tadqiqot va kuzatuvlar:** O'quvchilar to'garakda ilmiy ishlar olib borish, geografik tadqiqotlar qilish, ma'lumotlar yig'ish va tahlil qilish

ko'nikmalarini egallashadi. Bu jarayon o'quvchilarda ilmiy tafakkur va tahlil qobiliyatlarini rivojlantiradi.

5. **Ekologik ongni shakllantirish:** Geografiya to'garagi o'quvchilarda ekologik madaniyatni rivojlantirish, tabiat resurslarining barqaror foydalanilishi, global iqlim o'zgarishlari va ularning ta'siri kabi masalalarda ongni oshirishga yordam beradi.
6. **Xalqaro hamkorlik va madaniyatlararo tushunish:** Geografiya to'garagi o'quvchilarni xalqaro geografik masalalar, boshqa mamlakatlar va ularning tabiiy, ijtimoiy xususiyatlari bilan tanishtirishga, madaniyatlararo tushunishni rivojlantirishga yordam beradi.

Xulosa qilib aytganda, umumta'lim maktablari o'quvchilarini har tomonlama yetuk shaxs bo'lib yetishishlarida sinfdan va maktabdan tashqari ishlar muhim o'rin tutadi. Ayniqsa, sinfdan tashqari ishlar orasidan – fan to'garaklari asosiydardan biri hisoblanib, o'quvchilarni mazkur fan bo'yicha bilim va malakalarini shakllantirish hamda amaliy ko'nikmalarini rivojlantirishda asosiy rol o'ynaydi.

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STAGES OF IMPROVEMENT OF THE QUANTITATIVE LIMIT OF SMALL BUSINESS ENTITIES

Annotation

The subject "Small Business Management" is designed to teach students the concepts of entrepreneurship and business, their role in economic development, the specific features of the development of entrepreneurship and small business in the republic, the legal foundations of small business and entrepreneurship and their support by the state.

Keywords: "Small business, economy, development, market economy

Currently, the demand for businessmen engaged in the small business sector in the republic is increasing. This poses a number of challenges for higher and secondary specialized educational institutions in the republic. One of them is to train qualified specialists for small business, retrain them, improve their skills, and train them as mature personnel armed with modern socio-economic and legal knowledge.

The discipline of small business management, as a newly emerging economic discipline, cannot develop in isolation from other disciplines. It widely uses the achievements of related disciplines.

The discipline of "small business management" is closely related to specific economic disciplines: planning and organization of production at enterprises, management, accounting, finance and credit, statistics, and many other disciplines.

The task of this discipline is to use the current achievements of economic knowledge in business and entrepreneurial activities in a targeted manner, as a result of which it will increase the efficiency of small enterprises, ensure the production of high-quality products that are competitive in the world market, and increase the well-being of the people.

The object of study of this discipline is the formation of institutions and organizations in the enterprise by persons engaged in entrepreneurial activities, which indicates the importance of the discipline in the economy.

In the study of the discipline, qualified specialists in market economics, The organization of businessmen, entrepreneurs and businessmen allows students to gain deeper knowledge and broaden their worldview.

Uzbekistan is achieving global success and results during its historically short-term, but unprecedented in terms of content, essence, and scale of socio-economic development of the ongoing fundamental reforms and changes. The basis of such achievements is, first of all, the correct choice of the "Uzbek model" of independent development by the leader of our country, the effective, firm and consistent economic policy pursued for its implementation, and, most importantly, the consolidation of our hardworking people on the path of a high national idea that

moves them towards creativity and innovation, the formation of their strong faith and aspirations for tomorrow.

During the period of independent development, special attention was paid to the development of small business and private entrepreneurship as an important direction for structural transformation of our country's economy based on the requirements of the time, liberalization of economic relations and processes, ensuring high and stable growth rates through modernization of leading sectors of the economy, and increasing employment and well-being of the population. In particular, 2011 was declared by our President as the "Year of Small Business and Private Entrepreneurship" and a special State Program was developed, which included urgent tasks and measures to be implemented throughout the year. Speaking about the specific importance of these measures, the head of our country emphasized that "Another issue that requires special attention is that currently small business and private entrepreneurship in our country are developing mainly in the fields of trade, services and communications, and in the processing of agricultural products. However, at the same time, in the industrial sector, in the organization of modern production sectors that require high technologies, in the field of innovation and innotechnologies, pharmacology and pharmaceuticals, information and communication systems, biotechnology, the use of alternative energy sources, in short, we need to pave the way for the development of small business and private entrepreneurship based on the achievements of advanced science." This indicates the need to prioritize the development of small business entities that use modern equipment and technologies to produce finished products that meet demand, implement innovative projects and developments.

Assessing the development processes of small business and private entrepreneurship in our country during the years of independence, it should be noted, first of all, that to this day, the definition of the boundaries of enterprises included in the small business structure has been carried out through specific stages of development. The quantitative boundaries established at each specific stage are based on the decrees of our President and the decisions of our government. All this indicates the high importance of the development of this sector in the socio-economic development of our country. Since the first years of independence, it has been necessary to provide comprehensive support to small business entities in our country, their activities are regulated by the state.

In order to effectively regulate it, great attention is being paid to its definition as a separate sector. As a result of economic development and the creation of a favorable environment for entrepreneurial activity, small business entities are developing qualitatively and quantitatively, their quantitative boundaries are also being improved. In order to more clearly express these processes and quantitative changes in them, it is advisable to use a separate table. During the period of independence, the first regulatory document on small business activities was adopted in our country - the "Regulations on Small Enterprises in the Republic of Uzbekistan" (Appendix 2 to the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 85 dated February 26, 1992), which determined the

quantitative boundaries of small enterprises. At that time, the fact that there were still no quantitative boundaries for the scale of medium and large enterprises in our republic led to the fact that the small business sector was determined mainly through the activities of small enterprises. In the early period of independent development, the quantitative boundaries of small enterprises were relatively wide, that is, in industry and construction - up to 200 people, in science and scientific services - up to 100 people, in other sectors of the production sector - up to 50 people, in non-production sectors - up to 25 people, in retail trade - up to 15 people. This is mainly explained by the fact that at the initial stage of the transition from an administrative-command system to a socially oriented market economy, the share of large state-owned enterprises was still high, and the large number of business entities that felt the need for the state to provide these enterprises with equal economic conditions and support through various methods and means. It should be noted that this regulatory document, aimed at creating conditions for the active development of small businesses in Uzbekistan in order to form the infrastructure of a market economy, develop competition, create new jobs, implement structural changes in the economy, and fill the consumer market through increased production of goods and services, was indeed the initial impetus given to this process. As a result, small businesses in our country began to develop rapidly. As noted above, the broad socio-economic reforms being carried out in our country have created a basis for improving the structural structure of our economy and, accordingly, require further improvement in the definition of the small business sector. In particular, as a result of the implemented small privatization, almost 54 thousand small and medium-sized enterprises in the trade, service sector, local, light, food industry, motor transport, construction and construction materials production sectors were transferred to private ownership.

This law also defines the main directions of state stimulation of small business:

- improvement of the regulatory and legal framework of small business;
- formation and development of infrastructure;
- creation of conditions for the activities of small business entities.

The main feature of the next stage of defining the boundaries of small business entities in Uzbekistan is that a number of business structures within the structure of small and medium-sized business entities were singled out. In particular, in accordance with the Decree of the President of the Republic of Uzbekistan "On measures to further stimulate the development of private entrepreneurship, small and medium-sized businesses" dated April 9, 1998, it was determined that small and medium-sized business (business) entities are individual entrepreneurs, microfirms, small enterprises and medium-sized enterprises. Another characteristic aspect of this process was clearly manifested, namely, the fact that the size of small business entities in terms of the number of employees is mainly decreasing. For example, the average annual number of employees in small

enterprises decreased by 2.5 times in construction, by 1.25 times in industry, wholesale trade, agriculture and other sectors of production, while the boundaries of science and scientific services, and other sectors of non-production remained unchanged. On the contrary, the number of employees in small enterprises in the retail sector increased by 2 times. As a result of further improvement of the quantitative boundaries of small and medium-sized businesses and strengthening of targeted measures to support them by the state, in order to create favorable conditions for the further development of small entrepreneurship, increase the share of the private sector in the economy, and ensure full employment of the population in the production sector, on August 30, 2003, the Decree of the President of the Republic of Uzbekistan "On Amendments and Additions to the Decree of the President of the Republic of Uzbekistan "On Measures to Further Encourage the Development of Private Entrepreneurship, Small and Medium-sized Businesses" was adopted. This Decree initiated the next stage in determining the boundaries of small businesses in our country. A characteristic feature of this stage was the more precise definition of the average annual number of employees employed in micro-firms and small enterprises by sector.

In conclusion, the tasks that must be carried out in the economy to ensure its effective implementation are as follows:

Regularly study the problems that hinder, hinder or may hinder the effective activities of small businesses and private entrepreneurship in the regions and take measures to eliminate them in a timely manner;

Effectively organize the processes of obtaining accurate information on vacant or underutilized buildings and structures in the region in a short time and providing them to small businesses and private entrepreneurship;

Identify the specific features of each region in order to create a more favorable environment for small businesses and private entrepreneurship and mobilize all opportunities based on them;

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SHAXMAT SPORT TURINING AQLIY TAFAKKURNI RIVOJLANTIRISHDAGI O'RNI VA AHAMIYATI

Annotatsiya. Har qanday mamlakatning ertangi kuni, kelajak taraqqiyoti birinchi galda o'z xalqining, yoshlarining jismoniy va ma'naviy kamoloti bilan o'lchanadi. Maqolada aqliy tafakkurni shakllantirishda shaxmatning ahamiyati haqida so'z boradi.

Kalit so'zlar: tafakkur, shaxmat, intellekt, taraqqiyot, mashg'ulot, o'yin, bola psixologiyasi

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THE ROLE AND IMPORTANCE OF CHESS IN THE DEVELOPMENT OF MENTAL THINKING

Abstract. Tomorrow, the future development of any country will be measured primarily by the physical and spiritual maturity of its people and youth. The article discusses the importance of chess in the formation of mental thinking.

Keywords: thinking, chess, intelligence, development, learning, game, child psychology.

Hozirda davlatlar o'rtasidagi o'zaro musobaqa, kuch-qudratini namoyon etish bellashuvi, asosan ikki yo'nalishda – sport va jismoniy tarbiya hamda aql-zakovat, ya'ni intellektual faoliyat sohasida ustuvor ahamiyat kasb etmoqda.

Ilmiy ta'bir bilan aytganda, xalqning jismoniy-intellektual salohiyatini ro'yobga chiqarish, bu borada tegishli zaxiralarni shakllantirish XXI asrda taraqqiyot va yuksalish kafolatiga aylanib bormoqda.

Insonning intellektual imkoniyatlarini oshiruvchi vosita sifatida qadim davrlardan buyon o'ynalib kelinayotgan sport turlaridan biri bo'lgan – shaxmat o'yini hozirgi kunda eng mashhur o'yinlardan biriga aylangan, sport turi sifatida qabul qilingan; dunyo bo'ylab millionlab kishilar bu o'yinni o'ynashadi. Shaxmat aqliy gimnastika sifatida ham ko'riladi.

Zamonaviy nazariya va amaliyotda jamiyat tomonidan qo'yilgan obyektiv ravishda ortib borayotgan talablar va maktab o'quvchilarining aqliy qobiliyatlarini rivojlantirish, hamda nazariy va amaliy rivojlanish yo'llarining yetarli emasligi va o'quvchi shaxsining mantiqiy fikrlash va shaxsiy sifatlarini rivojlantirish vositalari o'rtasida ziddiyat mavjud.

Taniqli rus o'qituvchisi V.Suxomlinskiy shaxmat yordamida bolalarni tarbiyalashni kuchli talab qilgan birinchi pedagoglardan biri edi. U yozishicha: "...

shaxmatsiz aqliy qobiliyat va xotirani tarbiyalashni tasavvur qilib bo'lmaydi..." Shaxmat boshlang'ich maktab hayotiga. aqliy madaniyat elementlaridan biri sifatida kiritilishi kerak.

E.Lasker birinchilardan bo'lib shaxmatni o'qitish muammosiga e'tibor qaratdi. U shaxmat o'ynash qobiliyati faqat xotira bilan bog'liq bo'lishi mumkin emas deb hisoblagan va shaxmat o'ynashni o'rganish, mantiqiy fikrlash sifatlar rivojlantirish kerak.

A.Zak mashg'ulotlarda bola psixikasining o'ziga xos xususiyatlarini hisobga olish zarurligini ta'kidladi. Bolalar konkret fikrlaydilar, shuning uchun bir qator abstrakt tushunchalarni qiyinchilik bilan, qiziqishsiz qabul qiladilar .

Amerikalik mashhur shaxmat arbobi A.Bisno shunday degan edi: "Shaxmat butun taraqqiyot tarixidagi aql-idrok yutuqlarini, madaniyat va san'at elementlarini o'zida namoyon etadi" .

Shaxmat va mantiqiy tafakkur o'rtasidagi bog'liqlik mavjudligi haqida: N.Alekseyev, A.Bartashnikov, B.Gershunskiy, V.Zaxarov, V.Knyazeva, V.Kostrov, A.Kormishkin, N.Krogius, B.Lanin, V.Malkin, T.Petrosyan, Y.Roxlin, N.Talizina, A.Timofeyev, Y.Yakovlev, M.Feldman kabi mutahassislar yozgan edi.

Shaxmat o'yini kishi harakatining tarkib topishida va fikrlash qobiliyatini rivojlantirishda katta ahamiyatga ega. Shaxmat o'yini yoshdan o'z diqqat markazini uzoq vaqt davomida qattiq ishga solishni hamda keng mantiqiy fikrlashni, faol bo'lishni, o'yinchidan tashbuskor, dadil va ijodkor bo'lishni talab qiladi. mana shu xususiyatlarga ega bo'lmagan shaxmatchi shaxmatda yuqori ko'rsatkichlarga erisha olmaydi.

Shaxmat — umumiy va intellektual qobiliyatlarni rivojlantiruvchi ta'limning bir turi hisoblanib , psixologik jarayonlarini rivojlantiruvchi, insonni aqliy, ijodiy va tarbiyaviy komolotga erishishiga yo'naltirilgan pedagogik jarayondir. Shaxmat o'quvchi qizlarni yanada ma'nan yetuk qilib qilib tarbiyalashda qo'shimcha tarbiya vositasi bo'lib xizmat qiladi.

O'zbekiston Respublikasi Prezidentining 2018-yil 9-avgustdagi «O'zbekiston Respublikasida shaxmatni rivojlantirish bo'yicha qo'shimcha chora-tadbirlar to'g'risida» gi PQ-3906 sonli qaroriga muvofiq maktab dasturlari doirasida 150 ta umum ta'lim maktablarining o'quvchi qizlarini tajriba tariqasida shaxmatga o'qitishni tashkil etish vazifasi belgilangan.

Ushbu qarorga ko'ra, umum ta'lim maktablarining boshlang'ich (2-sinf) sinfida shaxmat o'quv kursi jismoniy tarbiya fani tarkibiga singdirib o'qitilishi O'zbekiston Respublikasi Xalq ta'limi hamda Jismoniy tarbiya va sport vazirliklari, O'zbekiston shaxmat federatsiyasi bilan o'zaro kelishuvlari asosida belgilandi. Ushbu umum ta'lim maktablarining 2-sinflarida jismoniy tarbiya fani odobnoma fanini 0,5 soatga qisqartirish hisobiga, haftasiga 2,5 soatdan o'qitiladi.

Shaxmat o'yinlarida ham turli holatlardan, murakkab vaziyatlardan chiqib ketish muvaffaqiyatga erishishning muhim omili sanaladi. Inson hayotida murakkab vaziyatlar tez-tez uchrab turishi bois keng tafakkurli, bilimli, aqlli inson o'z mantiqiy fikrlari asosida bosh qotirishiga to'g'ri keladi. Oxir-oqibat eng to'g'ri yo'l

tanlanadi. Mantiqiy fikrlash ayni shunday jarayonlarda tobora charxlanib, rivojlanib boradi.

Ba'zi bolalardagi parishonxotirlik xususiyatlari ular shaxmat o'yini bilan jiddiy shug'ullana boshlagan davrlardan 217eskin ravishda kamaya boradi. Albatta, bu hol shaxmat o'yinining kishi ongi va ruhiyatiga ko'rsatgan ta'sirining natijasidir.

Shaxmat o'yini yoshlarning xotirasini kuchaytirishda, fikrlashdagi parishonxotirlikni yo'qotishda muhim omil vazifasini bajaradi. Yuqorida bildirilgan fikrlar yoshlarni ijtimoiy taraqqiyotga mos holda tarbiyalash, ularning ongi, tafakkuri va dunyoqarashini zamon talablari darajasida shakllantirish borasida bir qancha olimlar o'z tadqiqot ishlarida ilmiy asoslangan fikrlarini bayon qilishgan.

Shaxmat insoniyat kashf etgan eng qadimiy, qiziqarli, jozibali hamda go'zal uyindir. Uning asosiy xususiyati shuki shaxmatda sport va san'at uyg'unlashib ketgan. Shaxmat qiziqarli va maroqli uyin. U bilan shug'ullanish organizmning umumiy jismoniy rivojlanishiga, fikrlash doirasining o'sishiga, o'sib kelayotgan yosh avlod ruhiyatiga ijobiy ta'sir etadi. Bundan tashqari shaxmat o'yinlaridan foydalanish orqali ularning idroki, tafakkuri, xotirasi va mantiqiy fikrlashini o'stiradi va rivojlantiradi.

Adabiyotlar

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TILSHUNOSLIK, ADABIYOTSHUNOSLIK VA MADANIYATLARARO MULOQOTLARNING BOG'LIQLIGI

Anotatsiya: Ushbu maqolada tilshunoslik, tilni o'rganish va tushunish, uning tuzilishi, ma'nosi, adabiyotshunoslik va madaniyatlararo muloqot usullari va ularning bir-biriga bog'liqligi tushuntirib berilgan

Kalit so'zlar: interkultural muloqot, madaniyatlararo muloqot; kontekst.

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THE RELATIONSHIP OF LINGUISTICS, LITERATURE AND INTERCULTURAL COMMUNICATION

Abstract: This article explains linguistics, the study and understanding of language, its structure, meaning, literary studies, and methods of intercultural communication and their interdependence.

Key words: intercultural communication, intercultural communication; context.

Tilshunoslik, adabiyotshunoslik va madaniyatlararo muloqot (interkultural muloqot) masalalari o'rtasidagi o'zaro ta'sir ko'p jihatdan murakkab va bir-birini to'ldiruvchi jarayonlardir. Ushbu sohalar o'rtasidagi aloqalar, madaniyatlarni tushunish va ifodalash, shuningdek, til va adabiyotning o'zgarishi va rivojlanishiga ta'sir ko'rsatadi. Quyida bu sohalarning o'zaro ta'sirini ko'rib chiqamiz.

1. Tilshunoslik va madaniyatlararo muloqot

Tilshunoslik tilni o'rganish va tushunish, uning tuzilishi, ma'nosi, va ishlatilishiga oid ilmiy tadqiqotlarni o'z ichiga oladi. Madaniyatlararo muloqot esa turli millat va madaniyatlar o'rtasidagi o'zaro aloqalarni va muloqot usullarini o'rganadi. Til va madaniyat bir-biriga chambarchas bog'liqdir. Til nafaqat muloqot vositasi, balki biror xalqning dunyoqarashi, tarixiy tajribasi, va madaniyatining aksidir.

Masalan, tilshunoslar tilning ma'no va strukturasi o'rganar ekan, madaniyatlararo muloqotning nozik jihatlarini ham hisobga olishlari zarur. Tilni to'g'ri tushunish va muloqot qilish, biror madaniyatni yoki jamiyatni chuqurroq anglashga yordam beradi. Misol uchun, biror so'zning turli madaniyatlarda qanday qabul qilinishi yoki qanday ishlatilishi o'zgarishi mumkin, bu esa madaniyatlararo muloqotda qiyinchiliklar tug'dirishi mumkin.

2. Adabiyotshunoslik va madaniyatlararo muloqot

Adabiyotshunoslik til va madaniyatlar o'rtasidagi o'zaro aloqalarni o'rganadi, lekin bunda asosiy e'tibor adabiy asarlarga qaratiladi. Adabiyot, asosan, til orqali ifodalanadi, lekin undagi ma'no va simvolika madaniyatning o'ziga xos xususiyatlarini aks ettiradi. Adabiyotshunoslik, turli tillar va madaniyatlarda yaratilgan asarlarni taqqoslash orqali madaniyatlararo muloqotning qanday amalga oshayotganini ko'rib chiqadi.

Adabiyot, shuningdek, til va madaniyatlarni bog'lashda ko'prik vazifasini bajaradi. Biror xalqning adabiy merosi o'zining milliy identitetini, qadriyatlarini va tarixiy tajribasini aks ettiradi. Adabiy asarlar orqali turli madaniyatlarni yaxshiroq tushunish va o'zaro muloqotni rivojlantirish mumkin. Masalan, xalqaro adabiyotda yozilgan asarlarni tarjima qilish madaniyatlararo muloqotni osonlashtiradi, chunki ularning o'ziga xos tilshunoslik va madaniy kontekstlarini o'rganish imkonini beradi.

3. Tilshunoslik va adabiyotshunoslik o'rtasidagi o'zaro ta'sir

Tilshunoslik va adabiyotshunoslik o'rtasidagi aloqalar juda kuchli. Adabiyotshunoslar tilning nozik jihatlarini va sintaktik, morfologik xususiyatlarini chuqur o'rganishlari zarur, chunki adabiy asarlarda tilning eng nozik va murakkab shakllari ishlatiladi. Tilshunoslar esa adabiyotda ko'rsatilgan nutq va til holatlarini o'rganib, tilni haqiqiy hayotda qanday ishlatilishini aniqlashadi. Bu o'zaro aloqalar orqali tilshunoslik va adabiyotshunoslik ko'pincha bir-birini to'ldiradi va yangi yondashuvlarni ishlab chiqadi.

4. Madaniyatlararo muloqot va tilshunoslik-adabiyotshunoslik o'rtasidagi aloqalar

Madaniyatlararo muloqot, tilshunoslik va adabiyotshunoslikni birlashtiruvchi asosiy omil bo'lib xizmat qiladi. Madaniyatlararo muloqotda, turli tillarda va madaniyatlarda yaratilgan adabiy asarlar va ularning tarjimasi ahamiyatlidir. Tarjima jarayonida madaniyatlar o'rtasida til va adabiyotning qanday o'zgarishi, o'xshashliklar va farqlarni aniqlash mumkin. Bu jarayon, tilshunoslik va adabiyotshunoslik ilmiy yondashuvlarini uyg'unlashtirib, turli xalqlar o'rtasida yaxshiroq muloqot o'rnatishga yordam beradi.

5. Amaliy jihatlar

Tarjima: Tarjimon til va madaniyatlararo farqlarni hisobga olib, asarlarning aniq ma'nosini saqlab qolish uchun katta mahoratga ega bo'lishi kerak. Tarjima jarayoni nafaqat tilshunoslik, balki madaniyatlararo muloqot va adabiyotshunoslikni ham talab qiladi.

Globalizatsiya va madaniyatlararo muloqot: Globalizatsiya sharoitida madaniyatlararo muloqot va tilshunoslik, adabiyotshunoslikning ahamiyati ortib bormoqda. O'zaro aloqalar ko'paygan sari, biror madaniyatdagi adabiy asarlarning boshqa madaniyatlar uchun ahamiyati ortadi, bu esa til va madaniyatlar o'rtasidagi o'zgarishlarni anglashga yordam beradi.

Xulosa

Tilshunoslik, adabiyotshunoslik va madaniyatlararo muloqot bir-birini to'ldiruvchi va o'zaro ta'sir qiluvchi sohalaridir. Bu sohalar o'rtasidagi o'zaro aloqalar, madaniyatlararo tushunishni chuqurlashtirishga yordam beradi va dunyo

miqyosida muloqotning samarali bo'lishini ta'minlaydi. Har bir soha o'zining alohida yondashuvini taklif etsa-da, ularning integratsiyasi yangi bilimlar va tushunchalarga olib keladi.

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APPLICATION OF INTERACTIVE TEACHING METHODS TO ENHANCE LEARNING OUTCOMES IN SCIENCE EDUCATION

Annotation. This in the article natural science in teaching interactive of the methods of use advantages given .

Key word. Interactive methods , Abu Rayhan Beruni , observation , natural science

Interactive of the methods use Natural science teaching in the process in children sure based on and whole verse h during memorable of knowledge accumulated to go help will give .

"Ma'mun" Academy about the importance of demonstration in the process of educating students members also expressed positive opinions. The members of "Ma'mun" Academy also expressed positive opinions about the importance of demonstration in the process of educating students . For example, **Abu Rayhan Beruni** was a great talent and researcher who made a huge contribution to the development of world science. Beruni writes: *"Our goal is not to bore the reader."* If the student moves from one issue to another, it is like walking in different district gardens, as soon as one garden is passed, another garden begins. Then his everyone to see and watch what to do comes » diya will fly To the reader knowledge in giving : - the student not boring ; - knowledge in giving one different thing or one different science not teaching ; - unity , consistency ; - new The topics are interesting, mostly demonstrative statement reach says that it is necessary . Knowledge in getting understand study , scientific of the researcher to purity compliance to reach separately ehtobar will give .

Natural science in classes applied exhibition to means (live natural objects and descriptive tables , systems , puppets , film , slide film , slide) and others enters

Natural science teaching for especially natural of bodies use to the goal according to because they are in students natural bodies directly to see based on imagination and concepts harvest to do possibility will give . Natural demonstrative weapons - t abiiy of plants samples all organs with , ready herbariums , seeds set , fixed (wet) accessories , bouquets , animal of the world alive natural samples , skeleton and overalls , insects collection of birds eggs and nests , mud , sand , river stones , gravel , water , birds pati , minerals etc enters These are live and lifeless nature to their bodies is divided .

When using these visual aids, it is advisable to start with the simplest ones first. As a result of their research, it turned out that:

- visual aids, which initially have a simple and simple structure and are quickly accepted by students, then (continuously) slightly complex visual aids, and

at the end of the lesson, when complex visual aids are used, students' acceptance and making personal conclusions about objects gave positive results,

- When complex visual aids were used from the beginning of the lessons, there were some shortcomings in students' perception and drawing their own conclusions about the topic.

In addition, it is important to take into account the students' acceptance of the lessons in the classroom, because some classes may have relatively low acquisition opportunities for all students, while other classes may have high acquisition opportunities for all students. . Going from simple to complex in the use of visual aids will give a positive result in both of the above cases. In addition, all students in the class actively participate in the lessons.

For example: in the "Deserts and Oases" topic in the "Natural Science" textbook of the fourth grade, the concepts "barkhan", "barren" are presented. Also, visual aids depicting "barkhan" and "bald" are presented in the textbook itself. Readers who live in the true desert zone or have been to the desert a few times may have a partial understanding of this, but have not seen the lightness of the sand and how it moves from one place to another as a result of strong winds. students cannot draw conclusions about the formed "barkhans". For this, the students *will see the lightness of the sand with their own eyes* , and if they see that the sand can fly away under the influence of a little *wind* , they will have a clear and positive understanding of the formation of "barkhans".

It is important to use a variety of sensory analyzers so that students can get full information about the objects when using each visual aid: skin sensation, smell and, if possible, the full senses with the guidance of the teacher. when used, they are stored in memory for a long time. Demonstrating live animals allows students to imagine not only their appearance, but also their movements, actions, sounds, etc., and these images will be more complete and clear. In order to better guide the observations, the teacher asks the students about the size, shape, color, main parts of the face if it is alive, the way it moves, as well as guiding questions about the similarities and differences from other objects. puts

In teaching science, the teacher has to inform the students about many objects and phenomena that they have not yet seen. In such cases, it is advisable for the teacher to use simple pictures first, and then some more complex ones.

Many objects are observed in science classes. Follow up nature of learning demonstrative is a method . Observation in science classes environment in the process of being the body and events planned purposefully washed away without , conscious acceptance do n adi . Observations regardless of what purpose it is intended for thing conscious acceptance by doing get for simple information at first know , and then they can summarize and draw conclusions.

For example, by observing the changes in the color of the leaves of maple and maple, students compare the leaves of these plants and determine their differences and common features: looking at the fruits of maple, sycamore, poplar , students learn what these fruits are different from each other. observed to differ with

Observing objects and phenomena, comparing them, identifying similarities and differences helps to develop thinking, attention and will.

" Diary observations in the notebook special sources the children observations to transfer help will give . M: In the summer you in nature what did you watch . How plants do you know Nature and work to the calendar observation information each day writing to go to observations steady interest absorbent to the goal appropriate of styles is considered

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PHOTOSYNTHESIS PROCESSES AND THEIR IMPACT ON PRODUCTIVITY IN SOYBEAN PLANTS

Annotation. *In this article given results of bioecological and morphological features kloy the perspective varieties of soybean in the conditions of Surkhandarya region. Certain photosynthetic index (maintenances of pigments, productivity of photosynthesis) of different sorts of soy.*

Key words: *sorts of soy, photosynthesis, pigment, productivity of photosynthesis.*

Introduction: Photosynthesis is the global natural source of renewable energy on earth, ensuring the full functioning of all the organs of a green plant. Therefore, it serves as a key factor in the production process of agricultural crops, resulting in the formation of up to 95% of the organic matter in the crop. [1,2]. Photosynthesis, which is the main process of plant nutrition, depends on the biological properties of plants, as well as complex external factors: sunlight, air temperature, the amount of carbon dioxide in it, soil moisture and the level of mineral nutrition.

Object and methods of research. The A.A. Nichiporovich method (based on the formula of Kidda, VestaiBriggsa) [5] was used to determine the net productivity of photosynthesis in plants. It is now common to use chlorophyll counters to determine chlorophyll or leaf greenness. For this reason, we also used the chlorophyll meter ZYS-4N (Hangzhou quality lab scientific instrument co., Ltd., China) in our study to determine the amount of chlorophyll.

Research results and its discussion. Based on the above data, we studied the photosynthetic properties of soybean varieties by their phases of development.

Pure productivity of photosynthesis. The net productivity of photosynthesis is the amount of dry matter in grams accumulated per 1 m² of leaf surface in 1 day. The value of this indicator for different crops is between 1-20 g / m² per day.

The growth of plant productivity is ensured by two main processes of their vital activity - photosynthesis and growth balance. Growth processes that reflect general functional and metabolic changes in plants are closely related to their accumulation of biomass and dry matter from the air.

The photosynthetic activity of plants is closely related to the size of the assimilating surface of the leaf apparatus and its function. Therefore, it is very important to know what the activity of the leaves is and whether it depends on various influences. These indicators are the photosynthetic potential of crops and the net productivity of photosynthesis

It is known that during the process of photosynthesis, various compounds are formed that are necessary for the growth, development and reproduction of

plants. Depending on the plant genotype and habitat, it makes different effective use of assimilants in photosynthesis. Therefore, in the conditions of Surkhandarya region, the net productivity of the process of photosynthesis of different shade varieties was determined at different growing seasons. The results obtained are presented in Table 1.

Table 1

Net productivity of photosynthesis in different shade varieties in Surkhandarya region (g / m² / day)

Shade varieties	Development cycles		
	budding	gross flowering	dukkak formation
Нафис	8.93	9,60	9.11
Тўмарис ман-60	7.34	7,87	7.58
Устоз ММ-60	9.33	10,72	9.57
Весточка	8.11	12,39	9.79

The pure productivity of photosynthesis was observed in Ustoz MM-60 and Vestochka varieties of soybean compared to other varieties. In all shade varieties, the net productivity of photosynthesis increased from the period of budding to the period of legume formation: its maximum value coincided with the period of gross flowering, and then slowed down slightly.

The amount of plastid pigments in the leaves of soybean varieties.

Accurate assessment of photosynthetic pigments of leaves is an important element in controlling plant stress and fertilizer application and in managing overall plant productivity, especially in agricultural systems where yields are directly related to plant condition. The photosynthetic pigments of the leaves are the main variables characterizing the photosynthetic reaction and gross primary production in the biosphere, pigments play a central role in light harvesting, protection of photosystems and other growth functions [5-6].

Studies have shown that the amount of chlorophyll in the leaves of Vestochka and Tomaris man-60 varieties of soybeans is higher than in other varieties. It was also observed that the amount of chlorophyll changed during the growing season of the soybean plant, i.e., it was highest during the flowering period, followed by a decrease in the amount.

Thus, it was found that the amount of plastid pigments in the leaves of the studied soybean varieties varies during the growing season depending on the biological characteristics of the varieties. Large amounts of plastid pigments to some extent express the intensity of photosynthetic processes in the plant, providing their growth, development rates and weight of the crop.

Chlorophyll counter readings can be affected by many factors other than nitrogen alone. It has been found that anything that can change the color of plants (e.g., diseases, nutrient deficiencies) can affect chlorophyll meter readings.

CONCLUSION

Studies have shown that the net productivity of photosynthesis in plants and the amount of plastid pigments in the leaves depend on the biological characteristics of soybean varieties and growing conditions.

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IMPORTANCE AND ECONOMIC EFFICIENCY OF SOYA IN PEOPLE'S ECONOMY

***Abstract:** As a result of the continuous increase in the demand for protein, its price is increasing in the world market. Therefore, the production of plant and animal protein and providing the population is the main issue, and protein is becoming the most important strategic product. The main way to solve this problem is to introduce planting of protein-rich plants, including soybeans, on large areas and to include them in the structure of crop rotation .*

***Key words:** Soy, protein, oil, artificial nutrition, yield.*

According to the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization, more than 840 million people in the world do not have the opportunity to get enough food. This means almost one in eight people of the world. In addition, more than 30% of the world's population suffers from lack of the most basic proteins, trace elements and vitamins. Soybeans contain a large amount of protein and oil, and are also rich in minerals and vitamins. The most important feature of soybeans is that it provides more and cheaper protein from land than other plant and animal feed sources. Soybean protein is the protein most similar to animal protein and is very important from a biological point of view. Today, when there is a protein shortage all over the world, soy is unmatched among all plants in the agricultural system due to its versatility.

Although soybean is of high enough quality, today it is not widely used in agriculture in Uzbekistan. In this regard, " On measures to organize soybean planting and increase soybean planting in the Republic in 2017-2021" as well as rational use of land and water resources, strengthening of the livestock feed base, processing of JSC "Uzpakhtayog" taking into account the more effective use of the production capacities of the organizations, the implementation of the decision of the President of the Republic of Uzbekistan No. Testing new high-yielding varieties of foreign selection in different soil-climatic conditions of the republic's territories, establishing cooperation with selection and seed breeding scientific institutions of countries with a positive practice of sowing soybeans is being carried out. Soybean cultivation is one of the most economically efficient methods of agricultural production, as the production of vegetable oil is 5-7 times cheaper than that of animals. Plants are an integral part of agriculture and are of special importance in the national economy. Food products necessary for humans are obtained from the soybean plant . Through this indicator, one can think about the well-being of the country's population. In addition, plants are a source of raw materials for industry. There are many reasons why demand for soybeans has increased recently. First of all, its grain contains 50% protein, up to 28% oil, and is an important raw material

in the food industry. In addition, soy has a great role in the development of industry, technology, and animal husbandry. It is widely used in the production of soap, lacquer, plastic, film, chemical and textile industries. The fact that it is a valuable food increases its importance. For example, shrot and kunjara are obtained from soybeans. The green stem is a nutritious fodder for livestock. So, more than 400 types of products are produced from soybeans. Among them, the most valuable is protein. While livestock accounts for 32% of the world's protein supply, the remaining 68% comes from plants, including 55% from soybeans. For this reason, soy is gaining great practical importance in eliminating protein deficiency. Today, it has become a leader in the production and export of soybeans, which are popular in the world market. Soybean crops are grown on an average of 33.3 million hectares annually in this country, and an average of 31.4 centners per hectare is harvested.

It should be said that the soybean plant does not choose a place according to its biological characteristics. It also grows in saline, cultivated fields with elevated groundwater levels. The main condition is to find a variety adapted to that environment. Also, it is very convenient to take care of it in a mixed way. The most important thing is that it "heals" the earth, collects up to 80-100 kilograms of pure nitrogen in the soil. In other words, it restores the power of the land used for another crop. That is why it is called "Soil Gold". Soybean is one of the most important sources in solving the main problem of today - protein deficiency. Because soy protein is similar to animal protein in terms of its chemical composition, all developed countries pay great attention to soy cultivation.

In conclusion, it can be said that soy is a waste-free plant. It is also possible to produce various products - construction boards, fabrics, artificial fertilizers - from the waste of soy that is not used in the food industry and animal husbandry. Soy, in turn, is considered a good predecessor for many plants. In particular, the productivity of corn, potato and potato crops planted after soybeans was high. For example, the yield of oats planted after soybeans was 4.5 centners higher. When seed was planted after sowing, cotton productivity increased to 2.7-3.3 centners per hectare.

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BETONNING XUSUSIYATLARINI YAXSHILASHDA QO‘LLANILADIGAN KIMYOVIY MODDALAR

Annotatsiya: Ushbu maqola betonning mexanik, fizik va kimyoviy xususiyatlarini yaxshilash maqsadida qo‘llaniladigan turli kimyoviy moddalar va ularning ta‘siri haqida ilmiy tahlil olib boradi. Maqolada betonning mustahkamligi, chidamliligi, suv o‘tkazuvchanligi va uzoq muddatli ishlash qobiliyatini oshirish uchun qo‘llaniladigan kimyoviy qo‘shimchalar, masalan, plastifikatorlar, suvsizlantiruvchilar, gidroizolyatsiya moddalar va boshqa kimyoviy modifikatorlar haqida ma‘lumotlar beriladi. Shuningdek, ushbu moddalar yordamida betonning fizik-kimyoviy xususiyatlarini yaxshilash va turli iqlim sharoitlariga moslashtirishning ahamiyati ham ko‘rib chiqiladi. Maqola qurilish sanoatida betonning sifatini oshirish va uni uzoq muddatli ishlashga yaroqli qilish uchun kimyoviy moddalarning roli haqida foydali ma‘lumotlarni taqdim etadi.

Kalit so‘zlar: Beton, kimyoviy moddalar, qorishma, plastifikatorlar, kaliy, natriy, kristallizatsiya, gidratatsiya.

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CHEMICALS USED IN IMPROVING THE PROPERTIES OF CONCRETE

Abstract: This article provides a scientific analysis of the various chemicals used to improve the mechanical, physical, and chemical properties of concrete and their effects. The article provides information on chemical admixtures, such as plasticizers, dehydrators, waterproofing agents, and other chemical modifiers, used to increase the strength, durability, water permeability, and long-term performance of concrete. Also, the importance of improving the physico-chemical properties of concrete and adapting it to different climatic conditions with the help of these substances is considered. The article provides useful information on the role of chemicals in the construction industry to improve the quality of concrete and make it suitable for long-term performance.

Key words: Concrete, chemicals, admixture, plasticizers, potassium, sodium, crystallization, hydration.

Beton qurilish sanoatida eng ko‘p ishlatiladigan materiallardan biri bo‘lib, uning xususiyatlari qurilish ob‘yektlarining mustahkamligi, uzoq muddatli ishlashga yaroqliligi va iqlim sharoitlariga chidamliligi bilan bevosita bog‘liqdir. Betonning sifatini yaxshilash uchun turli kimyoviy moddalardan foydalanish keng tarqalgan. Ushbu maqolada betonning xususiyatlarini yaxshilashda qo‘llaniladigan asosiy kimyoviy moddalar va ularning betonning sifatiga ta’siri haqida so‘z yuritiladi.

Betonning asosiy xususiyatlari orasida mustahkamlik, plastiklik, suvga chidamlilik, issiqlikka qarshilik va uzoq muddatli ishlash qobiliyati muhim o‘rin tutadi. Bu xususiyatlar beton aralashmasida ishlatiladigan materiallar va qo‘shimchalar yordamida yaxshilanishi mumkin.

Betonning mustahkamligi uning asosiy xususiyatlaridan biridir. Mustahkamlikni oshirish uchun beton aralashmasiga turli kimyoviy moddalarning qo‘shilishi mumkin. Masalan, plastifikatorlar va superplastifikatorlar betonning suyuqlashtirish xususiyatlarini yaxshilaydi, bu esa uning mustahkamligini oshiradi. Bu moddalarning yordamida beton aralashmasining suyuqligi kamaytiriladi, shuningdek, mustahkamligi va chidamliligi oshiriladi.

Betonning suvga va sovuq haroratlarga qarshi chidamliligini oshirishda kristallizatsiyalovchi moddalar (misol uchun, silikon asosidagi qo‘shimchalar) va gidrozolyatsiya moddalari qo‘llaniladi. Ushbu kimyoviy qo‘shimchalar beton ichida mikroskopik kristallar hosil bo‘lishini ta’minlaydi, bu esa betonning suv o‘tkazuvchanligini kamaytiradi va uni namlikdan himoya qiladi.

Qurilish materiallari ko‘pincha yuqori haroratga duch kelishi mumkin. Betonning issiqlikka qarshilik xususiyatlarini oshirish uchun pozolanik moddalar (masalan, yong‘oq qobig‘idan olingan kukun) qo‘llaniladi. Ushbu moddalarning qo‘shilishi betonning haroratga chidamliligini oshiradi va materialning uzoq muddatli ishlashini ta’minlaydi.

Plastifikatorlar va superplastifikatorlar beton aralashmasining ishlov berish osonligini yaxshilaydi, shu bilan birga, uning tez qotishiga va yaxshi konsistensiyasiga yordam beradi. Bu moddalarning asosiy maqsadi betonning oson qayta ishlanishini ta’minlashdir, bu esa uning shakllantirilishini osonlashtiradi.

Betonning fizik-kimyoviy xususiyatlarini yaxshilashda turli kimyoviy moddalar qo‘llaniladi. Kaliyli va natriyli qo‘shimchalar, masalan, nafaqat betonning mexanik xususiyatlarini, balki uning ekologik barqarorligini ham oshiradi. Bunday moddalar beton aralashmasida reaksiya qilish orqali betonning xususiyatlarini yaxshilaydi, shu bilan birga uning sog‘liq uchun zararsiz bo‘lishini ta’minlaydi.

Beton konstruksiyalarini sifati va xossalarini oshirish uchun quyidagi kimyoviy qo‘shimchalardan foydalaniladi:

- betonning muzlab qolishini oldini oladigan kimyoviy qo‘shimchalar;
- plastifikatorlar;
- betonning harakatchanligini saqlash uchun qo‘shiladigan kimyoviy qo‘shimchalar;
- modifikatsiyalovchi qo‘shimchalar;

- tezlashtirilgan mustahkamlikka erishish uchun qo‘shiladigan kimyoviy qo‘shimchalar;

- o‘z-o‘zidan zichlashadigan aralashmalar uchun qo‘shimchalar va boshqalar

Qorishmani tayyorlashning ajralmas qismi bu suvdur. Manfiy haroratlarda suv muzga aylanadi, bu qurilishda juda jiddiy muammo. Gidratatsiya jarayoni (tsement va suv nisbatlari) o‘n besh darajadan past haroratda dinamikligini yo‘qotadi. Isitish simini yotqizish yoki yordamchi qolipni qurish orqali kerakli haroratni saqlab turish mumkin. Ushbu chora-tadbirlar yordam beradi, ammo qurilish vaqtini va moliyaviy xarajatlarni oshiradi. Muzlashga qarshi qo‘shimchalarining asosiy printsipti betonning noldan past haroratda egiluvchanligini saqlab qolishdir, bu aralashmada bo‘lgan suyuqlikning muzlashiga yo‘l qo‘ymaydi va shu tufayli aralashmaning qattiqlashishi va mustahkamlikka ega bo‘lishiga imkon beradi.

Betonning oson yotqizuvchanlik xususiyati qurilishda juda muhim omil hisoblanadi, ayniqsa jarayonda yuqqa devorli tuzilmalar yoki murakkab geometriyaning qoliplari bilan ishlash ko‘zda tutilgan bo‘lsa. Bundan tashqari, yotqizishda bo‘shliqlar paydo bo‘lishining oldini olish kerak, bu beton konstruksiyalarning mustahkamligi va ishonchliligiga juda salbiy ta‘sir qiladi.

Beton aralashmaning harakatchanligini saqlab qolish uchun qo‘shimchalar qorishmani uzoq muddatli tashish zarur bo‘lganda qo‘llaniladi. Ulardan foydalanish issiq mavsumda ham o‘z o‘rnini topadi, chunki yuqori haroratda beton aralashmani qotish jarayoni tezroq bo‘ladi. Ushbu qo‘shimchalar suv molekulalarining tsement zarralariga kirishini qiyinlashtirish, ya‘ni gidratsiyani sekinlashtirish orqali sement toshi strukturasi shakllantirish jarayonining davomiyligini oshiradi.

Modifikatsiyalovchi qo‘shimchalar beton aralashmaning turli xususiyatlarini yaxshilash uchun ishlatiladi. Ko‘pincha ma‘lum tuzilmalarni qurishda qorishmadan ma‘lum zichlikka erishish talab qilinadi. Masalan, hovuzni qurish uchun namlik o‘tkazuvchanligi yuqori bo‘lgan beton va binolarning yuk ko‘taruvchi tuzilmalari uchun mustahkamlik darajasi yuqori bo‘lgan beton ishlatilishi kerak. Havoni jalb qiluvchi, gaz hosil qiluvchi va hidrofobizatsiya qiluvchi qo‘shimchalar vazifaga qarab betonning zarur g‘ovakligiga erishishga yordam beradi.

Xulosa

Xulosa qilib shuni ta‘kidlash mumkinki, zamonaviy beton ishlab chiqarishda kimyoviy qo‘shimchalardan keng foydalanish betonni sifati va xossalarini yaxshilashga yordam beradi. Shu bilan bir qatorda beton mustahkamlikni yaxshilash, suvga chidamlilikni oshirish va issiqlikka qarshilikni kuchaytirish uchun turli kimyoviy moddalardan foydalanish beton sifatini sezilarli darajada yaxshilaydi. Qurilish sanoatida yangi kimyoviy moddalar va texnologiyalarni qo‘llash betonning ishlash muddatini uzaytiradi va qurilish ob‘ektlarining mustahkamligini ta‘minlaydi.

Shunday qilib, betonning sifatini yaxshilashda kimyoviy moddalarning qo‘llanilishi nafaqat materialning o‘ziga, balki butun qurilish sohasining barqarorligi va samaradorligini oshirishga xizmat qiladi.

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CHIG'ATOY ULUSIDA ILK BOSHQARUV SHAKLI

Annotatsiya: Chig'atoy Ulusi Genghisxoning o'g'li Chig'atoy tomonidan tashkil etilgan va mongol imperiyasining G'arbiy qismlarini qamrab olgan davlatdir. Ulusning ilk boshqaruv shakli mongol imperiyasining markazlashmagan boshqaruv tizimi asosida tashkil topgan. Chig'atoy Ulusida hokimiyat asosan mahalliy xonlar va amaldorlar tomonidan amalga oshirilgan bo'lib, ular o'z hududlarida mustaqil ravishda boshqaruvni amalga oshirgan. Boshqaruv tizimida harbiy va fuqarolik boshqaruvi bir-biriga yaqin bo'lib, harbiy tuzilma davlatning siyosiy va iqtisodiy hayotida katta rol o'ynagan. Dastlabki davrda Chig'atoy Ulusining boshqaruvi decentralizatsiyalashgan bo'lib, xonlar va amaldorlar o'z qo'shinlari orqali mamlakatni boshqarishgan. Bu boshqaruv shakli, Chingizxondan meros bo'lib qolgan an'analar asosida amalga oshirilgan.

Kalit so'zlar: Chig'atoy ulusi, davlat, harbiy yurish, siyosiy tuzim, hudud.

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THE FIRST FORM OF GOVERNMENT IN THE CHIGATOY ULUS

Abstract: Chigatai Ulus is a state founded by Genghis Khan's son Chigatai and covering the Western parts of the Mongol Empire. The first form of government of the nation was based on the decentralized management system of the Mongol Empire. In Chigatoy Ulus, power was exercised mainly by local khans and officials, who managed independently in their territories. In the management system, military and civilian management are close to each other, and the military structure played a major role in the political and economic life of the state. In the early period, the administration of Chigatay Ulus was decentralized, and khans and officials ruled the country through their armies. This form of government was implemented on the basis of traditions inherited from Genghis Khan.

Key words: Chigatay ulus, state, military campaign, political structure, territory.

Chig'atoy Ulusi, Genghisxoning o'g'li Chig'atoy tomonidan tashkil etilgan va mongol imperiyasining muhim tarkibiy qismlaridan biri bo'lgan davlatdir. Chingizxondan keyin, uning farzandi Chig'atoy 1227-yilda mo'g'ullarning katta imperiyasining G'arbiy qismlarini boshqargan va bu hududda yangi bir ulus (xonlik) tashkil qilgan. Chig'atoy Ulusi, o'zining hududiy joylashuvi bilan Markaziy Osiyo, O'rta Osiyo va janubiy qismlarni o'z ichiga olgan, shu bilan birga, uning boshqaruvi ilk bosqichda oddiy va markazlashmagan shaklda bo'lgan.

Chig'atoy Ulusida mongol imperiyasining umumiy boshqaruv tizimiga asoslangan edi. Genghisxondan olingan an'analar bo'yicha, uluslarda, xususan, Chig'atoy Ulusida ham, markaziy hukumat tomonidan bevosita boshqaruvning o'rni kichik bo'lib, mamlakatni boshqarish, asosan, mahalliy xonlar va amaldorlar tomonidan amalga oshirilgan. Chig'atoy Ulusida boshqaruv shakli dastlab nisbatan decentralizatsiyalashgan edi, ya'ni hududlarda katta xonlar va amaldorlar o'z hududlarida mustaqil ravishda hukmronlik qilishgan. Ular, o'z navbatida, Genghisxonning amaldagi boshqaruv tizimidan foydalanib, ma'muriy va harbiy masalalarni hal qilishgan.

Boshqaruv tizimining asosiy xususiyatlaridan biri, mongol imperiyasida bo'lgani kabi, harbiy va fuqarolik boshqaruvining bir-biriga yaqin bo'lganligi edi. Chig'atoy Ulusida ham davlatning harbiy tuzilmasi juda kuchli bo'lib, xonlar va ularning amaldorlari o'z qo'shinlari orqali davlatni boshqarishgan. Harbiy boshqaruv va jangovar qo'shinlar davlatning siyosiy va ijtimoiy strukturasi asosiy o'rinni egallagan.

Chig'atoy Ulusida ilk boshqaruv shakli decentralizatsiyalashgan, harbiy va fuqarolik boshqaruvining birlashtirilgan tizimiga asoslangan edi. Bu boshqaruv tizimi, Genghisxondan meros bo'lib qolgan va Chig'atoy tomonidan amalga oshirilgan siyosiy strukturada o'z aksini topdi [1].

Mo'g'ullar ko'chmanchilik bilan hayot kechiruvchi xalq bo'lgani tufayli davlat boshqaruvida epsiz edi. Shu boisdan, xonlar dastavval ulus qo'l ostidagi hududlarni noiblar yordamida boshqargan. Buni Movaraunnahrni boshqarish ishlari mahalliy hukmdorlar va ayniqsa mahalliy boy zodagonlarga berilishida ham kuzatamiz.

Misol uchun, birinchi bo'lib Chig'atoy ulusi hududini boshqarish xorazmlik savdogar Mahmud Yalavochga keyinchalik ham uning avlodiga topshirildi. Ular xonning noibi sifatida faoliyat olib borishdi. Noib ko'rinishida ular Ho'janddagi qarorgohidan turib ulus miqyosida soliqlarni to'plash hamda Hoqon huzuriga yetkazish va aholini itoatda ushlab turish kabi ma'suliyat yuklatilgan edi. Bunda noib Chig'atoy ulusi xonlari oldida hisobot berishlari shart emas edi. Huddi shunday Buxoroda ham mahalliy zodagonlar va din ulamolari, sadrlar mamlakatdagi boshqaruvni qo'lga olgan edilar. Manbalarda Chig'atoyning xususan Mahmud Yalavachdan qutulish hoxishi bo'lgani haqida ishoralar bor va u bu maqsadiga 1238 yilgi Mahmud Tarobiy qo'zg'oloni orqali erishgan desak ham mubolag'a bo'lmaydi. Chunki Yalavach qo'zg'alonga homiylikda yoki bila turib keskin chora ko'rmaganlikda ayblanib O'qtoy Hoqonning ijozatisiz noiblikdan ozod etiladi. Yalavach Qora-qurumga ketishga majbur bo'ladi. Hoqon esa iltifot ila kutib oladi va uni Pekinga gubernator etib tayinlaydi. Yalavach u yerda umrining oxiriga qadar (1254 yil) faoliyat yurgazadi. Movaraunnahrning yangi noibi etib esa uning farzandi Ma'sudbekni tayinlaydi. Ma'sudbek ham bosqoqlar va darug'achilar boshliq qo'shinga hamda mahalliy amirlarga tayanib otasining ishlari va siyosatini 1289 yilga qadar davom ettiradi [2].

Mo'g'ullar imperiyasida siyosiy vaziyat juda murakkab bo'lib, bu davrda bosqinchilik urushlari davom etar edi. Xususan, Botu Khan 1236-1241 yillarda

Sharqiy Yevropaga yurishlar qilib, keyinchalik Oltin O‘rdaga asos solish uchun zamin yaratgan. 1248 yilda Hoqon Guyukxonning vafoti va undan keyingi davrda, katta hududga ega sulolani boshqarishga tayyor va malakali davogarlarning yo‘qligi O‘qtoy xonadonini ichki nizolarga olib keldi.

Shuningdek, Botu va Guyukxon o‘rtasida eski adovat mavjud bo‘lib, bu dushmanlik keyingi avlodlarga ham o‘tdi. Mankuxon, 1250 yilda Guyukxon va uning o‘g‘illari, shuningdek, Chingizxonning avlodlariga qarshi harbiy qo‘mondonlar yordamida g‘alaba qozonib, taxtni qo‘lga kiritdi. Bu g‘alaba uning hokimiyatini mustahkamladi va u o‘zini davlatning haqiqiy hukmdori deb hisobladi.

Botu, o‘z mavqeidan foydalanib, Tulu xonadoni vakillari bilan kelishib, Mankuxonni (Manguxonni) taxtga chiqarishga harakat qildi. Chingiziylar ichida kuchli bo‘lgan Botu qurultoyini Saroy Berkaga chaqirdi. O‘qtoy va Chig‘atoy xonadonlari bu qarorni qabul qilmasdan, qurultoyini Chingizxonning ona yurtida, Kerulen daryosi hududida o‘tkazishni talab qilishdi. Nihoyat, Botu va Tulu xonadoni ishtirokida Munkexon Hoqon etib ko‘tarildi, ammo O‘qtoy va Chig‘atoy xonadonlari bu qarorni tan olishni xohlamadi. Yana bir yil davomida, tortishuvlardan so‘ng, Qora-Qurumda yangi qurultoy chaqirilib, Munkexon 1251-1259 yillarda Hoqon etib saylandi.

Munkexon imperiyani boshqarishda bir qator muhim islohotlarni amalga oshirdi, shu jumladan Movaraunnahrda ham. Jamol al-Qarshiyga ko‘ra, u o‘z urug‘iga qilich ko‘targan va xonadoniga o‘tkir qilich sanchgan ilk kishilardan biri edi. U O‘qtoy va Guyukxon kabi Chig‘atoy ulusi hududlarini yana Ma’sudbekka topshirdi. Soliq yig‘ish masalasiga ehtiyotkorlik bilan yondashib, u qo‘zg‘olonlar va tartibsizliklarning oldini olish maqsadida, 1238 yildagi Buxorolik Mahmud Tarobiy singari harakatlarga qarshi chora ko‘rdi. Darug‘achi, bosqoq, chopar va lochinbozlar kabi lavozimlar uchun payza va yorliq olish imtiyozlari qisqartirildi. Mahalliy aholining ijtimoiy holatiga qarab soliq tizimi joriy etildi, lekin har bir hududda soliq stavkalari farq qilardi. Masalan, Xurosonda boy kishidan 7 dinor, kambag‘aldan esa 1 dinor olinadi, Movaraunnahrda esa boy kishidan 10 dinor, kambag‘aldan 1 dinor talab qilindi. Qopchur soliqlari har yuz jon boshidan bir jonni tashkil etgan, yuz jon boshidan kam bo‘lganlardan esa qopchur olinmagan. Bu soliq tizimi 60-yillarga qadar davom etdi. So‘ngra, Chig‘atoy xonadoni vakillari taxtni qaytadan qo‘lga kiritish uchun harakatlana boshladilar.

Fikrimizcha, Chig‘atoy xonlari tomonidan amalga oshirilgan bu harakat ulusda boshqaruvni qo‘lga olishning birinchi qadami deb hisoblanishi mumkin. Chunki, taxtga o‘tirish marosimi an’anaviy ravishda Ili daryosi bo‘yida emas, balki Movaraunnahrda, ya’ni Angren daryosi vodiysida o‘tkazildi. Bu, xonning mahalliy aholidan uzoqda bo‘lmagan, lekin yaqinroq joyda bo‘lishini ko‘rsatdi. Ushbu o‘zgarish, Chingizxon tomonidan yaratilgan qadriyatlarining tanazzulga yuz tutayotganini anglatardi.

Xulosa qilib aytganda, dastlab, Chingizxon o‘zi yaratgan imperiyani boshqarishning tartib-qoidalariga farzandlari qat’iy rioya qilgan. Ammo ularning vafotidan ko‘p o‘tmay, imperiyada tartibsizliklar boshlandi. Bu vaziyatda Botu va Tulu, shuningdek, O‘qtoy va Chig‘atoy xonadonlari o‘rtasida hamkorlik o‘rniga

raqobat boshlanib, bir-biriga qarshi chiqa boshladilar. Ularning harakatlari, ko‘proq qudratga ega bo‘lish uchun ba‘zan avlodlar qadriyatlarini bir chetga surib, uluslarning ichki siyosatiga bevosita ta‘sir ko‘rsatishga olib keldi.

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KARTOSHKANI EKOLOGIK MAHSULOT BIOPREPARAT YORDAMIDA SAQLASH TEXNOLOGIYASINI ISHLAB CHIQISH

***Annotatsiya.** Jahonda kartoshkachilik qishloq xo'jaligining rivojlanayotgan yo'nalishlaridan hisoblanadi. Kartoshka (*Solanum tuberosum* L.) dunyodagi eng muhim oziq-ovqat ekinlaridan biri bo'lib, uni saqlashdagi salbiy omillar, jumladan, zararkunandalar, kasalliklar, vazn yo'qotishlar, erta unib chiqishlarga bo'lgan yuqori talablar atrof-muhit muammolarini keltirib chiqaradi. Kartoshkani turli xil kimyoviy birikmalardan holi, ekologik toza mahsulot sifatida standart talablariga muvofiq ishlab chiqarish va saqlashda biotexnologik yondoshuvlardan foydalanish dolzarb hisoblanadi.*

***Kalit so'zlar.** biopreparat, Gala, Arizona, Evolyushn, Sante, Sovutish davri, Qishlash davri, Saqlash davri*

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DEVELOPMENT OF POTATO STORAGE TECHNOLOGY USING AN ECOLOGICAL BIOLOGICAL PRODUCT

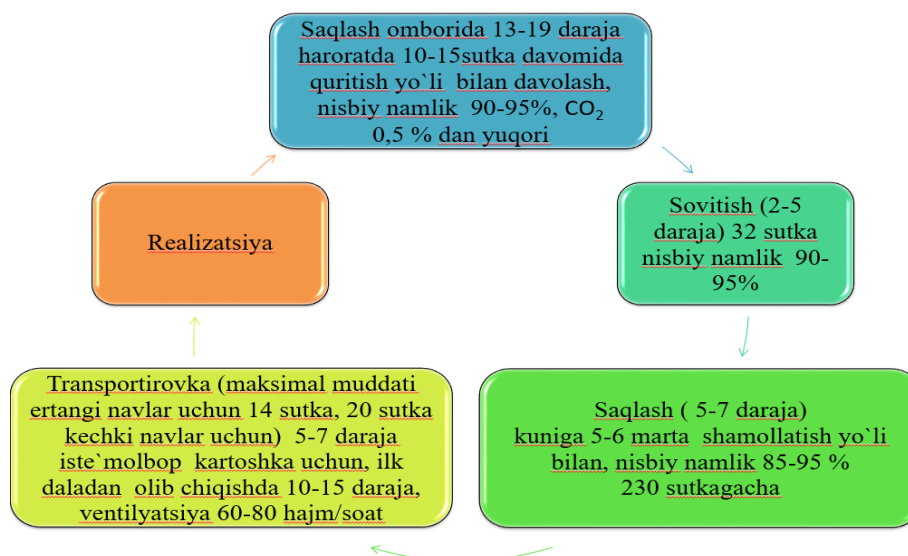
***Annotation.** The world of potato cultivation is one of the developing areas of agriculture. Potato (*Solanum tuberosum* L.) is one of the most important food crops in the world, and negative factors during its storage, such as pests, diseases, weight loss, and the high demand for early sprouting, lead to environmental issues. It is important to use biotechnological approaches for the production and storage of potatoes that meet standard requirements as an eco-friendly product free from various chemical compounds.*

Keywords: *biopreparation, Gala, Arizona, Evolyushn, Sante, Cooling period, Wintering period, Storage period.*

Kirish. Kartoshka xalq xo‘jaligida nafaqat oziq-ovqat sifatida katta ahamiyatga ega, balki u shifobaxshlik xususiyatiga ham ega bo‘lgan ekindir. Uni tunganagi tarkibida D.Mendeleyev davriy jadvalining 26 elementi borligi aniqlangan. Kartoshka tugunagidan tayyorlangan sharbat shamollashni, xavfli shishlarni, spazmli kasallikni oldini olish va zahar haydashda qo‘llaniladi [1-3]. Kartoshkani saqlashdagi yo‘qotishlarni oldini olish uchun tunganaklarini uzoq vaqt saqlashga tayyorlash, ustki qismi zararlanmasligi uchun profilaktik choralarini ko‘rish, yetarli harorat-namlik rejimlarini berish va har bir saqlash davri bosqishlarini samarali tashkil etish o‘ziga xos kompleks yondashuvlarni talab etadi. Kartoshkani saqlashdagi yo‘qotishlarni oldini olish uchun tunganaklarini uzoq vaqt saqlashga tayyorlash, ustki qismi zararlanmasligi uchun profilaktik choralarini ko‘rish, yetarli harorat-namlik rejimlarini berish va har bir saqlash davri bosqishlarini samarali tashkil etish o‘ziga xos kompleks yondashuvlarni talab etadi [4-6].

Tadqiqot materiallari va uslublari. Tadqiqotlar davomida biopreparat yordamida kartoshkani saqlash texnologiyasi bo‘yicha quyidagi jarayonlar amalga oshirildi: Xom ashyo (kartoshka) uni qayta ishlash liniyasiga bir xil yetkazib berish uchun qabul qilish bunkeriga beriladi. Ushbu bunker orqali xom ashyo sifatsiz materiallardan, toshlardan, tuproqdan va qoldiqlardan tozalash uchun tozalagichga uzatiladi. Tozalangan xom ashyodan chiqindilarni ajratish uchun, saralash va chiqindilarni olib tashlashga mo‘ljallangan qurilmaga uzatiladi. Tozalangan kartoshka mahsulotlari o‘lchamlari bo‘yicha saralagich uskunasi fraksiyalarga ajratish uchun beriladi. Fraksiyalarga ajratilgan xom ashyolar biopreparat bilan ishlov berish uchun purkagichga beriladi. Purkagichda 1:1000 nisbatda tayyorlanadi va kartoshka tunganagiga biopreparatning ishchi suyuqligi sepiladi. Ishlov berilgan kartoshka 18-36 °C da havo oqimi yordamida 30-35 daqiqa davomida quritish qurilmasida quritiladi. Tayyor bo‘lgan kartoshka 10-15 kun 19 °C da saqlash omborda qo‘yiladi. Sovutish davri 14-18 °C haroratda har 2 sutkada 1 °C dan pasaytirib borilib, 32 kundan so‘ng qishlash davriga o‘tkazildi. Qishlash davri harorat rejimi 3±1 °C ni va havo namligi esa 85-95 % ni tashkil etishi lozim (1 rasm). Saqlash davrida ombor faol ravishda ventilyatsion uskuna yoki maxsus darchalar yordamida shamollatib turiladi, harorat va gaz miqdori havo va tunganaklar oralig‘ida tavsiya etilgan darajada ushlab turiladi. Kartoshkani saqlash uchun umumqabul qilingan usullar asosida bakterial preparatlar bilan ishlov berildi va omborda 14 sutka davomida 18 °C haroratda saqlash davom ettirildi (davolash davri). Davolash davrini o‘tagach, haroratni sutkasiga 0,5-1 °C ga sekin tushirish yo‘li bilan intensiv pasaytirib borildi. So‘ngra barcha tajriba variantlaridagi iste‘molbop kartoshka tunganaklarini saqlash uchun tavsiya etilgan 4±1 °C da havoning nisbiy namligi 90-95 % da 1 oy davomida saqlandi.

Omborga tajriba va nazorat variantlari qo‘yildi, ishlov berish ikki xil haroratda: davolash davri 18±1 °C da 14 kun va saqlash davri 3±1 °C da 21 kun davomida saqlandi.



1 rasm. Iste'molbop kartoshkani saqlash bo'yicha texnologik sxema

Tadqiqot natijalari va muhokama. “Zamin-M” biopreparatining turli konsentratsiyalarini kartoshka tuganaklariga ishlov berish davriga ta'siri (15 kun davomida, 19 °C haroratga) o'rganilganda biopreparatning 1:100, 1:500 va 1:1000 nisbatdagi konsentratsiyalari bilan davolash davri oldidan ishlov berish nazoratga nisbatan mahsuldorlikning Arizona kartoshka navida mos ravishda 8,1 %, 10,9 % va 12,0 % ga, Gala kartoshka navida 1,5 %, 2,8 %, 4,3 %, va Evolyushn kartoshka navida 0,3 %, 0,6 %, 1,0 % yuqori bo'lishiga olib kelgan.

Shuningdek, olingan natijalarga ko'ra, biopreparatlarning Gala navli kartoshka tuganagini saqlash davrida uglevodlarga ta'siri nazoratga nisbatan olinganda “Zamin-M” biopreparati ta'sirida kartoshka tuganagi tarkibidagi uglevodlar: fruktoza miqdorini 0,45 % ga, glyukozani 0,87 % ga, maltozani 0,04 % ga va saxarozaning miqdori ham 0,20 % ga kamayganligi tahlil qilindi. “Bist” biopreparati qo'llanilganda, kartoshka tuganagi tarkibidagi fruktoza miqdori 0,45 % ga, glyukoza miqdori 0,87 % ga kamaygan bo'lsa, maltoza miqdori 0,02 % ga, saxaroza 0,19 % ga nazoratga qaraganda ortganligi qayd etildi.

Shulardan ko'rinib turibdiki, “Zamin-M” biopreparati saxaroza miqdorini past darajada ushlanib turishiga sabab bo'lib, tekshirilgan variantlarga nisbatan jadvalda keltirilgan ko'rsatkichlari bilan afzal ekanligi aniqlandi.

Xulosa. “Zamin-M” biopreparatining 1:1000 nisbatdagi konsentratsiyasi bilan kartoshka tuganaklarini davolash davri oldidan ishlov berish mahsuldorlikning mos ravishda nazoratga nisbatan Arizona kartoshka navida 12 % oshirib, boshqa variantlarga nisbatan eng yuqori natijani qayd etgan.

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THE USE OF HIGH-GRADE REINFORCEMENT IN PRECAST-MONOLITHIC REINFORCED CONCRETE STRUCTURES

***Abstract.** Reinforced concrete structures occupy an important place in the construction industry due to their excellent performance characteristics, such as high strength, durability, fire resistance and versatility. One of the main factors affecting their quality and safety is reinforcement, which provides concrete with compressive strength and resistance to tensile forces. In recent decades, high-class reinforcement has been actively used in construction, which allows for the creation of more reliable and cost-effective structures. This article discusses the use of high-class reinforcement in precast-monolithic reinforced concrete structures, as well as its impact on the strength characteristics and durability of structures.*

***Keywords:** Precast concrete, monolithic structures, high-class reinforcement, durability, stability.*

Reinforced concrete is a composite material consisting of concrete and reinforcement. Concrete effectively resists compression, but poorly absorbs tensile and bending loads, so reinforcement is used to increase strength and stability. Depending on the manufacturing method, there are two types of reinforced concrete structures:

Precast - structural elements are manufactured in factories and then transported to construction sites.

Monolithic - structural elements are poured directly at the construction site.

A combined option, when elements are manufactured both in the factory and during the pouring process on site, is called precast-monolithic. This approach ensures high precision in the manufacture of elements, as well as optimizes construction time.

High-class reinforcement is steel reinforcement, which is characterized by high strength and resistance to loads. The main classes of reinforcement used in reinforced concrete structures include:

A240 and A400 - low and medium class reinforcement, used in standard designs.

At800 and At1200 are high-class reinforcement, designed to create highly loaded and critical structures.

However, in addition to the advantages, there are also several disadvantages associated with the use of high-grade reinforcement:

High cost - although savings on materials and transportation generally compensate for these costs, at the initial design stage the cost of reinforcement can be significant.

Class of reinforcement or wire	Diameter range in millimeters	Tensile strength in N/mm²
A-I (A240)	6–40	373
A-II (A300)	10–40 and 40–80 depending on alloy grades	490
Ac-II (Ac300)	10–32	441
A-III (A400)	6–40 and 6–22 depending on steel grades	590
A-IV (A600)	10–18 и 10–32	883
A-V (A800)	10–32	1 030
A-VI (A1000)	10–22	1 230
AT400C	6–40	550
AT500C	6–40	600
AT600, AT600C and AT600K	10–40	800
AT800	10–32	1 000
AT800K	18–32	1 000
AT1000 and AT1000K	10–32	1 250
AT1200	10–32	1 450
Wire Vr-1	3–5	400 – 1085 depending on diameter
VR and V high-strength wire, corrugated and smooth	3–8	1470 – 1780 depending on diameter

Difficulties in processing and joining — high-class reinforcement, especially with higher tensile strengths, requires special conditions for welding and tying, which increases the labor intensity of the work.

Examples of the use of high-class reinforcement in construction

In recent years, high-class reinforcement has been actively used in the construction of large infrastructure facilities, such as bridges, tunnels, high-rise buildings and other structures where high loads and dynamic impact are critical. In particular, class A500C reinforcement is used to reinforce large precast and monolithic elements of buildings and structures, as well as for the construction of facilities with increased safety requirements.

The use of high-class reinforcement is especially important for structures in areas with different climatic conditions, where increased corrosion resistance and durability of structures play an important role.

High-class reinforcement in precast and monolithic reinforced concrete structures can significantly increase their strength, durability and cost-effectiveness. Using high-quality reinforcement, it is possible to optimize the design and reduce material costs, while ensuring the reliability and safety of structures. Despite the higher cost and complexity in processing, the use of high-class reinforcement is a justified solution for the construction of facilities subject to increased loads and external factors.

Taking into account the growing requirements for the stability of construction projects and safety standards, the use of high-class reinforcement will continue to expand, ensuring the construction of more reliable and durable structures.

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THE OPPORTUNITIES FOR INCREASING EMPLOYMENT IN THE SERVICE SECTORS OF KASHKADARYA REGION

Abstract: This article discusses the problems of increasing the employment level of the population in the service sectors of the Kashkadarya region, reforms aimed at increasing the employment level by the state, and a SWOT analysis based on identifying the strengths and weaknesses, opportunities and problems of increasing employment in the service sectors.

Key words: Service sectors, service facility, guest houses, tourist and recreational potential, tourist organization, population, infrastructure, social services, communications, transport, medical services.

In our country, an active socio-economic policy is being implemented to ensure the employment of the working-age population in a market economy, eliminate the problem of unemployment, and regulate the labor market. Because increasing the efficiency of the use of labor resources, improving the standard of living of the population, and joining the ranks of highly developed countries are among the most important tasks facing each country.

It is necessary to provide employment to the working-age population in the regions based on the effective use of service sectors, as well as to provide opportunities for the development of small businesses and entrepreneurship.

The socio-economic development of the service sectors of the Kashkadarya region is closely related, first of all, to the creation of the basis for planning infrastructure elements in the regions.

Taking into account the current demographic situation in the region, the development of modern service sectors requires the establishment of a balance between jobs and labor resources in order to provide labor resources with employment and increase their employment rate. For this reason, it is of great scientific and practical importance to take into account the created and existing jobs in the region, as well as the demographic basis for the formation of labor resources.

The following factors influence the employment of the population in informal labor activities: economic, legal, and socio-demographic factors also have a significant impact.

In the process of studying the socio-demographic status of those engaged in informal labor activities in our republic, it was found that 32.2% of those with

secondary education, 61.3% with secondary specialized education, and 6.5% with higher education make up the population, which indicates that the higher the level of education and qualifications of the population, the lower the level of employment in informal labor.

The extensive reforms are being carried out to ensure employment of the population. In the regions, employment authorities are actively training the unemployed population in professions. The rate of involvement of the unemployed population in public works has increased by 60 times. Today, non-traditional forms of employment, self-employment of the population, while increasing employment, are leading to a decrease in the unemployment rate [6].

Individual entrepreneurship was introduced in Uzbekistan from July 1, 2020. In order to increase employment, simple registration via the Internet without leaving home and convenient taxation attracted young people. The income of individual entrepreneurs is not subject to tax, but they can voluntarily pay social tax in the amount of one basic calculation amount once a year to take into account their work experience.

We can see a high level of interest among young people in the following areas:

- household services (hairdressing, manicure, cosmetology, pedicure, laundry and ironing at home, key making, shoemaking, repair and painting, etc.) - 106,482 individual entrepreneurs;

- provision of services in agriculture (herding and care, assistance to homestead owners in planting and caring for agricultural crops) - 71,694 individual entrepreneurs;

- services in the industrial sector (wooden architecture, sanitation, electrical installation, collection of waste paper, plastic, scrap metal, etc.) - 51,575 individual entrepreneurs;

- social services (home tutoring, childcare and household chores, cleaning, traditional medicine, etc.) - 44,273 individual entrepreneurs;

- consumer goods production and service sector (home-made bread, popcorn, ice cream, salads, soft drinks, ayron, drilling and sale of agricultural products at farmers' markets, etc.) - 26,639 individual entrepreneurs;

- ICT services (social media activities, software, mobile applications and website development, text creation and processing, etc.) are provided by 9,485 individual entrepreneurs.

In 2021, the number of self-employed young people was 310,148. As of February 16, 2022, the number of self-employed people reached 1,324,031. From January 1 to February 16 of this year, 132,047 citizens registered as self-employed, including 20,295 in Fergana region, 18,988 in Samarkand region, 13,901 in Andijan region, 10,647 in Jizzakh region, and 10,362 in Tashkent region.

The following privileges and obligations apply to self-employed persons:

Free registration, no employer, no employee, no seniority and pension are accrued to them, voluntary social tax is paid once a year in the amount of one percent of the minimum wage, no income tax is paid, they can open a bank account to

receive money transfers from legal entities, and they are only engaged in permitted activities [7].

In 2017-2020, as a result of foreign investments in the amount of 33.3 billion US dollars, including 22.7 billion dollars in direct foreign investments, the country is experiencing stable new job creation and growth. As a result, 339.4 thousand in 2016, 389.3 thousand in 2017, 372.1 thousand in 2018, 388.5 thousand in 2019, 427.8 thousand in 2020, and 506.2 thousand in 2021 were created, and more than 407 thousand people were employed in 2022 [8].

The fact that the Kashkadarya region consists of rural districts and the availability of land plots for the population allows for self-employment in household and dehkan farming. They earn legal income by growing and selling products on their homesteads. Currently, the number of such entrepreneurs in the region is 167.3 thousand people, and individual entrepreneurial activity is carried out on 39.8 thousand hectares of arable land, and their number is increasing day by day, and employment in this sector is improving. Their share in gross agricultural product is 77-78 percent.

The social development of the Kashkadarya region is closely related, first of all, to the creation of the basis for the development of infrastructure facilities in the regions. In this regard, it is important to determine the features of their development in accordance with the Roadmaps in accordance with the resolution "On additional measures for the comprehensive socio-economic development of the territories of the Kashkadarya region in 2022-2026 and further improvement of the living standards of the population".

Based on the measures planned to be implemented in the target indicators of the comprehensive socio-economic development of the Kashkadarya region in 2022/2026, it is planned to increase the total number of employed people to 82.7 thousand people in 2022. During this period, more than 52 thousand young people have entered the labor force, and there will be an opportunity to provide employment to more than 30 thousand unemployed people.

In regions with different opportunities, it is advisable to organize the social infrastructure structure in the interests of the population. This, of course, requires the development of master plans for each district, regardless of the population.

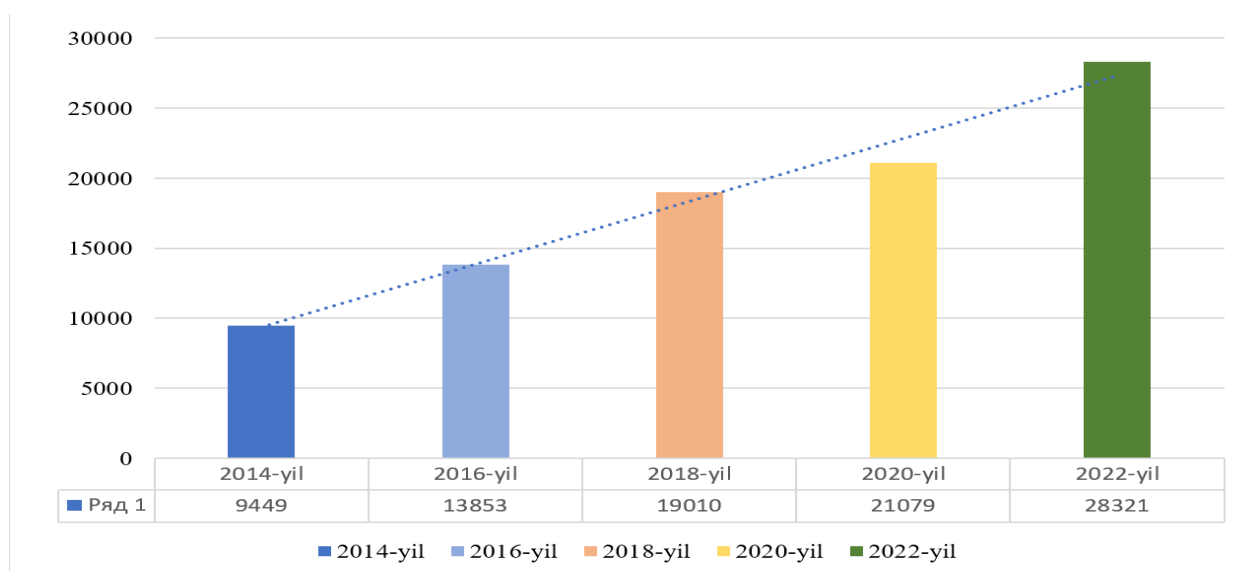


Figure – 1. The number of employed people. *Compiled by the author based on information from the The ministry of employment and Labor relations.*

Based on the effective use of the region's recreational opportunities, it is necessary to organize tourist centers that provide for measures such as environmental protection, recreation and tourism development [4].

A SWOT analysis was developed to identify the strengths and weaknesses of the region, social opportunities and problems in terms of increasing employment in the service sectors of the Kashkadarya region (Table 1).

Table-1. The SWOT analysis based on identifying strengths and weaknesses, social opportunities and challenges in increasing employment in the service sectors of the Kashkadarya region

	Advantages	Disadvantages
Economic geographical location	*has a convenient geographical location.	*has a convenient geographical location.
Service sectors	*by economic geographical location: bordering 4 regions and 2 states. * problems related to natural conditions and relief in the mountainous and foothill districts of the region: Dehqanabad, Qamashi, Yakkabog, Shahrisabz, Kitab and Chiraqchi districts.	*by economic geographical location: bordering 4 regions and 2 states. * problems related to natural conditions and relief in the mountainous and foothill districts of the region: Dehqanabad, Qamashi, Yakkabog, Shahrisabz, Kitab and Chiraqchi districts.
Labor resources	*service networks are well developed in large cities and district centers.	*service networks are well developed in large cities and district centers.
	Opportunities	Threats
	*Having a convenient transport location (location on international transport logistics, in the future the road connecting Afghanistan, Iran, Pakistan will pass through the region, which will allow for	*Having a convenient transport location (location on international transport logistics, in the future the road connecting Afghanistan, Iran, Pakistan will pass through the region, which will allow for the

	the development of service sectors and increase employment).	development of service sectors and increase employment).
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Compiled by the author.

Based on the above data, it was revealed through scientific analysis that the Kashkadarya region has its own demographic and socio-economic development characteristics, the development of service industries in the region, the service industries are the leading sector in providing employment to the population, and this sector has surpassed the industrial and agricultural sectors in terms of wages.

In the process of analyzing the employment of the population in the service industries, the following conclusion was made: while the population in developed countries of the world chooses a job based on their interests, due to the abundance of labor resources in the studied region, the number of large enterprises and organizations, and the lack of jobs, we witnessed that the population is self-employed and the majority of the employed population falls into the service industries [5].

In order to develop service networks in the Kashkadarya region and ensure employment of the population in it, it is necessary to carry out the following work:

- when improving the territorial structure of the service networks of the region, take into account the specific features of the historically established system in the regions, the specialization of services, ensure the proximity of service facilities to the places of residence of the population and increase their types, as well as improve the provision of social and household services to the population, create favorable conditions for their satisfaction with life and recreation;

- create and implement a mechanism for developing model projects of socio-cultural, sanitary, household facilities and types of services that are convenient for the population, fast and high-quality, taking into account the natural and climatic conditions and socio-demographic characteristics of settlements;

- determine the future needs of settlements in drinking water, sources of water resources and provide them with water culverts;

- design of social services in settlements, including the construction of new service facilities and the reconstruction of existing ones, increasing the range of services, etc.;

- increase employment and quality of life in settlements located far from the district center by improving social and production infrastructure;

- create conditions for uninterrupted supply of guaranteed electricity to the regions through the reconstruction of existing enterprises supplying electricity, the construction of new ones and the gradual transition to the use of solar panels;

- improve the system of medical services for the population, increase their medical culture, further improve the quality and content of the education system in educational organizations, and strengthen the material and technical base of educational institutions in the regions.

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ISHLAB CHIQRISH TANNARXI, ISHLAB CHIQRISH XARAJATLARI VA XARAJATLAR TUSHUNCHALARI BO'YICHA ASOSIY BILIMLAR

Annotatsiya. Ushbu maqolada biz ishlab chiqarish xarajatlari, shu jumladan ishlab chiqarish xarajatlari tushunchasi, xarajatlarni taqsimlash va hisoblash usullari haqida asosiy bilimlarni taqdim etamiz.

Kalit so'zlar. Xarajatlar, maxsulot narxi, foydani oshirish, sotish narxlari, tannarx, xizmatlar, material, xizmat xarajatlari.

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BASIC KNOWLEDGE OF THE CONCEPTS OF COST OF PRODUCTION, COST OF PRODUCTION AND COST

Annotation. In this article, we present basic knowledge about production costs, including the concept of production costs, cost distribution and methods of calculation.

Keywords. Costs, product price, profit increase, sale prices, cost, services, material, service costs.

Ishlab chiqarish xarajatlari - mahsulot ishlab chiqarish uchun qilingan barcha xarajatlar yig'indisi .

Ishlab chiqarish sanoatida foydani oshirish uchun ikkita asosiy usul mavjud: sotish narxini oshirish va ishlab chiqarish xarajatlarini pasaytirish. Ishlab chiqarish xarajatlarini kamaytirish va foydani oshirish uchun ishlab chiqarish xarajatlarining nimalardan iborat ekanligini to'g'ri tushunish kerak. Ishlab chiqarish xarajatlarini to'g'ri hisoblash orqali ishlab chiqarish jarayonida qayerda muammolar mavjudligini tushunish va yaxshilash mumkin. To'g'ri sotish narxlarini belgilashda ishlab chiqarish xarajatlarini tushunish ham muhimdir. Ishlab chiqarish harajatlari tarkibiga mahsulot ishlab chiqarish uchun sarflangan materiallarning tannarxigina emas, balki mehnat va asbob-uskunalar xarajatlari ham kiradi. Shuningdek, ishlab chiqarish xarajatlarini hisoblash uchun, aniq hisoblangan tahlillar asosida xarajatlar tasnifi batafsil o'rganib

chiqilishi kerak. Ishlab chiqarish xarajatlari mahsulot va xizmatlarni ishlab chiqarish bilan bog'liq xarajatlarni bildiradi, sotilgan mahsulot tannarxi esa tovarlarni sotish bilan bog'liq xarajatlarni bildiradi. Shuning uchun sotilgan mahsulot tannarxi ishlab chiqarish tannarxiga kiritiladi. Faqat ishlab chiqarishsiz sotilganda, qilingan xarajatlar sotilgan mahsulot tannarxiga kiritiladi, shuning uchun sotilgan mahsulot tannarxi ko'pincha chakana va ishlab chiqarish tarmoqlarining savdo bo'limlarida qo'llaniladi. Buxgalteriya hisobida ishlab chiqarish xarajatlari mahsulot sifatida tasniflanadi, lekin sotilgan mahsulot tannarxi tovar sifatida tasniflanadi.

1-usul: Xarajatlarning paydo bo'lish shakli bo'yicha tasniflash.

Ishlab chiqarish xarajatlari uchta moddaga bo'linadi: "moddiy xarajatlar", "mehnat xarajatlari" va "bilvosita xarajatlar". Ushbu elementlarni alohida hisoblash orqali siz ishlab chiqarish xarajatlarini kamaytirish uchun qaerga e'tibor qaratish va yaxshilash kerakligini tushunishingiz mumkin.

- **Material xarajatlari.** Bu mahsulot ishlab chiqarishda zarur bo'lgan qismlar, vintlar, moylash materiallari va boshqalarga tegishli bo'lib, shuningdek, sarf materiallarini o'z ichiga oladi.

- **Mehnat xarajatlari.** Bu mahsulot ishlab chiqarish bilan shug'ullanadigan xodimlarga to'lanadigan ish haqini bildiradi. Mehnat xarajatlariga bonuslar, nafaqalar va pensiya xarajatlari kiradi.

- **Bilvosita Xarajatlar.** Materiallar yoki mehnat xarajatlari sifatida tasniflanmagan xarajatlar kiritilgan. Masalan, xarajatlar tarkibiga zavod va omborlarni ijaraga berish to'lovlari, asbob-uskunalar amortizatsiyasi, inventarning tugashi va elektr energiyasi xarajatlari kiradi.

2-usul: To'g'ridan-to'g'ri va bilvosita xarajatlar bo'yicha tasniflash.

Ikkinchi tasniflash usuli - mahsulotga bevosita bog'liq bo'lgan xarajatlarni va mahsulotga bilvosita bog'liq xarajatlarni ajratish. Ular «to'g'ridan-to'g'ri ishlab chiqarish xarajatlari» va «bilvosita ishlab chiqarish xarajatlari» deb ataladi va ularni moddiy xarajatlar, mehnat xarajatlari va bilvosita xarajatlar tasnifi bilan birlashtirib, olti turga bo'linadi. "To'g'ridan-to'g'ri ishlab chiqarish xarajatlari" nomidan ko'rinib turibdiki, mahsulot bilan bevosita bog'liq bo'lgan xarajatlarni anglatadi va mahsulot qancha ko'p ishlab chiqarilsa, shuncha ko'p xarajatlar kelib chiqadi. To'g'ridan-to'g'ri xarajatlarning uchta asosiy turi mavjud.

1. To'g'ridan-to'g'ri material narxi ishlab chiqarish zavodida ishlab chiqarilgan mahsulotlar uchun bevosita ishlatiladigan materiallarning narxi. Xususan, asosiy moddiy xarajatlarga mebel ishlab chiqarish uchun ishlatiladigan yog'och va plastmassa, velosiped ishlab chiqarish uchun ishlatiladigan alyuminiy va po'lat kiradi.

To'g'ridan-to'g'ri moddiy xarajatlar, shuningdek, materiallarni bir-biriga bog'lab turadigan metall armatura va vintlardek, tashqaridan sotib olingan qismlarning narxini ham o'z ichiga oladi. Qayta ishlash usuliga qarab, katta miqdorda material qolishi yoki ishlab chiqarish oqimiga qarab, yuqori rentabellik darajasi bo'lishi mumkin, shuning uchun bunday hollarda to'g'ridan-to'g'ri moddiy xarajatlarni kamaytirish ishlab chiqarish xarajatlarini yaxshilashga olib keladi.

2. To'g'ridan-to'g'ri mehnat xarajatlari, ishlab chiqarish korxonalarida mahsulotlarni qayta ishlash va yig'ish kabi bevosita amaliy ishlarni bajaradigan xodimlarga to'lanadigan ish haqi. Agar ishlab chiqarish oqimining samaradorligi yetarli bo'lmasa, to'g'ridan-to'g'ri mehnat xarajatlari bo'lim yoki ish joyiga qarab ish yukining o'zgarishi tufayli ortadi.

3. To'g'ridan-to'g'ri xarajatlar. Bu to'g'ridan-to'g'ri mahsulot bilan bog'liq xarajatlar. To'g'ridan-to'g'ri xarajatlarga autsorsingni qayta ishlash xarajatlari va mahsulotlarni tayyorlash uchun ishlatiladigan qoliplar kiradi. Agar ichki ishlab chiqarish oqimida samarasizlik mavjud bo'lsa, autsorsing umumiy ishlab chiqarish xarajatlarini kamaytirishi mumkin.

"Ishlab chiqarish uchun qo'shimcha xarajatlar" - bu fabrikada ishlab chiqarilgan mahsulotlar bilan bevosita bog'liq bo'lmagan va tushunish qiyin bo'lgan xarajatlar. Shuning uchun, to'g'ridan-to'g'ri ishlab chiqarish xarajatlari bilan solishtirganda, ular tasavvur qilish qiyin va xarajatlarni hisoblashni murakkablashtiradigan xususiyatlarga ega. To'g'ridan-to'g'ri xarajatlar kabi, bilvosita xarajatlarni ham uch turga bo'lish mumkin.

4. Bilvosita moddiy xarajatlar. Bu qaysi mahsulotlarda qancha ishlatilganligi noma'lum bo'lgan materiallarga ishora qiladi va xususan, aniq miqdorda ifodalab bo'lmaydigan moylash materiallari va bo'yoqlar kabi materiallarni o'z ichiga oladi. Bundan tashqari, bilvosita moddiy xarajatlarni uch toifaga bo'lish mumkin.

Yordamchi materiallar xarajatlari: uskunani ko'chirish uchun ishlatiladigan yoqilg'i, bir nechta mahsulotlar uchun ishlatiladigan bo'yoqlar, qadoqlash materiallari va h.k. Zavod sarf materiallari narxi: moylash materiallari va boshqalar. Shuni ta'kidlash kerakki, qaysi materiallar to'g'ridan-to'g'ri moddiy xarajatlarga va qaysi materiallar bilvosita moddiy xarajatlarga kiritilganligi aniq belgilanmagan va u mahsulotning texnik xususiyatlari va kompaniya siyosatiga qarab o'zgaradi. Masalan, mahsulotni qadoqlash uchun ishlatiladigan polietilen paket bilvosita moddiy xarajat hisoblanadi, chunki u boshqa mahsulotlar uchun ham ishlatiladi, lekin agar qadoqlash bitta mahsulotga kiritilgan bo'lsa, uni to'g'ridan-to'g'ri moddiy xarajatlar deb hisoblash mumkin.

5. Bilvosita mehnat xarajatlari. Ishlab chiqarish sanoatida bu ishlab chiqarishni boshqarish va ishlab chiqarish texnologiyasi kabi mahsulotlarga bevosita aloqador bo'lmagan xodimlarga, ishlov berish va yig'ish kabi amaliy ishlarni bajaradigan xodimlarga to'lanadigan ish haqini o'z ichiga oladi. Zavodda mahsulot ishlab chiqarilayotganda, materiallar tugab, ish vaqtincha to'xtatilganda ham ishchilarga ish haqi to'lanadi. Bundan tashqari, kutish vaqtida olingan ish haqi ham bilvosita mehnat xarajatlariga kiritiladi, shuning uchun xarajatlar ishning xususiyatiga qarab tasniflanishi mumkin.

Xulosa

Raqamlashtirishni rag'batlantirish, asbob-uskunalarga sarmoya kiritish orqali joriy xarajatlarni kamaytirish va inson resurslarini rivojlantirishga e'tibor qaratish orqali odamlar mustaqil ravishda yaxshilanishlarni amalga oshirishi mumkin bo'lgan ish joylarini yaratish kabi qisqartirishni maqsad qilish yo'llari mavjud.

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SURXONDARYO VILOYATIDA YUZ BERADIGAN CHANG BO‘RONLARIGA SABAB BO‘LUVCHI OMILLAR VA CHANGNING TA‘SIRINI O‘RGANISH

***Annotatsiya:** Hozirgi vaqtda bir qancha jahon mamlakatlarida kuzatiladigan chang bo‘rinlarining ta‘siri ortib borayotganligi ekologik mammolardan biriga aylanib bo‘ldi.*

***Kalit so‘zlar:** Chang, changli kunlar, iqlim omillari, Surxondaryo viloyatida “Afg‘on shamoli” ning vujudga kelishi, chang zarrachalari, chang bo‘ronlari.*

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FACTORS CAUSING DUST STORMS IN SURKHANDARYA REGION AND STUDYING THE IMPACT OF DUST

***Abstract:** The increasing impact of dust storms, currently observed in several countries around the world, has become one of the environmental concerns.*

***Keywords:** Dust, dusty days, climatic factors, the emergence of the "Afghan Wind" in Surkhandarya region, dust particles, dust storms.*

Kirish. Hozirda ko‘pgina mamlakatlarda yuz beradigan chang bo‘ronlari shahar va tunamlar aholisining salomatligiga jiddiy ta‘sir ko‘rsatishi bilan bir qatorda surinkali kasaliklarni ham keltirib chiqarmoqda. Chang bo‘ronlari vaqtida nafas olish paytida u burun va tomoqdan osonlikcha o‘tib, bronxlar va o‘pkalarga joylashib, turli xil sog‘liq muammolarini keltirib chiqaradi[1].

Surxondaryo viloyati hududi tog‘lar orasidagi berk botiqda joylashganligidan yog‘inlar notekis taqsimlangan. Yog‘in miqdori relyefning tuzilishiga bog‘liq bo‘lib, janubi-g‘arbdan (tekisliklardan) shimoli-sharqqa (tog‘larga) tomon ortib boradi. Viloyatning janubidagi tekisliklarga eng kam yog‘in (yiliga 133-230mm) tushadi. Biroq tog‘ yonbag‘irlari bo‘ylab ko‘tarilgan yog‘in miqdori ortib, 500-600 mmga yetadi. Nam havo shimol va shimoli-sharqqa borgan sari tog‘lar tomon

ko'tarilib soviydi va viloyatning shimol va shimoli-sharqdan o'rab olgan Hisor tog'larining janubiy yonbag'irlariga 800-900 mmgacha yog'in tushishi mumkin[2].

Surxondaryo viloyatda yoz oylarida g'arbiy, janubi-g'arbiy, qish oylarida shimoli-sharqiy shamollar ko'p esadi. Viloyat janubiy qismining iqlimiga janubi-g'arbdan esuvchi chang-to'zonli quruq "Afg'on" shamoli salbiy ta'sir ko'rsatadi[3].

1. Natijalar va tahlillar.

Tajriba va natijalar olishda SN 245-71 va GOST 12.1.005-88 tomonidan turli changlar (aerozollar) uchun, ularning fibrogen va zaharlilik xususiyatlarini aniqlash uchunda foydalanildi[4].

Havoda turli xildagi changli birikmalar miqdorining ruxsat etigan miqdoriy konsentratsiyasini aniqlashda **СанПиН РУз N 0293-11 orqali aniqlandi**[5].

Surxondaryo viloyatida mavsumiy xarakterga ega chang bo'ronlarining sodir bo'lishi va yillik changlik va turli hodisali kunlar soni monitoring jarayonlarida o'rganildi.

1-jadval

Hodisa	Yanvar	Fevral	Mart	Aprel	May	Iyun	Iyul	Avgust	Sentabr	Oktyabr	Noyabr	Dekabr	Yillik
Yomg'ir	7	10	11	8	5	1	1	0.2	0	3	6	8	60
Qor	4	3	1	0,03	0.1	0	0	0	0,03	0.1	1	3	12
Tuman	3	1	1	0.3	0.1	0.1	0	0,03	0,03	0.2	1	4	11
Tuman	2	4	5	6	6	7	9	7	7	7	6	3	69
Bo'ron	0.1	0.2	1	2	2	1	0,03	0,03	0.1	0.1	0.1	0.1	7
Bo'ron	0,03	0.2	0.1	0	0	0	0	0	0	0	0	0.1	0
Chang bo'roni	1	2	2	2	2	2	1	1	1	2	2	1	19
Muz	0	0,03	0.1	0	0	0	0	0	0	0	0	0.1	0.2

Yuqoridagi monitoring natijalari ko'p yillil o'rtacha ko'rsatkich ma'lumotlar hisoblanadi[6].

Surxondaryo viloyatida "Afg'on shamoli"ning vujudga kelishi sabablari O'rta Osiyo tekislik qismlariga sovuq havo massalarining kirib kelishi hamda sovuq frontning yaqinlashishi bilan bog'liq holda kechadi.

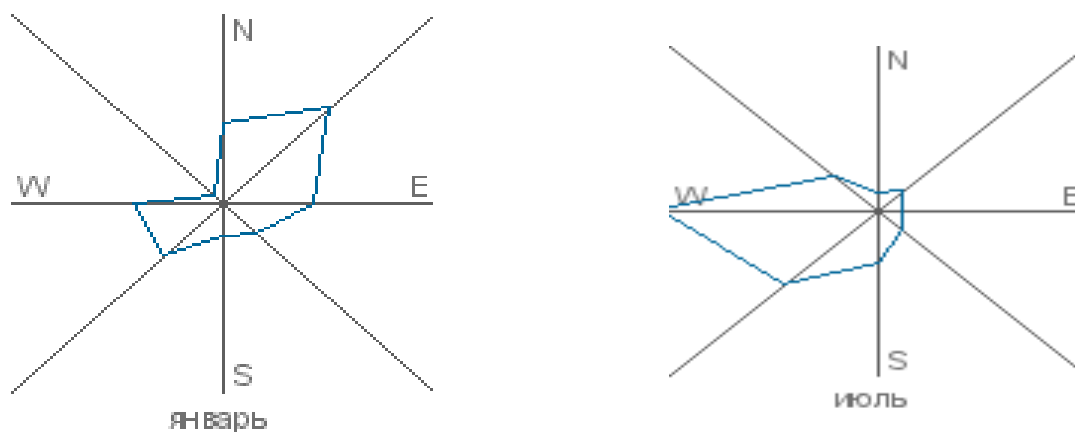
"Shimoldan esadigan sovuq havo massalari zich va og'ir bo'lganligidan Parapamiz tog'laridan o'ta olmay, tekisliklarda to'planib, yuqori bosimli markazi vujudga keladi[7]. Hisor va Ko'hitang tog'lari bilan to'silgan Surxondaryo, Kofirnihon, Vaxsh havzalarida esa havo iliq, bosim past bo'ladi[8]. Shunga ko'ra, bu hududlarga qarab kuchli g'arbiy va janubiy-g'arbiy shamollar esadi. Termiz yaqinida "Afg'on shamoli" yiliga o'rta hisobda 16 kun esadi[3]. Bu kabi shamollar tog'lardan oshib tushib, qishda iliq havo, boshqa vaqtlarda esa issiq havo keltiradi. Bu kabi shamol tezligi ayrim vaqtlarda sekundiga 15-20 m ga yetadi, qum va changni to'zitadi va atmosferada changlik darajasining ortishiga, ba'zan havoning juda xiralashtiradi. Bunda ko'rish masofasi 100-200 m gacha tushib ketadi. Bu shamol bahorda esganda qishloq xo'jaligiga juda katta zarar yetkazib hosildorlikning 20-25 % ga keskin tushib ketishiga ham sabab bo'ladi.

Har xil shamol yo'nalishlarining chastotasi, %

Yo'nalishi	Yanvar	Fevral	Mart	Aprel	May	Iyun	Iyul	Avgust	Sentabr	Oktyabr	Noyabr	Dekabr	Yillik
BILAN	15	13	15	14	13	9	4	3	6	12	14	15	11
NE	25	26	25	24	18	12	6	5	11	21	27	26	18
IN	15	16	16	14	12	8	4	5	7	11	13	15	11
SE	8	7	6	7	8	6	6	8	10	9	8	8	8
Yu	6	5	5	6	8	9	11	12	13	10	7	7	8
SW	14	14	15	15	15	18	22	23	21	16	14	13	17
Z	15	17	16	17	20	30	37	34	26	18	15	14	22
NW	2	2	2	3	6	8	10	10	6	3	2	2	5
tinch	12	9	8	7	7	8	9	10	13	14	13	13	10

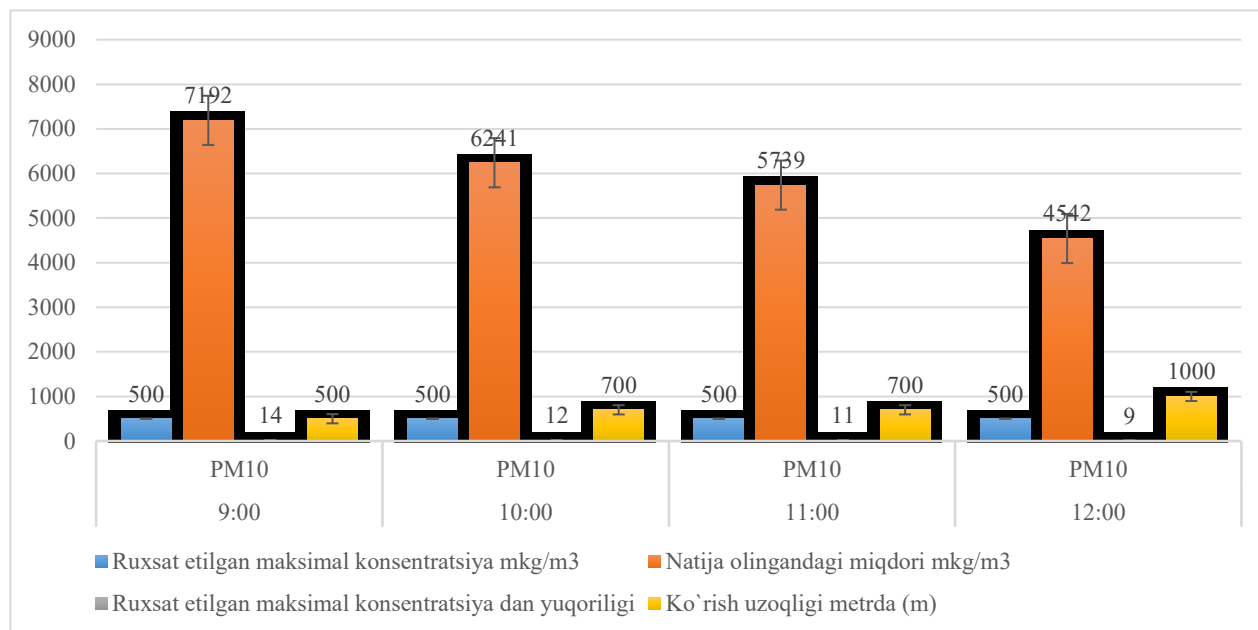
Surxondaryo viloyatida "Afg'on shamoli"ning ta'sirida chang bo'ronlarining tarqalishida shamol seklonlarining ta'siri katta.

1-rasm. Termiz shahrida fasllarning bir oyi bo'yicha "shamol guli"



Xususan 2023-yil 22 iyun kuni Termiz shahrida ob-havo sharoitlari tufayli chang bo'ron hodisasi kuzatildi. Havodagi changlik darajasi monitoring jarayonlarida "Ekolob" asbobida "fotoelektromitrek" usulda natijalar o'rganildi.

Natijalar quyidagi vaqtlarda olindi.



Bu kabi chang ko‘tarilishi kamida 12 soatdan 24 soatgacha ayrim vaqtlarda bundan xam ko‘proq vaqt davom etishi oqibatida, odamlarning nafas olishi qiyinlashib, o‘z navbatida issiq oqim (garmsel) kirib kelishiga sabab bo‘ladi. Havoning chang zarralari bilan ifloslanishi butun yer sharidagi tirik mavjudotlar uchun xavf tug‘diradi.

Surxondaryo viloyatida qum bo‘ronli kunlarning maksimal kunlar soni Termiz shahri, Termiz tumani va unga tutash tumanlar hududlarda 68 kuni tashkil etishi bu hududlarda ekologik muhitning yomonlashuviga olib keladi[9].

Xulosa

O‘tkazilgan tajriba va olingan natijalarga ko‘ra, Viloyatda kuzatiladigan chang bo‘ronlarining ta‘siri kundan kunga orib borayotganligi ayon bo‘ladi. Chang bo‘ronlari vaqtida havoda 2,5, 5 va 10 mkm li chang zarralari va ularga irigan holda ko‘lab kimyoviy zararli moddalarning uchrashi esa chang ta‘srini yanada oshirib yuboradi. Bu holatlarning oldini olish uchun mini muhitlarda chang yotqizish mexanizmlaridan foydalanish va chang bo‘ronlari vaqtida tibbiyot niqoblaridan foydalanish hamda ta‘lim muassasalari, xodimlarning ishjoylari, tibbiyot massasalari va kasalxnalarda maxsus chang tozalash texnologiyasini joriy etish yaxshi samara beradi.

Chang bo‘ronlarini kamaytirish uchun ko‘plab amaliy ishlar olib borilmoqda ammo qum bo‘ronlari tabiiy jarayonda sodir bo‘lishini inobatga oladigan holda bu jarayonga mini muhitlarda changni tozalochi texnologiyalardan foydalanish va yashil makonlar barpo etib kurashish mumkin bo‘ladi.

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HAVODAGI CHANG VA BOSHQA BIRIKMALARNING BELGILANGAN MIQDORI O'RGANISH

***Annotatsiya:** Hozirgi vaqtda bir qancha jahon mamlakatlarida kuzatiladigan chang bo'rinlarining ta'siri ortib borayotganligi ekologik mammolardan biriga aylanib bo'ldi.*

Kalit so'zlar: Chang, changli kunlar, iqlim omillari, Surxondaryo viloyatida "Afg'on shamoli"ning vujudga kelishi, chang zarrachalari, chang bo'ronlari.

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STUDY OF THE SPECIFIED CONCENTRATION OF DUST AND OTHER COMPOUNDS IN THE AIR

***Abstract:** The increasing impact of dust storms, currently observed in several countries around the world, has become one of the environmental concerns.*

***Keywords:** Dust, dusty days, climatic factors, the emergence of the "Afghan Wind" in Surkhandarya region, dust particles, dust storms.*

Yer yuzi bo'yicha turli moddalarning ta'sir darajasiga qarab xilma-xil ruxsat etilgan miyor (REM) ko'rsatkichlari belgilangan. Masalan. Atmosfera xavosining holatini baholash va "O'zbekiston Respublikasi hududida aholi punktlarining atmosfera havosidagi ifloslantiruvchi moddalar ro'yxati" (SanPIN UzR №0293-11) da quyidagi ruxsat etilgan miyor (REM) ko'rsatkichlarini ajratish mumkin; havodagi chang-0,1 mg/m³; is gazi-0,01 mg/m³; oltingugurt oksidi-0,05 mg/m³; xlor-0,03mg/m³; fenol-0,01 mg/m³; formaldegid-0,003 mg/m³; qurum-0,05 mg/m³; va hokozo. REM ko'rsatkichlari turli davlatlarda farqlanishi mumkin. Hozirgi kungacha atmosfera havosidagi 600 ta kimyoviy moddaning ruxsat etilgan miyorlari ishlab chiqilgan, shuningdek 38 ta moddalarning birlashib ta'sir qilishi o'rganilgan bo'lib ular uchun me'yorlar belgilangan.

Atmosfera havosidagi ifloslantiruvchi moddalarning ruxsat etilgan maksimal kontsentratsiyasi - bu odamning butun hayoti davomida ta'sirida uning sog'lig'iga

va keyingi avlodlariga bevosita yoki bilvosita salbiy ta'sir ko'rsatmaydigan, uning ish faoliyatini pasaytirmaydigan va yomonlashtirmaydigan maksimal kontsentratsiyasi. uning farovonligi, shuningdek, sanitariya va yashash sharoitlariga qarab belgilanadi.

1-jadval

№	Ism moddalar	PDK, mg/kub.m				Sinf xavfli - sti
		bir marta	kunlik	oylik	yillik	
1	2	3	4	5	6	7
1.	Azot dioksidi	0,085	0,06	0,05	0,04	2
2.	Aquatetraurea kaltsiy xlorat (hayot)	0,2				4
3.	Azot oksidi	0,6	0,25	0,12	0,06	3
4.	Akrilonitril	0,15	0.1	0,05	0,03	2
5	Orol tuzining changi	0,5	0.3	0,2	0,15	3
6	70% dan ortiq kremniy dioksidi bo'lgan noorganik chang (kremniy dioksidi, Dinos va boshqalar).	0,15	0.1	0,08	0,05	3
7	Tarkibida 20 dan 70% gacha kremniy dioksidi bo'lgan noorganik chang (chamot tsement va boshqalar).	0.3	0,2	0,14	0.1	3
8	Tarkibida 20% dan kam kremniy dioksidi bo'lgan noorganik chang (dolomit va boshqalar)	0,5,	0,35	0,2	0,15	3
9	Paxta changi	0,5	0,2	0.1	0,05	3
10	Don changi	0.3	0,12	0,06	0,03	3

Hozirgi kunda chang bo'ronlari asosiy ekologik muammolardan biridir. Biz ko'chada havo bilan yutadigan chang shunchaki zarralardan emas, balki ishlab chiqarish sanoati natijasida paydo bo'lgan kimyoviy birikmalar, og'ir metallar tuzlari, shuningdek, kasalliklarga sabab bo'luvchi turli bakteriya va viruslardan iborat. Aytaylik, avtobus bekatida chang-to'zon ichida qolib ketdingiz va ikki kundan keyin birdaniga shamolladingiz. Bu holat, hoynahoy, viruslar to'la changli havodan nafas olganingiz natijasi. Agar ishlab chiqarish korxonolari yaqinida yashasangiz, bilingki, boshqalardan ko'ra ko'proq chang yutayapsiz. Yoningizdagi zavod o'zidan qo'rg'oshin yoki marganesli chang tarqatsa, bu ko'pincha zaharlanishga sabab bo'ladi. Ko'p miqdordagi asbest va sementli chang, hatto, onkologik xastaliklarga olib kelishi mumkin. Chang qanchalik mayda bo'lsa, shunchalik zararlidir. Mittigina chang zarralari nafas yo'llariga cho'kib, burun-halqumni zararlaydi, ko'z va teriga salbiy ta'sir qiladi. Oqibati ayon — o'pka

xastaliklari, kon`yunktivit, dermatitlar. Chang bulardan ham og`irroq dardlarga sabab bo`lishi mumkin. Masalan, sil tayoqchalari changda bir necha oydan bir necha yilgacha yashayveradi. O`simliklar gullaydigan pallada chang tarkibida allergen gul changi ham bo`ladi. Allergiyaga chalinganlar buning nima ekanini yaxshi bilishadi: ko`zning yoshlanishi, burun bitishi, tinka-mador qurishi. Aytgancha, chang erdan bir metr balandlikda, ayniqsa, ko`p bo`ladi, demakki, uning kattalardan ko`ra bolalarga zarari ko`proq. Shunday ekan, shamol esayotgan mahal kichkintoyni ko`tarib olganingiz ma`qul.

Chang quyidagi a`zolari zararlaydi:

- ko`z (kon`yunktivit, blefarit);
- teri (dermatitlar);
- immun tizimi (allergiya);
- o`pka (astma);
- burun-halqum (tumov, tomoq achishishi).

Qum va chang bo`ronlari (SDS) (material xavfsizligi ma'lumotlar varag'i) kabi iqlim bilan bog`liq xavflar inson salomatligi, ijtimoiy-iqtisodiyot, atrof-muhit va agroekotizimlarga turli xil ta`sir ko`rsatadi.

Surxondaryo viloyati Termiz shahri va unga yaqin tumanlarga ta`sir etuvchi chang bo`ronlarini o`rganish va ta`sirini baholash uchun shamol yo`nalishlari bo`yicha o`rganishlar olib borildi.

Termiz shahriga ta`sir etadigan “Afg`on shamoli” shamol oqimining
“shamol guli” foizlarda aniqlangan holati.

2-jadval

1.	Tomonlar	Shamol oqimi, %
2.	Shimoliy	6,6
3.	Shimoliy-sharqiy	14,9
4.	Sharqiy	12,9
5.	Janubiy-sharqiy	7,2
6.	Janubiy	6,4
7.	janubiy-g`arbiy	17,5
8.	g`arbiy	29,1
9.	shimoliy- g`arbiy	5,4
	Jami	100,0

Surxondaryo viloyati Ekologiya, atrof-muhitni muhofaza qilish va iqlim o`zgarishi boshqarmasining tahliliy laboratoriyasi tomonidan 2024-yil 5- oktabr soat 09:00 da viloyatning Termiz shahri A.Temur ko`chasi xududidan “EKOLAB” uskunasi yordamida havodagi oksid uglerod (SO₂), serovodorod (H₂S), dioksid sergi (SO₂), dioksid azota (NO₂), ftorovodorod (HF) ingredientlardan namunalar olinib tahlil ishlari amalga oshirilganda taxlal natijalariga ko`ra A.Temur ko`chasi atmosfera xavosi me`yor darajasida ekanligi aniqlandi.

<i>Termiz shahar "Porloq yo'l" ko'chasi</i>		<i>5- oktabr</i>	
Ingridentlar nomi	SanPiN UzR N 0293-11 PDK Mg/m³	Taxlil natijalari Mg/m³	Talabga javob berishi
Oksid uglerod (SO)	5.0	1,890	Me'yorda
Serovodorod (H ₂ S)	0.008	0.000	Me'yorda
Dioksid serbi (SO ₂)	0.5	0.112	Me'yorda
Dioksid azota (NO ₂)	0.085	0.000	Me'yorda
Ftorovodorod (HF)	0.012	0.000	Me'yorda
Ammiak (NH ₃)	0.2	0,000	Me'yorda
Formaldegid (CH ₂ O)	0.035	0,000	Me'yorda
Neorganik chang	0.15	1,3	Me'yordan 8,6 marta ortiq

Surxondaryo viloyatida qum bo'ronli kunlarning maksimal kunlar soni Termiz shahri, Termiz tumani va unga tutash tumanlar hududlarda 50 kundan bo'lishi hududlarda ekologik muhitning yomonlashuviga olib keladi.

Chang bo'ronlarini kamaytirish uchun ko'plab amaliy ishlar olib borilmoqda ammo qum bo'ronlari tabiiy jarayonda sodir bo'lishini inobatga oladigan holda bu jarayonga mini muhitlarda changni tozalochi texnologiyalardan foydalanish va yashil makonlar barpo etib kurashish mumkin bo'ladi.

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TASVIRIY SAN'AT ASARLARINI YARATISH TEXNIKASI

Annotatsiya: Ushbu maqolada Yangi O'zbekistonda tasviriy san'at darslarini o'qitishning o'ziga xos jihatlari, shuningdek, tasviriy san'at asarlarini yaratish texnikasi hamda bu borada olimlarning fikrlari tahlil etilgan.

Kalit so'zlar: tasviriy san'at, rangtasvir, monumental rangtasvir, tasvirlash texnikasi, akvarel, qalamtasvir.

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TECHNIQUE OF CREATING FINE ART WORKS

Abstract: This article analyzes the specific aspects of teaching fine art classes in New Uzbekistan, as well as the techniques of creating fine art works, as well as the opinions of scientists in this regard.

Key words: fine art, painting, monumental painting, painting technique, watercolor, pencil drawing.

Yangi O'zbekistonda amalga oshirilayotgan inqilobiy o'zgarishlar jamiyatimizni iqtisodiy, siyosiy, ma'naviy jihatdan jahonning eng rivojlangan mamlakatlari qatoridan o'rin olishda o'zining ijobiy natijalarini bermoqda.

Tasviriy san'at ta'limi mazmunini takomillashtirishning ustuvor yo'nalishlaridan biri milliy-hududiy materiallaridan samarali foydalanishga katta e'tibor berilmoqda. Shuning uchun tasviriy san'at ta'limi mazmunini takomillashtirishning hozirgi bosqichi o'ziga xos xususiyat kasb etib, badiiy ta'limda milliy-hududiy va o'lkashunoslikka oid materillarning xususiyatini inobatga olishni taqozo etadi.

Tadqiqot ishi bugungi kunda Farg'ona vodiysi xalqlarining milliy madaniyati, o'ziga xos xalq amaliy san'ati va nomoddiy obidalarni saqlash, etnik an'analarni tiklash va kelajak avlodga yetkazish asosida o'rta maktabda tasviriy san'at ta'limini takomillashtirish yuzasidan olib borilgan.

Keyingi vaqtda hamma sohalarida bo'lgani kabi, xalq ta'limi tizimida ham ko'pgina amaliy tadbirlar amalga oshirilmoqda. Hususan, o'quvchilarni badiiy jihatdan voyaga yetkazishda tasviriy san'at fanini darslarida milliy-hududiy va o'lkashunoslikka oid materillar tarixini chuqurroq o'rganish maqsadida dars va darsdan tashqari mashg'ulotlarni to'g'ri tashkil etish, o'quvchilarni ekskursiyalarga olib chiqishga katta ahamiyat berilmoqda.

O'zbekistonda yangi ma'naviy-g'oyaviy yo'nalishlarning shakllanishi o'z navbatida, zamonaviy san'atning barcha sohalariga samarali ta'sir etib, ijodiy izlanishlar doirasini kengaytirib, badiiy tafakkur rivojini yanada jadallashtiradi. Tarixiy, madaniy va ma'naviy-ahloqiy qadriyatlarining keng qatlamlarini qayta idrok etish g'oyalari, yangilanish tamoyillari me'morlik, tasviriy va amaliy bezak sohalarida yaqqol namoyon bo'lmoqda.

Viloyatimizda va Respublikamizda o'tkazilayotgan ko'p sonli ko'rgazmalarning katta qismini an'anaviy tarzda dastgohli rangtasvir asarlari tashkil qiladi. Bu ko'rgazmalar faollik ko'rsatib kelayotgan rangtasvir san'ati namoyondalarini ko'p maqtaymiz, ammo ular haqidagi ma'lumotga egamizmi? O'zbekistonni barcha viloyatlarida ham rangtasvir bir xil taraqqiy topganmi? O'sib kelayotgan yosh avlod bu haqda ma'lumotga egami? Viloyatlarda, jumladan Namanganda yashab, ijod qilayotgan rassomlar haqida ma'lumotlar darslik, o'quv qo'llanmalarga kiritilganmi? Bu savollarni barchasi javobini kutib yotgan ilmiy muammolardir.

Rangtasvirning bugungi kundagi grafik xududi Samarqand, Buxoro, Andijon, Namangan, Toshkent, Nukus kabi ko'zga ko'ringan markazlardan iborat.

O'quvchilar rasm chizish va rangtasvir texnikasi borasida yetarli bilim va malakalarni egallamay turib, kompozitsiya, qalamtasvir, rangtasvir, haykaltaroshlik, halq amaliy san'ati va boshqa fanlarni yuqori darajada o'zlashtira olmaydilar.

Bugungi kunda tasviriy san'at ta'limi mazmuni, hamda metodlarini takomillashtirish eng dolzarb muammolardan hisoblanadi. Ular quyidagilardan iborat: tasviriy san'at fani mashgulotlarini o'qitishning hozirgi holatini aniqlash va uning keyingi mo'ljallangan istiqbolli yo'llarini ishlab chiqish. Farg'ona vodiysi tasviriy va xalq amaliy san'ati, shu o'lkada tug'ilib o'sgan xalq rassomlari, xalq ustalari ijodi, qadimiy haykaltaroshlik san'ati materiallarini yoshlarga bilim va badiiy-estetik tarbiya berish tasviriy san'at asarlarini o'qiy olishga o'rgatish.

Tasviriy san'at darslarida milliy-hududiy, mahalliy manbalardan foydalanishni keng yo'lga qo'yish orqali yoshlarni yuqori malakali mutaxassis bo'lib yetishishlarini ta'minlash va yuksak didli vatanga sadoqatli, O'zbekiston san'atini hamda jahon xalqlari san'atini mukammal biladigan o'tmish madaniyatimizni sevib qadrlay oladigan kishilar bo'lib yetishishlarini ta'minlashdir.

Tasviriy san'at o'qitish metodikasi muammolariga bag'ishlangan adabiyotlarda "rangtasvir texnikasi", "tasvirlash texnikasi", "tasviriy san'at asarlarini yaratish texnikasi" singari atamalarga tez-tez duch kelamiz.

Rangtasvir texnikasi deganda, vitraj, mozaika, freska chizish nazarda tutiladi. Ma'lumki, rangtasvir asarlari qadimdan o'zining yuksak badiiyligi va ishlanish texnikasi jihatidan kishilarni hayratga solib kelmoqda. Umumiy o'rta ta'lim maktablari uchun tayyorlangan dasturlarda san'atshunoslik asoslari, rangtasvir va qalamtasvir ishlash, naturaga qarab tasvirlash, borliqni idrok etish bo'limlari mavjud bo'lib, kasbiy badiiy va umumiy badiiy ta'lim tizimlari o'rtasiga qat'iy chegara qo'yib bo'lmaydi.

Rangtasvir deb tekis yuzada turli rang va materiallar vositasida bajariladigan tasviriy asarga aytiladi. Bu tur uchun asosan bo‘yoqlar – moyli bo‘yoq, akvarel, guash, tempera, shuningdek, rangli qalamlar, ko‘mir, qalam, pastel, sous, sangina kabi badiiy materiallar bilan ishlash xarakterlidir.

Rangtasvir asarlari qog‘oz, mato, karton, devor, oyna, yog‘och kabi tekis yuzalarga ishlanadi. Rang tasvir asosini rasm tashkil etadi. Har qanday rangtasvir ishida, avvalo, uning rasmi ishlab olinadi. Unda kompozitsiya, nur va soya, rang asosiy o‘rinni egallaydi.

Rangtasvir asarlari bajarilish texnikasi jihatdan turli-tuman bo‘lib, ular moybuyoqli, temperali, freskali, mozaikali, vitrajli, akvarelli, guashli, pastelti bo‘lishi mumkin. Rangtasvirning quyidagi turlari mavjud: 1. Dastgohli rangtasvir. 2. Monumental (mahobatli) rangtasvir. 3. Miniatyura (mu‘jaz) rangtasviri. 4. Dekorativ (bezak) rangtasvir. 5. Teatr-dekorativ (bezak) rangtasviri.

Dastgohli rang tasvir deyilganda, rassomlarning maxsus asbob dastgoh (molbert) yordamida ishlaydigan suratlari tushuniladi. Dastgohli rang tasvir asarlari uncha katta bo‘lmagan o‘lchovda yuqorida qayd qilib o‘tilganidek mato, karton, oyna, faner kabi tekis yuzali materiallarga buyoklar bilan ishlanadi. Dastgohli rangtasvirda ko‘pincha moyli va akvarel bo‘yoqlar qo‘llaniladi.

Monumental rangtasvir atamasi monumental (mahobatli), ya‘ni katta o‘lchovdagi rangtasvir ma‘nosini anglatadi va bu turdagi asarlar ko‘pincha binolarning ichki va tashqi devorlariga tempera bo‘yoqlari bilan ishlanadi. Freska, mozaika, vitraj, panno monumental rangtasvir asarlarining turlari hisoblanadi.

Freskalar asosan bino devorlarining o‘ziga, shuningdek, unga matolar yordamida ishlanadi.

Mozaika – turli tabiiy va ikkilamchi materiallar - rangli oyna parchalari, toshlar, sintetik materiallardan bino devorlariga yoki tekis materiallar ustiga ishlanadi.

Vitraj esa binolarning deraza, eshik, oynalari ustiga bo‘yoqlar yordamida ishlanadi. Vitrajlar uy ichkarisi va tashqarisidan ham bir xil ko‘rinadi.

Miniatyura (mu‘jaz) rangtasviri deb, bejirim, kichik hajmdagi, nozik san‘at asarlariga aytiladi. Miniatura rangtasviri o‘rta asrlarda kitob bezagi bilan bog‘liq, xolda rivoj topdi.

U kitoblardagi bosh, yakuniy bezak, zarxat harf, iltiyustratsiyalardan iborat bo‘lgan. Rangtasvirning bu turi Sharqda, shu qatori Movarounnahrda katga shuxrat qozongan. Hozirda u mustaqil san‘at turi sifatida nafaqat kitoblarni, balki turli quticha, tomosha qovoq, kabilarni bezatishda ham keng qo‘llanilmoqda. Shuningdek, bu tur mustaqil san‘at sifatida yildan-yilga ommalashib bormoqda.

Dekorativ rangtasvir asarlari mustaqil amaliy ahamiyatga ega bo‘lib, u binolarning ichki va tashqi devorlarini bezatishda keng qo‘llaniladi. Ular panno shaklida, shuningdek, quticha, patnis, sandal, shkaflarni bezatishda qo‘l keladi. Bino ichini bezatishga xizmat qiladigan naqshlar, frizlar, namoyon kabi mayda elementlar ham dekorativ rangtasvirga kiradi. Teatr dekorativ rangtasviri spektakl dekoratsiyalari, unda ishlatiladigan grim, saxna jihozlari bilan bog‘liq. Ular teatr

rassomi tomonidan tayyorlanib, spektakl mazmunini tomoshabinga keng va chuqurroq singdirshga yordam beradi.

Bu bezaklarda rassomlar sahnaning yoritilishi va ranglarga alohida e'tibor qaratadilar. Spektakl bezaklari unda ifodalangan voqea sodir bo'layotgan joy, davr, muxit to'g'risida tomoshabin tasavvurlarini boyitadi, va qarashlarni idrok etishini osonlashtiradi va faollashtiradi.

Tasviriy san'at nazariyasi va amaliyotida akademik ranggasvir iborasi ham ishlatiladi. Akademik ranggasvir asosan o'quv jarayonida foydalaniladigan ko'rgazmali ranggasvir ishlarini nazarda tutadi. Haykaltaroshlik ham huddi rangtasvir kabi hayotiy voqea va xodisalarni turli uslub va tasvirlash texnikasi hamda materiallar yordamida ifodalaydi. Haykaltaroshlikda tosh, metall, gips, yog'och, pesok (qum), sim kabi materiallar keng qo'llaniladi. Haykaltaroshlik asarlari kesish, yopishtirish, o'lchash va o'yish, qo'ritish orqali bajariladi. Haykaltaroshlikning asosan ikki turi mavjud bo'lib, ularning birinchisi gulli, yumaloq, haykallar, ikkinchisi esa relefli — burtma xaykallardir. Yumaloq, haykallarni har tomondan ko'rish mumkin bo'lsa, relef, haykallarni fakat bir tomondan, ya'ni oldi plan ko'rish kerak bo'ladi. Relefli haykallar tekislik ustiga ishlanib, yuzadan kisman burtib chiqqan bo'ladi.

Tasvirlash texnikasi ko'proq kompozitsiyadagi detallarni ishning bosh g'oyasiga bo'ysunishi qonuni, muvozanat qonuni, detallarning haykalda simmetrik va assimetrik joylashuvi qoidasi, kompozitsiyasida harakat va turg'unlik, qarama-qarchilik kabi qoidalarga alohida e'tibor berishni taqozo etadi.

Texnika - san'at sohasida: alohida o'rganish va usullar majmuasi, yig'ndisi, uning natijasida badiiy asr yaraladi. «Texnika» tushunchasi tor ma'noda rassomning maxsus material yoki asbob bilan ishlash natijasi, shu materialning badiiy imkoniyatlaridan foydalana bilish. Yanada kengroq ma'noda bu tushuncha tasviriy hususiyatning mos elementlarini o'z ichiga qamrab olgan-jismlarning moddiyligini, bo'rtgan shaklni yasash, fazoviy munosabatlarni modellashtirish va h.k. Barcha texnik usullar badiiy natijaga olib kelishi kerak. Texnik usullar mazmunga bevosita bog'liq. Realistik texnikaning asosiy hususiyatlari eng avvalo asarning g'oyaviy-qiyofali qurilishiga bo'ysunganligiga asoslanadi.

Akvarel bo'yoqlar yelim bo'yoqlar qatoriga kiradi. Akvarel lotincha so'z bo'lib, «akva» - suv demakdir. Bu bo'yoq suvda tez eriydi.

Akvarel bo'yoq boshqa bo'yoqlarga nisbatan yorqin, toza va jozibalidir. Shuning uchun u bilan ishlangan tasvirlar chiroyli, nafasatli ko'rinishi sababli kishi e'tiborini jalb qiladi. Akvarel bo'yog'ida o'quv-mashq vazifalirni. Shuningdek badiiy asarlar ham yaratish mumkin. Bundan albatta bo'yoqning va rang tanlashning hususiyatlarini yaxshi bilishi lozim.

Akvarel texnikasini mukammal egallash, bu sohada malaka xosil kilish uchun birinchi navbatda ish qurollari va ashyolarning ham bo'lishi katta ahamiyatga ega. Qog'oz, albatta oq, yetarli darajada qalin va yuzasi g'adir-budur bo'lishi kerak. Juda silliq qog'ozga bo'yoq tekis surtilmaydi. Qog'zning yuzasi g'adir-budur bo'lsa, bo'yoq zarrachalari uning govaklariga singib, quriganda mustahkam qotadi.

Akvarel texnikasining guash tempera va moy bo‘yoqlaridan farqi uning tiniqligi va havoiligi, bo‘yoqlarning yorqinligi va tozaligi bilan uyg‘unlashib ko‘rinishidir.

Shuni ham ta’kidlab o‘tish kerakki tabiatda absolyut oq va absolyut qora ranglar mavjud emas. Ularning barchasi qandaydir bir rang tovlanishda bo‘ladi. Masalan. qoraning jigarrangga, ko‘kka, yashilga moyil ekanligini ko‘rishimiz mumkin. Oq rangning turlm nozik tuslarga moyilligi ham tabiiy. Bunday rang va tuslarning hamda ularning to‘q-ochliklarini topib tasvirlash uchun moybo‘yoqda ishlash texnikasi juda qulaydir.

Grizayl (Grisaille - lotincha “griz” ya’ni kulrang) usulida rasm ishlash turli ranglar vositasida ish usuliga o‘tish uchun tayyorgarlik bosqichi bo‘lib, unda mo‘yqalamni ishlatish yo‘llari va akvarel bo‘yoqlarining hususiyatlarini o‘rganish uchun imkoniyat yaratadi. Grizayl texnikasida buyum sirtlari, shakllarining ro‘paradan (fas), yondan, ustdan va kundalang ko‘rinishlarini tahlil qilish qulayrok kechadi. Bu mashg‘ulotlar jarayonining boshlanishida faqat akvarelda emas, tempera, moybuyok, akril kabi bo‘yoqlarida ham ishlashni tavsiya qilish mumkin.

Bu texnika bilan bir nechta natyurmortlarni tasvirlab o‘rgangandan so‘ng, barcha rang xillari bilan ham natyurmort ishlash ancha oson bo‘ladi.

Lessirovka /nemischa lasieren sir bilan qoplash ma’nosida- rangtasvir texnikasining bir turi bo‘lib, boshqa bo‘yoqlar qatlami zich holda qurigan tekislika juda yupqa, baquvvat va xiraroq qoplashdir. Bunda ranglarning jarangdorligi, alohida bir yengilligi vujudga keladi.

Tasviriy san’at asarlarini yaratish texnikasini ongli o‘zlashtirilishi ilmiylik prinsipidagidek perspektiva, rangshunoslik, optika va yorug‘ soya qonunlari, anatomiyadan ba’zi ma’lumotlarga ega bo‘lishi bilan bog‘liq.

Tasviriy san’at va uni o‘qitish metodikasida rasm chizish texnikasini o‘rgatishga oid bir muncha ilmiy-tadqiqot ishlari olib borilgan (M.Nabiev, R.Hasanov, B. Boymetov, S. Bulatov, B.Oripov, B.Azimova, D.A. Gancharova, M.X. Mirzaxmedov va b.). Tasviriy san’at o‘qitishning turli bosqich va tashkiliy qismlarida o‘lkashunoslikka oid materiallar asosida rasm chizishni o‘rgatishning maqsad, mazmun, vazifa, usul va vositalari mavjud bo‘lib, tasviriy san’at fani o‘qituvchilari ularni yaxshi bilishlari talab qilinadi.

Har qanday predmetning hajmi, shakli, materiali va ularning fazoda joylashuvini biz faqat yorug‘ soya jihatdangina emas, rang jihatdan ham idrok etamiz. Hajmi va materialni idrok etish predmetlar yuzasida joylashgan yorug‘-soya va ranglarga bog‘liq bo‘ladi. Birinchi va ikkinchi planda predmetlarning ranglari bir-biridan o‘z to‘yinganliklari, yorug‘langanliklari bilan keskin farq qiladilar. Shuning uchun ham biz narsalar shaklining tabiiy emas, prespektiv ko‘rinishini tasvirlaganimizdek, predmetlar ranglarini ham tabiiy emas, perspektivada ko‘rinayotgandek shartli tasvirlashimiz kerak bo‘ladi.

Ulug‘ rassom Leonardo da Vinchi perspektivani uch bo‘lakka bo‘lgan edi. 1. Chiziqli perspektiva. 2. Relif perspektivasi 3. Rang va havo perspektivasi. Chiziqli perspektivada narsalar kishi ko‘zidan uzoqlasha va yaqinlasha borgani sari ularning o‘lchovlarida, havo, ranglarida o‘zgarishlar yuz beradi. Relif perspektivasi deganda

esa narsa shakllaridagi aniqlik va ularning fazoda uzoqlashuvi natijasida yorug‘lik va soya o‘rtasidagi nisbiy o‘zgarish tushuniladi. Rang va havo perspektivasining mohiyati, rangtasvir ishlashda rasmning ta’sirchan va ifodali chiqishida ahamiyati kattadir. Perspektiva qisqarish degan ma’noni anglatadi. Bunda kuzatuvchiga nisbatan uzoqlashib borayotgan tomonlar oldinda turgan tomonga nisbatan biroz kichraygan holda ko‘rinadi. Masalan, temir yo‘llar, simyog‘ochlar misolida buni ko‘rish mumkin. Bundan tashqari, havo perspektivasi, rang perspektivasi ham mavjud. Rang va havo perspektivasi ham ana shu talablarni amalga oshirishda qo‘l keladigan muhim usullardan biridir.

Rangshunoslik asoslari kursi bo‘lajak mutaxassislarining rangshunoslik borasida bilim malaka va ko‘nikmalarini yanada yaxshi rivojlantirishga qaratilgan. Rangtasvirning asosini rangshunoslik fani tashkil qiladi. Bo‘lajak rassom o‘qituvchilarga ranglarning tabiatda hosil bo‘lishi va tarqalishi masallarini, ularning atrof-muhit ta’sirida o‘zgarib ko‘rinishini, bo‘yoqlarni tayyorlash va ulardan foydalanish yo‘llarini o‘rgatadi.

XIX asrda nemis tabiatshunos olimi G.L.Gelmgols rangshunoslik nazariyasida muhim yangilik yaratgan. Ko‘p yillik tajribalari asosida xromatik ranglarni uchta asosiy alomat - rang tusi (nomi), rangning och-to‘qligi va to‘yinganligi asosida turkumlash kerakligini ko‘rsatgan.

Bo‘yoqlar ikki turga bo‘linib, suv bilan ishlatiladigan bo‘yoqlar va moy bilan ishlatiladigan bo‘yoqlar. Suv bilan ishlatiladigan bo‘yoqlar sirasiga akvarel, tempera, guash bo‘yoqlari va tush kabilar kiradi. O‘quvchilar suv bilan ishlatiladigan bo‘yoqlardan foydalanishning o‘ziga xos mahoratlarini egallab olganlaridan so‘nggina, moybo‘yoqda rangtasvir ishlashga o‘tadilar. Moybo‘yoqda rangtasvir shllashning o‘ziga xos tartib - qoidalari hamda tayyorgarlik bosqichlari mavjud.

Ranglarni nomlari va xususiyatlarini bilmasdan turib, kerakli maqsadga erishish qiyin albatta.

O‘quv jarayonida nimani o‘rgatish masalasining mohiyatiga oid mutaxassislarining turli, ko‘pincha bir-biriga qarama-qarshi fikrlari izohlab kelinmoqda. Bu borada ikki muammo mavjud: birinchisi – nimani o‘rgatiladi, savoliga javob berishda, aksariyat olimlar ta’lim mazmuni o‘rgatiladi, degan aslida to‘g‘ri, ammo umumiy javobni qaytaradilar. “Nimani – ta’lim mazmunini” muammosining hal etilishi dolzarbligicha qolmoqda.

Tasviriy san’at o‘qitish mazmunining tarkibiy qismlarini tadqiq etish muhim nazariy-izlanishlar sirasiga kiradi. Ta’lim mazmuni qanday qismlardan tashkil topishi o‘qitish maqsadlariga uzviy bog‘liq holda hal etiladi. Maqsad odatda mazmunni belgilaydi, ya’ni mazmun ta’lim chog‘ida o‘zlashtiriladigan o‘quv-metodik hodisa bo‘lsa, uning mahsuli erishiladigan maqsad sari olib boradi.

Ishning toza, puxta bajarilganligi nafaqat tartiblilikka bog‘liq, balki qalam, mo‘yqalamdan foydalanish mahoratini o‘zlashtirishga ham bog‘liqdir. Tasvirlash, chizish texnikasi bo‘yicha mahoratlar o‘quvchi qo‘llari rivojlanganliklari bilan bog‘liq bo‘lgan muvofiqlashtirish, aniqlik, ohistalik, harakatlarning erkinligidan iboratdir.

Jahon ta'lim va ilmiy tadqiqot muassasalarida tasviriy san'atni o'qitishda bolaga individual yondashuvni takomillashtirish (N.A.Kosenko, S.A.Amanjonov), tasviriy san'at ta'limida innovatsion texnologiyalarni qo'llash (G.A.Gorbunova), topshiriqlar tizimini o'quvchining layoqati, omilkorligiga mos ravichda tanlash, taqsimlash va taqdim etishning didaktik imkoniyatlaridan oqilona foydalanish (A.K.Markova), tasviriy san'at darslarida tabaqalashtirib o'qitish prinsiplarini qo'llash, ijodiy qobiliyatni takomillashtirish (M.A.Semenova), tasviriy san'at darslarida milliy-badiiy an'analardan foydalanish (M.V.Kadirova) bo'yicha ilmiy tadqiqotlar olib borilgan.

O'z xalqi va ajdodlari o'tmishini, tug'ilib o'sgan shahri, qishlog'i san'ati va madaniyati tarixini yaxshi bilgan insonning irodasi kuchli bo'ladi, uni har xil aqidalar girdobiga tushishdan saqlaydi. O'z xalqining tasviriy va amaliy san'at tarixi saboqlarini anglab yetgan o'quvchi hozirgi zamoni yaxshi tushunadi, kelajakni to'g'ri tasavvur etadi.

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XORAZM VILOYATI TOPONIMIKASI TARKIBIDA KO'CHMA OYKONIMLARNING SHAKLLANISHI

***Annotatsiya:** Xorazm viloyati geografik jixatdan o'ziga xos bo'lgan tabiiy sharoitga ega bo'lgan hudud hisoblanadi. Shundan kelib chiqib, ushbu maqolada Xorazm viloyati toponimlari tarkibida ko'chma oykonimlarning vujudga kelganligi tahlil qilingan.*

***Kalit so'zlar:** toponim, geografik nomlar, geografik terminlar (topotermlar), gidronimlar, oykonimlar, ko'chma oykonimlar, etnonimlar, fitonimlar.*

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THE EMERGENCE OF PORTABLE SIGNS IN THE TOPONYMICS OF KHORAZM REGION

***Abstract:** Khorezm region is a region with unique natural conditions from a geographical point of view. Based on this, the article analyzes the appearance of portable oikonyms in the toponymy of the Khorezm region*

***Keywords:** toponym, geographical names, geographical terms (topoterms), hydronyms, oikonyms, portable oikonyms, ethnonyms, phytonyms.*

Kirish Bizga ma'lumki, Toponimikada o'rganiladigan geografik nomlarning eng katta tarmog'i *oykonimika* (yunoncha, "oykos"-uy, turar joy, makon) ya'ni: ma'muriy-hududiy birliklar, aholi yashash maskanlari va ularning qismlari (*shahar, qishloq, mahalla, guzar, ko'cha, ovul, qo'rg'on*) nomlarini o'rganuvchi soha hisoblanadi.

Oykonimlar tarkibiga shahar, qishloq, shaharcha, ovul, mahalla, guzar, ko'chalar kirib, joy nomlari orasida alohida ahamiyatga ega. Bu nomlar joyning tabiiy va iqtisodiy geografik sharoiti, aholining milliy-etnik tarkibi, kasb-hunari, tarixda yuz bergan muhim voqea va hodisalar haqida batafsil ma'lumot beradi. Shuningdek toponimlar tarkibida kishilarning ism-familiyasi bilan bog'liq bo'lgan oykonimlar *antropooykonimlar* deb, urug', qabila, elat, xalq, millat kabi etnik

birliklar nomi bilan atalgan oykonimlarni *etnooykonimlar* deb atash qabul qilingan[5].

O‘zbek toponimikasining shakllanishi va taraqqiyotida H.Hasanov, S.Qoraev, Z.Do‘simov, T.Nafasov, T.Enazarov, B.O‘rinboev, N.Oxunov, Sh.Qodirova, T.Rahmatov, L.T.Karimova, Yo.Xo‘jamberdiev, J.Latipov, K.Seytniyazov, A.Otajanova, M.Mirakmalov, K.Xakimov, M.Tillaeva, F.Abdullaev, O.Madrahimov, A.Ishaev kabi olimlarning xizmatlari katta bo‘ldi.

Xorazm viloyati O‘zbekiston Respublikasining shimoliy g‘arbida joylashgan bo‘lib uning yer maydoni 6,3 ming km² ni tashkil etadi. Mamlakatning shimoli-g‘arbida joylashgan, qadimiy sug‘orish madaniyatiga ega bo‘lgan ko‘hna viloyatlardan biridir. Tarkibida 3 ta shahar (Urganch, Xiva, Pitnak); 11ta qishloq tumani (Hazorasp, Gurlan, Urganch, Xiva, Xonqa, Shovot, Qo‘shko‘pir, Bog‘ot, Yangiariq, Yangibozor, Tuproqqal‘a); 58 shaharcha, 98 ta qishloqlardan tarkib topgan. Ma‘muriy markazi – Urganch shahri.

Xorazm toponimlarining aksariyat ko‘pchiligi uzoq tarixdan beri mavjud bo‘lib, tabiiy sharoit, siyosiy o‘zgarishlar va turli tarixiy jarayonlar ta‘sirida shakllangan.

Xorazm qadimdan sharq va g‘arbni, shimol va janubni tutashtiruvchi chorrahada joylashganligi hamda ko‘pgina xalqlar uchun doimo go‘zal va jannatmakon yurt timsolida ko‘rib, barcha podsholar bu makonga ega bo‘lishga va o‘ziga qo‘shib olishga intilganlar. Shuning uchun qadimdan Xorazmga ko‘chib kelib joylashgan juda ko‘plab xalqlarning avlodlarini etnooykonimlar ko‘rinishida ham uchratishimiz mumkin.

Darhaqiqat, O‘zbek xalqining asosini tashkil etgan etnik komponentlardan biri o‘g‘uz qabilalar guruhiga kirgan *Soyot, Bayot, Juvondir, Ovshar, Qinik, Bijanak* va boshqalar shuningdek, *qipchoq* qabilalariga kirgan *Kenagas, Nukus, Qatag‘on, Uyg‘ur, Mang‘it, Qangli, Qo‘ng‘irot, Nayman* kabi ko‘plab etnonimlar bilan ataluvchi joy nomlari uchraydi. Turkman xalqini etnik tarkibini tashkil etgan ayrim etnik guruhlardan *Chavdur, Yovmut, Ali-eli, Xizr-eli, Taka* va boshqa qabilalar ham Xorazm toponimiyasining bir qismini tashkil etadi[1]. Jumladan, Soyot(mahalla, Xiva tumani), Bayot(aholi punkti, Yangiariq tumani), Ovshar(qishloq,Hazorasp tumani), Ovsharbadoq(aholi punkti, Hazorasp tumani), Knik(aholi punkti, Xiva tumani), Kenegas(qishloq, Qo‘shko‘pir tumani), Qangli(shaharcha, Shovot tumani), Nayman(qishloq, Bog‘ot tumani) va boshqalarni misol qilish mumkin.

Abulg‘ozi Bahodirhonning xabar berishicha Xorazmshoh Takashxon *qangli* qabila boshliqlarining birining qizi Turkun(Turkon) Xotunga uylangan. Shundan so‘ng Xorazmga ko‘plab *qangliklar* ko‘chib kelganlar[1].

Hozirgi kunda ham Xorazmda yashovchi aholi o‘zlarining urug‘ va qabilalarga bo‘linishlarini unutgan bo‘lsalarda ular etnik nomlar asosida vujudga kelgan toponimlar ko‘rinishida hududiy tarqalgan. Bu esa Xorazm aholisining urug‘-qabilaga bo‘linishi uzoq davrlardan beri saqlanib kelganligini ko‘rishimiz mumkin.

Shu bilan birga siyosiy jarayonlar natijasida qo‘shni hududlarni bosib olish orqali asirlar yoki qullarni, shu yerdagi shahar yoki qishloq aholisini ham butulay majburan ko‘chirib olib kelingan. Bunday harakatlar zamirida o‘z mamlakati aholi

sonini, mudofaa tizimini yaxshilash, qishloq xo‘jalik ishlarini yanada rivojlantirish, qurilish va boshqa ishlarni takomillashtirishga qaratilgan edi.

Umuman olganda Xorazm nomining kelib chiqishi ham ko‘chish bilan bog‘liq holda shakllangan. Bu fikr bo‘yicha yagona to‘xtanga kelinmagan bo‘lsa ham, tadqiqotlar davom etmoqda. Xususan, bir guruh olimlar (S.P.Tolstov, Ya.P.G‘ulomov, I.M.Dyakonov, M.G. Vorobyova) xorazmliklar Amudaryoning quyi oqimidagi Xorazm vohasida yashab, janubiy Turkmanistongacha bo‘lgan hududda hukumronlik qilganlar deb hisoblasalar, yana birlari (V.M. Masson, I.V.Pyankov, B.F.G‘ofurov, B.I.Vaynberg, A.S Sagdullaev, L.S.Tolstova) xorazmliklar Tajan–Gerirud daryolari havzalarida yashashgan va keyinchalik qandaydir tazyiq ostida shimolga – hozirgi Xorazm hududiga ko‘chib kelganlar, deb ta‘kidlaydilar. Shu bilan birga “Katta Xorazm” tarixiga oid yangi ma‘lumotlarni professor B.I.Vaynberg(1932-2010 yy) o‘rgandi. U miloddan oldingi 674 yilga oid Asarhoddon yozuvlarida Ossuriya davlatiga qaram bo‘lgan sharqdagi eng uzoq o‘lka - Xoreana (Xorazm) haqida yozma ma‘lumot borligini aniqladi. Demak Xoreana(Xarri yoki Xvarri qabilasining vatani) bu Xorazmliklarning oldingi yashagan joydagi nomi, ko‘chib kelgandan so‘ng hozirgi Xorazm nomi ko‘rinishiga o‘tgan degan xulosaga kelinadi.

Olim Xoreanadagi Koles–Mura daryosining tasviri Gerodotning Akes daryosi haqidagi ma‘lumotlarga mos kelishi, shimoliy Eron hududida yashagan xorazmliklar assiriyaliklar tazyiqi ostida O‘rta Osiyoning janubiy viloyatlariga ko‘chishga majbur bo‘lganlar degan fikrni ilgari surdi[3].

Etnograf L.S.Tolstova xorazmliklarning yangi yerlarga ko‘chib kelish haqidagi ma‘lumotlarni o‘zbek va qoraqalpoqlar orasidagi keng tarqalgan rivoyatlar bilan bog‘laganligini ko‘rishimiz mumkin. Abu Rayhon Beruniy ma‘lumotlariga qaraganda miloddan avvalgi 1202 yilda Marv atroflarida yashagan xorazmliklar Amudaryo bo‘lariga ko‘chib kelganlaridan so‘ng, kayoniylar sulolasi vakili Siyovushning o‘g‘li Kayhusrov boshchiligida ilk davlatga asos solganliklarini yozib o‘tadi.

Amudaryo o‘z yo‘nalishini o‘zgartirib Orol dengizi tomon oqa boshlagandan so‘ng Gurganj suvsiz qoladi. Shundan so‘ng Xiva xoni Abulg‘ozi Bahodirxon1646 yilda Gurganj va Vazir shaharini va uning atroflaridagi tarqoq holda yashagan aholini ko‘chirib Amudaryoning janubiy qismida joylashtirgan hamda aholi o‘rnashgan hudud atrofini qal‘a devori bilan mustahkamlab unga „Toza Urganch“, ya‘ni „Yangi Urganch“ deb nom bergan. Shundan keyin qadimgi Gurganj shahrining nomi Ko‘hna Urganch bo‘lib, Yangi Urganch bilan Ko‘hna Urganch oralig‘i 170 km ni tashkil etadi. Suningdek, Urganch tumanida *Ko‘nayurt* aholi punkti borki u ham asli Ko‘hna Urganch shahri atrofidan ko‘chib kelgan aholining avlodlari bo‘lib, yashash joyini *Ko‘nayurt*(eski ona makon,yurt) deb nomlashgan.

O‘rta asrdagi *Vazir* shahri aholisi ham tabiiy sharoit tufayli yangi maskanga hozirgi Gurlan shahrchasidan 12 km shimoli-g‘arb tomonga ko‘chirtirildi. *Yangi Vazir* shahri XIX asrda aholisi ancha zich shahlardan biri hisoblangan[2].

Xorazm toponimiyasida *eroniy* xalqlardan qolgan joy nomlari ham o‘z o‘rniga ega. Hozirda viloyatda *Qullar*, *Pirsiyan*, *Jamshid* deb ataluvchi xalqlarni

uchratishimiz mumkin. Xorazmda eronlik xalqlarni *Pirsiyon* yoki *eroniylar* deb atashadi. Xiva xonligi qo‘shinlari 1826 yilda Xuroson atrofiga bostirib kirib *Oqdarband* qal‘asini xarobaga aylantiradi, uning aholisini esa Xorazmning Qo‘shko‘pir tumaniga joylashtiradi va bu qishloq hozir ham shu nom bilan yuritiladi[1].

Chor Rossiyasining topshirig‘i bilan 1760-70 yillarda asli millati nemis bo‘lgan qirolicha Ekaterina II tomonidan Prussiyada yashagan nemis-mennonitlarni Volga, Ural, Sirdaryo daryolari quyi oqimi bo‘ylariga ko‘chirib keltiradi. O‘rta Osiyo bosib olinishi bilan, Turkiston gubernatori general Konstantin Petrovich fon-Kaufman asli millati nemis bo‘lganligi uchun 1873 yil 12 avgust Gandimyon shartnomasidan keyin, 1883-84 yillarda nemis-mennonitlarni qulay joyga Xiva xonligidagi Yangiariqning tinch va unumdor yerlariga ko‘chirib keltirgan. Bu joy *Oqmachit* deb yuritilib uning ma‘nosi ajralib turishi uchun oq rangda, iqlim xususiyatidan kelib chiqib issiqlikni qaytaruvchi, hamda yorqin sof tinchliksevarlik belgisini anglatadi. Ularning oldingi makoni Qo‘qon xonligining Sirdaryoning quyi oqimidagi Oqmachit(1853 yilgacha, 1938 yildan Qizil O‘rda) bo‘lganligi uchun, keyingi manzil nomi ham shu shahar nomidan ko‘chirilgan bo‘lishi kerak.

Munis(“Munis” - taxallusi ostida Avazbiy o‘g‘li Shermuhammad Mirob(1778-1829yy) ning hikoya qilishicha, Yormish kanalining qurilishiga Anushoh hukumronligi davrida o‘ng qirg‘oqdagi Kat shahrining “*suvsiz qolganligi*” sabab bo‘lgan. Shuning uchun shahar aholisini suvga muhtojligini nazarga olib, 1681 yil chap qirg‘oqdan Yormish deb ataladigan kanalni qazish haqida buyruq bergan va u yerga Qiyot qal‘asini ko‘chirib o‘tgan.

Muhammad Rahimxon 1810 yilda Yangiariq kanali etaklaridagi Oqmachit mavzeisiga suv o‘tkazish va bu joylarni obod qilish haqida buyruq bergan. Bu tadbirlarning hammasi Gurlan rayonidan ko‘chirilgan “qo‘zg‘olonchi” *uyg‘urlarni* joylashtirish maqsadida o‘tkazilgan edi. Muhammad Rahimxon jazo chorasi sifatida butun qabilani uch qismga bo‘lgan: ularning bir qismini Oqmachitning yangi o‘zlashtirilgan yerlarga, ikkinchisini Toshovuzga, uchinchisini Xivaning shimolidagi *Zax*(hozirgi Zeyyop) kanali bo‘yiga ko‘chirgan[2]. Hozirda *Uyg‘ur* viloyatning Yangibozor, Yangiariq, Qo‘shko‘pir, Urganch tumanlarida qishloq yoki mahalla nomlarida uchratish mumkin.

Xiva xoni Muhammad Rahimxon 1823-24 yillarda Buxoroga yurish qilib *Qoqushtuvon* qishlog‘i, *Poykent* shahri hamda *Xayrobod* qishloqlari aholisini Xorazmga ko‘chirib kelgan. Hozirda *Xayrobod* Qo‘shko‘pir tumanida qishloqlardan birining nomidir.

Siyosiy jarayonlar natijasida Respublikamizning ko‘pgina hududlarida Xorazmdan ko‘chib borgan aholi o‘zlari bilan birga joy nomlarini ham olib borishgan. Jumladan, birgina Buxoro vohasida Urganch so‘zi bilan ko‘pgina qishloqlarni(Urganji, Urganj mahallasi, Urganjiylar, Urganji eli) uchratishimiz mumkin.

Xiva xonlari zulmidan ozor chekkan *urganchliklar* (Xorazm) Sirdaryo bo‘ylab yuqori tomon suzib, yillar davomida Farg‘ona vodiysigacha kelganlar va daryo bo‘ylarida o‘rnashib, o‘z qishloqlarini tashkil qilganlar. Bunday qishloq nomlari

Sirdaryoga yaqin joylashgan. Farg‘ona, Namangan, Andijon, Buxoro, Jizzax viloyatlarida ham “Urganji”, “Urganjiyon”, “Urganji bog” nomida qishloqlar bor[4].

Shuningdek Turkiyada *Harezmi*, Isroilda *Korazim*, *Chorazm* va boshqa joylarda shu kabi nomlarni uchratishimiz mumkin.

Uzoq davom etgan xar-xil jarayonlar natijasida Xorazm viloyati hududiga ko‘chib kelgan xalqlar shu yerdagi mahalliy aholi bilan o‘zaro aralashib ketib hozirgi zamonaviy shavalarga ega bo‘lgan xalq, urug‘ – qabilalarni shakllantirganlar.

Yuqoridagi ma’lumotlardan shunisi ayon bo‘ladiki qadimdan Xorazmga kuchib kelib joylashgan juda ko‘plab xalqlarning avlodlarini hozirda etnooykonimlar ko‘rinishida uchratishimiz mumkin. Shulardan kelib chiqib xalq, urug‘ - qabila nomlari bilan bog‘liq joy nomlari viloyat oykonimlari tarkibida jami toponimlarning 21% ni tashkil etadi.

Xulosa Geografik nomlar bugungi kundagi muayyan hududdagi mahalliy aholi tomonidan tarixiy rivojlanish jarayonida tabiiy ravishda shakllantirilgan, tegishli ob‘yektlarga oid qimmatli tarixiy-madaniy ma’lumotlarni o‘zida saqlayotgan, ularning muhim tabiiy, ijtimoiy-iqtisodiy, etnomadaniy xususiyatlarini aks ettirgan, geografik nomlar hisoblanadi. Shuning uchun hududiy oykonimlarni geografik jihatdan ham tadqiq qilish ishlari Xorazm toponimikasini o‘rganishdagi dolzarb vazifalaridan biri desak mubolag‘a bo‘lmaydi.

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SURXONDARYO VILOYATI TERMIZ QUIY SURXONDARYO TABIIY GEOGRAFIK RAYONIDAGI ANOPHELES SUPERPICTUS CHIVINLARNING GONOTROFIK TSIKLNING DAVOMIYLIGI

Annotatsiya. Maqolada Termiz Quyi Surxondaryo tabiiy geografik rayonida Anopheles superpictus chivinning fenologik xususiyatlari va uning qishlash jarayoni o'rganilgan. Tadqiqotda urg'ochi chivinlarning qishlash joyidan uchib chiqish vaqti, gonotrofik tsiklning davomiyligi, tuxum qo'yish davrlari va birinchi generatsiyaning rivojlanishi tahlil qilingan. Olingan natijalar asosida bezgakning yuqish ehtimoli va chivinlarga qarshi kurash chora-tadbirlarning samaradorligi bashorat qilindi. Bu ma'lumotlar chivinlarning samarali zararlanish mavsumini aniqlashda va bezgak tarqalishini oldini olishda muhim ahamiyatga ega.

Kalit so'zlar: Anopheles superpictus, qishlash, gonotrofik sikl, tuxum qo'yish, bezgak, chivinlar, fenologiya

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SURKHANDARYA REGION TERMEZ ANOPHELES SUPERPICTUS IN THE NATURAL GEOGRAPHICAL REGION OF SURKHANDARYA THE DURATION OF THE GONOTROPHIC CYCLE OF FLIES

Annotation. This article explores the phenological characteristics of Anopheles superpictus in the Lower Surkhandarya Natural-Geographical Region of Termez, Uzbekistan. The research covers the timing of female mosquitoes' emergence from overwintering, the duration of the gonotrophic cycle, egg-laying periods, and the development of the first generation. Based on the findings, the malaria transmission period and the effectiveness of mosquito control measures are predicted. These results are significant for determining the effective period of mosquito infestation and preventing the spread of malaria.

Keywords: Anopheles superpictus, overwintering, gonotrophic cycle, egg-laying, malaria, mosquitoes, phenology, Surkhandarya

Voyaga yetgan *Anopheles superpictus* chivinlarning imago bosqichida qishlovga ketgan turlar uchun urg'ochi chivinlar qishlash joyidan ommaviy uchib chiqish vaqti, qishlash joylarida birinchi qon so'rgan urg'ochi chivinlarning paydo bo'lishi va tuxum qo'yish vaqti (gonotrofik tsikl).

Bezgakning odamlarga yuqishini hisoblash birinchi generatsiya urg'ochi chivinlari tomonidan bezgakni samarali yuqtirish mavsumining boshlanishini hisoblash quyidagicha amalga oshiriladi: fenologik kuzatuvlarga ko'ra, birinchi

generatsiyaning ommaviy uchish sanasi belgilanadi va shu kundan boshlab ushbu haroratda sporogoniyani tugatish uchun qancha vaqt kerakligini hisoblab chiqadi. Sporogoniyaning tugashi birinchi generatsiya vakillari tomonidan bezgak yuqish mavsumining boshlanishini anglatadi. Mavsumning oxiri yoz va kuzning oxirida har xil turdagi urg'ochi bezgak chivinlarining xatti-harakatlariga bog'liq. Bezgak tashuvchisi sifatida eng katta epidemik ahamiyatga ega bo'lgan urg'ochi chivinlar odatda I- va II-avlodlardir, chunki qishlagan urg'ochilar bahorda issiqlik etishmasligi tufayli bezgak yuqishini ta'minlay olmaydi. Tabiiy sharoitda faqat bitta urg'ochi *Anopheles* uchta gonotrofik tsikl o'tadi va juda kamdan-kam hollarda to'rtta va bezgakning yuqishi mumkin bo'lgan mavsumning aniqligi 3 oyni tashkil qiladi.

Termiz Quyi Surxondaryo tabiiy geografik rayoniida tashqi muhit havo harorati o'rtacha +6 °C bo'lganda 18-fevraldan *An. superpictus* chivinlari qishlovdan yalpi ucha boshladi, qishlagan urg'ochilarning yalpi uchishi 18 fevraldan boshlandan so'ng gonotrofik tsikl davomiyligi +21 kun bo'ldi. Shu tarzda birinchi tuxum qo'yish 12 martda tugaydi, mayning boshidan, ya'ni 02.05.2021 yil dan *An.* Surxondaryo viloyati Termiz Quyi Surxondaryo tabiiy geografik rayonidagi gonotrofik tsiklning davomiyligini va urg'ochi *An. superpictus* rivojlanish vaqtini bashorat qilish *superpictus* birinchi generatsiya uchishi kuzatildi. Ikkinchi tuxum qo'yish ikkinchi avlodning birinchi generatsiyasi 2021 yil 3 mayda boshlanadi (5.1-jadval).

2021 yilda

Urg'ochi chivinlarni uchish sanasi	Avlodlar soni	Gonotrofik tsiklning	Ommaviy tuxum ko'yish	Urg'ochi chivinlarning tuxumdan imagogacha rivojlanish davomiyligi	Chivinlarni uchish sanasi	Izoh
18.02		21	12.03	50	02.05	Qishlagan chivinlarning I-generatsiyasi
12.03		11	24.03	39	03.05	Qishlagan chivinlarning II-generatsiyasi
03.05	I	4	8.05	20	29.05	II-generatsiya
29.05	II	3	2.06	14	17.06	III-generatsiya
17.06	III	3	21.06	13	05.07	IV-generatsiya
05.07	IV	2	8.07	12	21.07	V-generatsiya
21.07	V	2	23.07	13	06.08	VI-generatsiya
06.08	VI	3	10.08	15	26.08	VII-generatsiya
26.08	VII	3	30.08	23	23.09	VIII-generatsiya
23.09	VIII	4	28.09	40	08.11	IX-generatsiya
			Diapauzaga yalpi ketishi		Qishlovga ketish	

Bezgak yuqish mavsumining vaqtini Sh.D. Moshkovskiy usulida hisoblash havoning o'rtacha kunlik haroratga asoslanadi. Chivin P. vivax gamenozitlarining ma'lum kunda yuqtirib oldi deb faraz qilinganda, chivin organizmida sporozoitlarning rivojlanishi uchun kerak vaqti hisoblab chiqiladi.

Hisob-kitoblarga ko'ra, sporogoniyaning birinchi tsikli 35 kun davom etadi va aprelning birinchi dekadasi tugaydi. Sporogoniyaning birinchi tsikllar mobaynida urg'ochilar beshta gonotrofik tsikllar o'tadi, ya'ni besh tuxum qo'yish bo'ladi (bezgak mavsumining asosiy elementlarini hisoblash usullari haqida kengroq ma'lumotlar 3-ildagi 5.16-jadval keltirilgan).

Termiz Quyi Surxondaryo tabiiy geografik rayonida birinchi *An. superpictus* avlod urg'ochilarining suv havzalaridan uchish vaqti hisobga olinishi kerak, ya'ni 10 oktyabrdan keyin havo harorati +16 °C-dan past bo'lganligi va uzoq muddatli

pasayish kuzatiladi, shuning hisobiga mavsumning so'nggi sporogoniya tsikli 10 oktyabrda tugaydi. Sporogoniyaning oxirgi tsikli, hisob-kitoblarga ko'ra, 9 kun 2-oktyabrgacha davom etadi. Shuning uchun chivinlarni samarali yuqtirish mavsumi tugagan sana *An. superpictus*ni 2-oktyabr deb hisoblash kerak (5.2-jadval).

5.2-jadval

**Surxondaryo viloyati Termiz Quyi Surxondaryo tabiiy geografik rayonida
P. vivax sporozoitining yetilishi va *An. superpictus* rivojlanish muddatlarini
bashorati (2021 yil)**

T/r	Samarali zararlanish mavsumning boshlanishi sanalari			Samarali zararlanish mavsumning tugallanishi sanalari			Samarali zararlanish mavsumning davomiylik kunlari		
	1	2	3	1	2	3	1	2	3
1	04.03	19.06	07.08	09.04	24.06	11.08	37	6	5
2	10.04	25.06	12.08	19.04	30.06	16.08	10	6	5
3	20.04	01.07	17.08	30.04	06.07	22.08	11	6	6
4	01.05	07.07	23.08	09.05	12.07	29.08	9	6	7
5	10.05	13.07	30.08	20.05	17.07	07.09	11	5	9
6	21.05	18.07	08.09	28.05	22.07	15.09	8	5	8
7	29.05	23.07	16.09	05.06	27.07	23.09	8	5	8
8	06.06	28.07	24.09	11.06	01.08	03.10	6	5	10
9	12.06	02.08	04.10	18.06	06.08	03.11	7	5	31

Yuqoridagilardan kelib chiqqan holda, *An. superpictus* chivinlari uchun Termiz shahrida taxminimizcha samarali zararlanish mavsumi sakkiz oy davom etadi, 4 matdan boshlanib va 3 noyabrda tugashi mumkinligi ayta olamiz. Surxondaryo viloyatida *Anopheles* turiga mansub *An. superpictus* chivinlari bezgakning asosiy tarqatuvchisi bo'lib, ularni qat'iy hisobga olish va nazorat qilishni yo'lga qo'yish, hamda bezgak mavsumi elementlarining vaqtini hisoblab chivinlarda sporogoniyaning samarali rivojlanishining boshlanishi va oxiri, birinchi va oxirgi sporogoniyaning davomiyligi, bezgak yuqishining boshlanishi va tugash vaqtlari kunning o'rtacha harorati bilan uzviy bog'ligi o'rganib bezgak bilan zararlanish natijasida yuzaga keluvchi birinchi bezgakni paydo bo'lish muddatlarini davomiyligini avvaldan aniqlash va bezgak bilan zararlanish mavsumi yuza kelishi mumkinligini tahlil qilib oldindan aniqlash imkonini beradi.

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SURXONDARYO HUDUDIDA TARQALGAN ANOPHELES AVLODI CHIVINLARINING EKOLOGIK TAHLILI

Annotatsiya. Ushbu maqolada Surxondaryo viloyatida Anopheles avlodiga chivinlarning ekologik tahliliga ko'ra Anopheles hyrcanus, An. claviger, An. pulcherrimus, An. superpictus turlarining ekologik holatiga asoslangan ma'lumotlari tahlil natijalari keltirilgan.

Kalit so'zlar: Anopheles chivinlari, ekologik, endofil, ekzofillar, yarim ekzofillar

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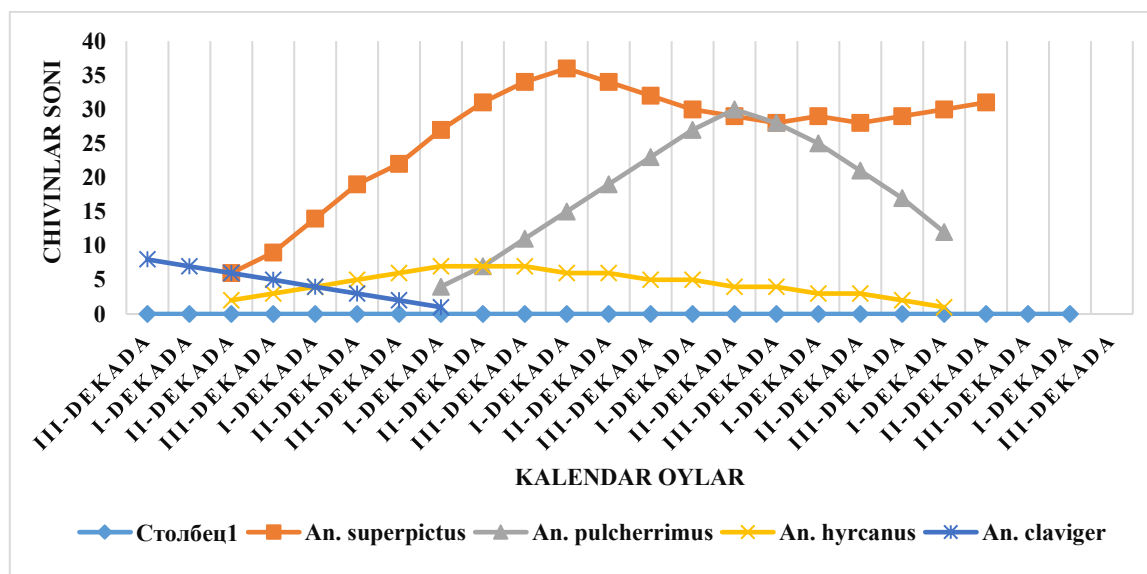
Abstract: This article presents the results of an ecological analysis of Anopheles mosquitoes in the Surkhandarya region. The ecological characteristics of Anopheles hyrcanus, An. claviger, An. pulcherrimus, and An. superpictus species are discussed.

Keywords: Anopheles mosquitoes, ecological, endophilic, exophilic, semi-exophilic.

Anopheles chivinlarining imagolar yashaydigan muhitda haroratning qulay yuqori va pastki chegaralariga ega. Surxondaryo viloyati sharoitida endofil An. superpictus chivinlarning kuzatuv nuqtalarining odamlar yashaydigan bino va molxonalarda o'zlariga boshpana izlaydi. Ekzofil chivinlar An. hyrcanus va An. claviger o'simliklar va kovaklar orasidagi ularning dam olish joylarida topildi. Yarim ekzofil chivinlar An. pulcherrimus boshpanalari ham aholi yashash joylaridagi ochiq molxonalarda, shiyonlarda, tom shiplari orasida hamda tabiatda esa devor kovaklarida, daraxt yoriqlarida va o'simliklar orasida uchraydi.

Bizning tadqiqotlarimizda ushbu omillar ushbu chivin biotopining tabiatini ham aniqladi. Shuni ta'kidlash kerakki, uning lichinkalari suvdagi xlor va sulfat tuzlarining muhim tarkibiga erkin toqat qiladilar. Biz ular tomonidan suv achchiq sho'r bo'lgan va suv omborining chetlari oq tuz bilan qoplangan daryolar tekisligida joylashgan ko'lmaklar joylashishini kuzatdik. An. superpictus lichinkalarini rivojlantirish uchun yer osti suvlariga boy bo'lgan eriydigan kaltsiyga muhtoj. An. pulcherrimus Quyi Surxondaryo tabiiy geografik hududidagi qamish bilan o'ralgan tomlarda, chorva mollari uchun soyabonlar ostida, vaqtincha qamish kulbalarida, sholi poyalarda va poliz ekinlarida ommaviy ravishda topilgan. Ushbu tur, shuningdek, optimal namlik 35÷45 % bo'lgan o'simliklar va turli xil qo'shimcha

binolarda qayd etilgan. Erkaklar va urg'ochilar suv omboridan uchib chiqib, darhol namligi yuqori bo'lgan g'orlarda yashaydilar (3.11-rasm).



3.11-rasm. Surxondaryo viloyatida uchrovchi *Anopheles* chivinlarining uchratish darajasi

Tadqiqotlarimizda issiq mavsumda, iyul oyida *An. pulcherrimus* lichinikalari Pastki Surxondaryo tabiiy geografik hududi landshaftlarida kam edi, *An. superpictus* va *An. hircanus* umuman topilmadi. Surxondaryo, Qoratog', To'palang, Obizarang, Sina, Sangardak daryolarini o'rganish *Anopheles* avlodi lichinkalar chivinlar u yerda suv oqimlari tez bo'lganligi sababli topilmadi. Chivin lichinkalari turg'un yoki ozgina oqadigan suv havzalarida yashaydi (3.13-jadval).

3.13-jadval

Surxondaryo viloyatidagi ekologik guruhlar bo'yicha o'rganilgan *Anopheles* avlodi chivin turlari haqida ma'lumot

№	Ekologik guruhlar	Tur miqdori, %	Individlar miqdori, %
1	Endofillar	25,0	69,58
2	Ekzofillar	50,0	1,66
3	Yarim ekzofillar	25,0	28,76
Jami:		100,0	100,0

Surxondaryo viloyatlari tumanlarini o'rganish *An. hircanus* faqat daryolarning toshqin botqoqlarining qamish-qamish chakalakzorlarida va yer osti va buloq suvlari quyiladigan joylarda sug'oriladi. Urg'ochilarning u yoki bu o'simlik jamoalariga tortilishini belgilaydigan asosiy omillar nisbiy namlik va haroratdir. Nisbiy namligi 50 %-dan past va harorati 30 °C-dan yuqori bo'lgan otsu

chakalakzorlarning har xil turlarida. *hurcanus* umuman uchramagan. Ushbu tur faqat oziq-ovqat izlash uchun turar-joy binolari va chorva mollariga uchadi.

Kechasi uchib ketgan chivinlarning ozgina qismi bu erda va bir kun qoladi. Odatda *An. hurcanus* devorga polga yaqinroq o'tiradi. Chivinlar $+10 \div +26$ °C haroratda, optimal $+13 \div +19$ °C haroratda va nisbiy namlik $51 \div 95$ %-da faoldir. O'simliklarda ular kun davomida hujum qilishlari mumkin. Ular uylarga hujum qilish uchun uchib ketishadi, lekin hidi yanada jozibali bo'lgan omborxonalar ular uchun ayniqsa afzaldir. Shunga ko'ra, qoramollarga bu chivinlar odamlarga qaraganda tez-tez hujum qiladi.

Kuzatishlar natijasida *An. superpictus* endofil, termofil tur, turar-joy binolarining qorong'i joylarida, hovlilarda, yopiq omborlarda uchraydi. Odamlar va hayvonlarning qoni bilan to'yingan urg'ochilar ularni hazm qilish uchun turar-joy binolari va chorvadorlarning qoraygan burchaklarini afzal ko'rishadi *An. hurcanus* *An. claviger* ekzofil, gigrofil turlardir. Ular o'simliklarda, sug'orish kanallari qirg'og'ida, loy to'siqlarining yoriqlarida va boshqalarda joylashgan. *An. pulcherrimus* yarim ekzofil tur, qishloqlarda, ochiq chorva mollarida, shiyponlarda, qamish tomlarida va kulbalarda yashaydi. Tabiatda ular g'orlarda, qoyalardagi yoriqlarda, o'simliklarda uchraydi. Ushbu turdagi termofil va kserofil qorong'i va nam joylarni yoqtirmaydi. Fenologik kuzatuvlarga ko'ra, bir mavsum davomida kamida to'rtta gonotrofik tsikldan o'tgan urg'ochi chivinlar epidemik ahamiyatga ega hisoblanadi.

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XORAZM MILLIY TAOMLARINING GASTRONOMIK TURIZMNI RIVOJLANISHIDAGI AHAMIYATI

***Annotatsiya.** Ushbu maqolada Xorazm viloyati O'zbekistondagi sayyohlik markazlari orasida o'zining qadimgi tarixi va madaniyati, o'ziga xos pazandaligi bilan ajralib turishi to'g'risida fikr yuritiladi. Bundan tashqari, viloyat milliy taomlarining hududiy tarqalish xususiyatlari o'rganilab gastroturizmni rivojlanishidagi ahamiyati ochib berilgan.*

***Kalit so'zlar:** milliy taomlar, gastronomik turizm, pazandachilik an'analari, gastronomik sayyoh.*

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THE IMPORTANCE OF KHWAREZMIAN NATIONAL CUISINE IN THE DEVELOPMENT OF GASTRONOMIC TOURISM

***Abstract.** This article reflects on the fact that the Khorezm region is distinguished among tourist centers in Uzbekistan by its ancient history and culture, its unique culinary value. In addition, the features of the territorial distribution of regional national dishes are studied and revealed their importance in the development of gastrotourism.*

***Key words:** national cuisine, gastronomic tourism, culinary traditions, gastronomic tourist.*

Turizm - insonlarning doimiy hayot tashvishlaridan biroz chetlashish, yoki o'zlari qiziqqan joylarni o'z ko'zlari bilan ko'rish, dam olish uchun boshqa mamlakatlarga, tabiatning ajoyib go'shalariga amalga oshiradigan sayohatidir. Turistlar biror joyga tashrif buyurar ekan albatta o'sha joyning taomlarini tanavvul qilishadi. Ko'pchilik hollarda turizm salmog'iga turistlarga yaratilgan sharoitlar, xizmatlar va albatta taomlar jiddiy ta'sir ko'rsatadi. Bugungi kunda tobora

rivojlanayotgan va katta biznesga aylanayotgan gastronomik turizm ko'pchilikni qiziqtirishi tayin.

Gastronomik turizm, yoki oshxona turizmi, turizmning asosiy turlaridan biri bo'lib, asosiy maqsadi, sayyohlarning ma'lum bir mamlakatga dam olish, sayohat qilish, madaniy hordiq chiqarish yoki o'zlarining qiziqishlari maqsadida borgan joylaridagi davlat hududlarning milliy taomlari bilan tanishib chiqishi sababli vujudga kelgan [3].

Gastronomik sayyoh, birinchi navbatda, madaniyatning ajralmas qismi hisoblangan, milliy va an'anaviy taomlarni, ularning tayyorlash jarayonlarini, dasturxonga tortish usullari, ovqatlanish tartibi va pozitsiyalarini ko'rish va bilish barobarida, sayohat qilayotgan davlatining tarixini, iqtisodiyotini, davlat siyosati hamda mahalliy aholining e'tiqodlarini o'rganadi [3].

Gastronomik turizm, odatda ikki turga bo'linadi:

- Agroturizm, dala (qishloq) gastronomik turizmi; sayohat qilinayotgan davlatning, ekologik toza mahsulotlari (meva va sabzavotlar, poliz mahsulotlari, uzumchilik) ni, hosilini yig'ish yoki qadoqlashni o'z ko'zi bilan ko'rish va mahsulotlarni ta'tib ko'rish tushiniladi.

- Shahar gastronomik turizmi, mahalliy mahsulotlarni qayta ishlaydigan va ishlab chiqaradigan korxonalar, milliy taomlar tayyorlaydigan ovqatlanish shahobchalarida, oziq-ovqat do'konlariga va boshqa ob'yektlarga, tashrif buyurib, ularni o'rganish va ta'tib ko'rishni o'z ichiga oladi [4].

O'zbekistonda ham qator mehmonxonalarda, restoranlarda jahon talablariga javob beradigan dunyo taomlari va o'z milliy taomlarimiz tayyorlanmoqda. Bugungi kunda turizmni rivojlantirishga qaratilgan va uni jadal yuksaltirishga butun jahon miqyosida juda katta ahamiyat berilmoqda. Bu borada yurtimizda olib borilayotgan keng ko'lamli islohotlar bilan bir qatorda turizm sohasiga qaratilayotgan e'tibor ham quvonarli albatta. Respublikamizda turizm va uning tarmoqlarida xizmat turlarini shakllantirish, hududlarning tabiiy va iqtisodiy-ijtimoiy imkoniyatlarini hisobga olgan holda, ko'p tarmoqli tur firmalar sonini ko'paytirish va ularning ixtisoslashuvi hamda hududiy tarkibini takomillashtirish bo'yicha qator chora-tadbirlar amalga oshirilmoqda [5].

O'zbekiston jannatmakon o'lka. Uning har bir hududi hushmanzara tabiati bilan kishiga o'zgacha shukuh baxsh etadi. Mamlakatimizning turli xududlarida ajdodlardan avlodlarga o'tib kelayotgan maxsus reseptlar asosida tayyorlanadigan tansiq milliy taomlar ham mavjud. Jumladan, xalq marosimlarida tayyorlanadigan mahsulotlar, qatlama, halim, sumalak, qorma, to'y oshi, qaynatma, biqtirma, moshava, moxora kabi taomlarni tayyorlash uchun maxsus tayyorgarlik ko'riladi va reseptning miqdoriy o'lchamlariga qat'iy rioya qilinadi.

Xorazm viloyati O'zbekistondagi sayyohlik markazlari orasida o'zining qadimgi tarixi va madaniyati, o'ziga xos pazandaligi bilan ajralib turadi.

Ma'lumki, tabiatda mavjud o'simliklarning ko'pchilik turlari oziq-ovqat sifatida ishlatilishi mumkin. Xorazmliklar har bir o'tdan, suvdan, yerdan va qumdan, shuningdek quyosh nuri, qor va yomg'irdan donolik, maxfiy ma'no va shifobaxsh fazilatlar izlaydi. Hozir vohani, turizm sohalarinini, ayniqsa

gastronomik, ziyoratgoh, ekologik, agroturizm va boshqa sohalarni rivojlantirishga va obod qilishga katta e'tibor qaratilmoqda.

Xivaga tashrif buyuradigan sayyohlar albatta Xorazmning milliy taomlaridan ta'tib ko'radi. Milliy taomlar sayyohlarni yana kelishi uchun turtki bo'ladi, chunki shu yerda tayyorlanadigan taomlar boshqa hududlarda tayyorlanmaydi. Milliy taomlar shu davlatning milliy qadriyatlarini aks ettiradi. Xorazm viloyati o'ziga xos milliy taomlari bilan respublikamizda boshqa viloyatlardan farq qiladi. Quyida milliy taomlarning Xorazm hududlari bo'yicha tarqalishi keltirilgan (1-jadvalga qarang).

1-jadval

Xorazm hududlarida milliy taomlarning tarqalishi

№	Taom nomi	Tayyorlanish hududlari	Izoh
1	PALOV	Hamma hududlarda pishiriladi	Palov -yurtimizdagi eng mashxur va ma'lum bo'lgan taom hisoblanib, uning tayyorlanish usullari juda xilma hildir (suzma, palov, chalov turda pishiriladi)
2	JUGARI KURTUK	Gurlan tumanida ko'p istemol qilinadi	Jugari kurtik-Xorazmning faqat Gurlan tumanida iste'mol qilinib.tayyorlanishida xamirni jugardan sho'rva suvidan olib qilinadi.Parxez taom sifatida tavsiya etish mumkin
3	ATALA (blomiq)	Xorazm viloyatining hamma tumanlarida pishiriladi	Kech kuzda va qishda iste'mol qilinadi, juda to'yimli
4	QOQ O'RIKLI UN OSHI	Xorazm viloyatida va barcha tumanlarida pishiriladi	Taom oshqozon ichak jigarning surunklali xastaliklarida ko'proq naf keltiradi. Un oshi faqat Xorazm viloyatida pishiriladi
5	KO'K BARAK	Xorazmning hamma tumanlarda pishiriladi	Ko'k barak to'yimli ovqat hisoblanadi. Beda o'simligidan tayyorlanadi
6	TUXUM BARAK	Xorazmning eng ko'p pishiriladigan milliy taomi.	Tuxum barak-tuxumdan tayyorlanib, to'yimli ovqat hisoblanadi
7	KADI BARAK	Xorazmning hamma tumanlarda pishiriladi	Asosiy masallig'i kadi (qovoq) hisoblanadi , to'yimli shifobaxsh ovqat sanaladi.
8	IJJON	Faqat Xivada tayyorlanadi	Ijjon-mol go'shtidan tayyorlanadi,mazali
9	SHIVIT OSHI	Xorazmning hamma tuman va shaharlarida iste'mol qilinadi	Shivit oshi – xushxo'r, yengil, mazali, tez hazm bo'lganligi uchun ko'pgina kasalliklarda tavsiya qilingdi.

Jadval muallif tomonidan tayyorlangan

Xorazm viloyatida gastronomik turizmni shakllanishida milliy taomlarning turlarini tahlil qilar ekanmiz , yuqorida ko'rsatilgan taomlar faqat shu hududlarda nisbatan ko'p iste'mol qilinib kelinayotganligi va asta sekin boshqa hududlarda ham tarqalayotganligini ko'rish mumkin. Ko'k barak Xorazm viloyatidan boshqa hududlarda tayyorlanmaydi, un oshi, jugari kurtik, bulomiq kabilar Xorazmda ko'p iste'mol qilinib, milliy taomlardan biri hisoblanadi [1].

Xorazm viloyatida gastroturizm ham turizmning endi rivojlanayotgan tarmoqlardan biri hisoblanadi. Gastroturizmning ikki tarmoqqa bo'linishi Xorazm viloyatida ham o'z aksini topmoqda. Qishloqlarda gastroturizmning rivojlanishi qishloq aholisining o'zini-o'zi ish bilan band qilib iqtisodiyotni rivojlantirmoqda. Qishloq gastroturizmida qishloq joylariga borib shu yerning o'zida toza, sof havoda pishgan mahsulotlardan milliy taomlarning tayyorlanishi bu rivojlanishning dastlabki bosqichlaridan biridir. Sayyohlar uchun gastronomik dasturlar va marshrutlar ishlab chiqish eng dolzarb masalalardan biridir.

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TRANSFORMATION IN EDUCATION MANAGEMENT: A NEW ERA OF INNOVATION AND GROWTH

***Abstract.** This article explores the key factors reshaping education management today, highlighting the shift from centralized to decentralized governance models, the integration of digital tools, and the growing emphasis on personalized and data-informed education.*

***Key words:** Education Management, Transformation, Decentralization, Data-driven Decision Making, Leadership, Innovation, Personalized Learning, Data Analytics, Educational Equity*

Introduction. Education, often referred to as the cornerstone of a society's progress, has always been in a state of flux, adapting to the changing needs of the world. As technology, globalization, and evolving pedagogical strategies continue to shape the future, the management of education systems has undergone a profound transformation. The traditional models of education management are being replaced by more dynamic, inclusive, and tech-driven approaches that seek to address the challenges of today's fast-paced, interconnected world. This transformation is not just about technology, but also about shifting the mindset and structures within which education operates.

In this article, we will explore the various facets of transformation in education management, including the integration of digital technologies, new leadership paradigms, data-driven decision-making, inclusivity, and the global impact of these changes. By delving into these areas, we aim to understand the challenges and opportunities presented by these transformative forces and offer insights into how educational institutions can navigate this period of significant change. Historically, education systems were highly centralized. Decisions regarding curriculum, teacher recruitment, policy implementation, and resource allocation were predominantly made at the national or state level. These traditional systems often lacked flexibility, which made it difficult to adapt to local needs or incorporate innovative teaching methods. In recent decades, however, education management has shifted towards more decentralized models. Local schools, districts, and even individual institutions are increasingly given more autonomy to shape their educational strategies. This decentralization has led to more tailored educational experiences, allowing schools to better meet the needs of their students and communities.

Decentralization has also promoted greater accountability at the local level. With more decision-making power in the hands of educators, there is a stronger sense of ownership over the educational process. It has encouraged schools to focus

more on outcomes, student performance, and the creation of personalized learning pathways.

One of the most significant transformations in education management has been the rise of digital technologies. The integration of digital tools and platforms has revolutionized the way education is delivered, managed, and accessed. From online learning environments to administrative systems, technology has reshaped almost every aspect of education. Digital platforms have made education more accessible, enabling remote learning and providing a variety of learning materials and resources that were once limited to physical classrooms. Cloud-based Learning Management Systems (LMS), video conferencing tools, and educational apps have facilitated real-time communication, collaborative learning, and personalized learning experiences. These tools not only enhance the quality of education but also improve operational efficiencies.

Moreover, data analytics has empowered educational institutions to make more informed decisions. By collecting and analyzing data on student performance, attendance, engagement, and even social-emotional well-being, schools can gain insights into how to improve teaching methods and student outcomes. For example, predictive analytics can help identify at-risk students and intervene early to ensure better retention and success rates. The transformation in education management also demands a shift in leadership. Traditional educational leadership models, which emphasized top-down control, are increasingly being replaced by more collaborative and adaptive approaches. Effective leadership in the modern educational landscape requires not only a deep understanding of educational theory but also a strong grasp of technology, change management, and organizational culture.

Modern educational leaders need to be visionaries who can inspire and guide their institutions through periods of rapid change. They must be open to innovation and willing to embrace new technologies and pedagogical strategies. Furthermore, they need to foster a culture of continuous learning, both for students and for teachers. Professional development for educators is no longer a one-time event, but an ongoing process that incorporates new tools and methods to keep pace with the evolving demands of the education sector.

Leadership in education management also involves a focus on inclusivity. Transformational leaders advocate for diversity in the classroom and ensure that all students, regardless of their background or abilities, have equal access to quality education. This inclusivity extends to the recruitment and training of teachers as well, ensuring that educational staff reflect the diversity of the student body and are equipped with the skills to address varied learning needs. The role of data in transforming education management cannot be overstated. In the past, decisions in education were often based on intuition or experience. Today, however, educational institutions are increasingly relying on data-driven decision-making to improve outcomes for students, teachers, and the organization as a whole. Data analytics in education can serve a multitude of functions. For example, data can help educators identify trends in student performance, determine which teaching methods are most

effective, and track the progress of individual students. Moreover, data can be used to optimize the allocation of resources, ensuring that schools can meet the needs of their students without unnecessary waste.

Educational institutions are also using data to enhance their operational efficiency. By automating administrative tasks such as scheduling, grading, and resource allocation, schools can save time and reduce costs. With more streamlined processes in place, educators and administrators can focus on what matters most—delivering high-quality education. Education is no longer a localized or national issue. The effects of globalization have made it essential for educational systems to be interconnected and responsive to global trends. Students today need to be prepared for a world that is increasingly interconnected, and this requires education systems to be more international in their outlook. Educational management now embraces cross-border collaborations, global exchanges, and partnerships between schools, universities, and research institutions around the world.

Additionally, the rise of international assessments like the Programme for International Student Assessment (PISA) has provided valuable comparative data, enabling countries to assess the effectiveness of their educational systems relative to others. This global perspective fosters greater transparency and accountability in education management.

Conclusion. The transformation in education management represents an exciting and challenging period of change, characterized by rapid technological advancements, evolving leadership paradigms, and a growing emphasis on data and inclusivity. While these changes present certain challenges, they also offer unprecedented opportunities to create a more equitable, accessible, and effective education system. By embracing new technologies, adopting data-driven decision-making, fostering adaptive leadership, and encouraging global collaboration, educational institutions can position themselves to thrive in this new era. However, these transformations will not happen overnight. It requires the collective effort of educators, policymakers, students, and communities to adapt and drive the necessary changes. In the end, the future of education management is about more than just the tools we use; it's about creating an environment where every learner has the opportunity to reach their full potential, and where educational institutions can continuously evolve to meet the needs of a rapidly changing world. Through collaboration, innovation, and a commitment to continuous improvement, we can build an education system that not only prepares students for the future but actively shapes it.

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TRANSFORMING UNIVERSITY MANAGEMENT: EMPHASIZING INNOVATION, FLEXIBILITY, AND GLOBAL ENGAGEMENT

***Abstract.** This paper examines the evolving management of modern universities, shifting from a model of external control to one of self-governance and flexibility. The paper emphasizes the importance of innovation, leadership, and adaptation in ensuring that universities remain competitive and relevant in a rapidly changing global landscape.*

***Keywords:** University management, Self-governance, Flexibility in higher education, Strategic planning, Innovation in education, Global engagement, Higher education Leadership, Quality assurance in universities, Community development.*

Introduction. The evolving nature of educational management reflects a shift in how educational institutions are perceived and governed. While previously universities were considered static organizations controlled by external forces, today’s management theories emphasize that these institutions are self-regulating and flexible. Modern universities are multi-dimensional, actively contributing to education, research, economic development, and social responsibility. This paradigm shift is particularly evident in the way universities interact with their communities and the world. In contemporary educational management, there is a shift in how educational institutions are understood and represented in academic research. Historically, these organizations were viewed as entities that could be controlled, but modern educational management theories now see them as self-regulating bodies. This transformation is especially evident in today’s universities. A modern university is more than just a place for higher education; it plays a key role in research and economic development, adapting to various socio-economic, political, cultural, spiritual, and moral contexts. Today’s universities are evolving into dynamic learning environments focused on personal development, and they can no longer be perceived as rigid, mechanical entities. A more flexible perspective is needed, where universities are recognized as active participants in the world around them, developing their own organizational culture in line with their unique characteristics. Modern universities pursue strategic development across several levels:

- Global: Integrating higher education into the broader cultural and educational landscapes of Europe and the world.

- National: Contributing to the creation of scientific knowledge and the development of skilled professionals to support national economic and societal progress.

- Regional: Providing skilled personnel and ideological support to regional development, aligning with local labor market demands, and fostering social cooperation.

- Community: Connecting with the university's growth as an institution, which includes improving educational quality, advancing teaching methods, establishing effective management models, and encouraging staff and student self-governance. The university's administration system consists of two key components: the control subsystem and the managed subsystem. The control subsystem includes:

- Educational Authorities
- Local education boards,
- Regional education authorities,
- University leadership groups.

The managed subsystem encompasses various management systems within the university, such as: Growth Planning, Teaching and Research Activities, University Information and Computerization, Economic and Industrial Operations, International Activities, Community Engagement, Administrative and Financial Operations

Each subsystem carries out specific tasks aligned with its function. Strategic development management involves long-term planning and execution, creating and implementing strategic initiatives and projects, identifying growth strategies at different stages of the university's development, and establishing personnel strategies. Additionally, evaluating both the internal and external environments of the university is crucial to its success. This includes identifying strengths and weaknesses, developing oversight systems, and approving the university's strategic direction. The educational management subsystem ensures the educational process is aligned with state standards, adopts new educational technologies, maintains quality assurance systems, manages accreditation, and offers career guidance. For instance, Caucasus International University has been officially recognized as a higher education institution, meeting state educational standards for six years. The research management subsystem organizes research activities, coordinates academic events, supports staff development, supervises doctoral research, and oversees publishing efforts. The information and computerization subsystem focuses on integrating IT into education and research, managing digital resources, and providing access to online learning options.

Economic and industrial management involves financial oversight, market research, resource acquisition, and collaboration with local businesses. The international activities subsystem oversees global partnerships, academic collaborations, and the export of educational services. The social and educational management subsystem focuses on staff welfare, student engagement, cultural activities, and supporting student governance. The administrative and economic management subsystem ensures the maintenance of university facilities, campus safety, and support services.

A flexible and adaptable management model helps universities like Caucasus International University thrive as centers of learning, research, and cultural development. This model promotes creativity, fosters collaboration between departments, and ensures that scientific research stays relevant in a globalized world. In today's context, higher education serves not only as a tool for personal development but also plays a crucial role in economic and social advancement. It enhances national security by contributing to a country's international standing. Higher education management encompasses a wide range of activities, including educational, research, financial, and administrative responsibilities. Effective university leadership requires strategic planning, quality management, staff development, and ensuring the well-being of students and faculty.

As universities continue to evolve, new roles in management consulting have emerged to help leaders identify areas for improvement and implement necessary changes. These consultants, often trained in specialized programs, play a key role in driving innovation within educational institutions.

In Uzbekistan, government support for university innovation involves funding scientific research, developing new educational standards, and guiding the direction of higher education growth. University leaders must meet specific criteria to promote educational advancements, including articulating a vision for innovation, implementing frameworks for creative growth, and improving the overall educational system. While some argue that reducing competition among top universities may diminish true competitiveness, others emphasize that efficient management and continuous innovation can help universities provide high-quality education and remain competitive in both domestic and global educational markets.

Conclusion. In conclusion, the evolution of higher education management reflects a broader shift toward universities being seen as dynamic, self-governing institutions rather than static entities to be controlled. This transformation requires a flexible, adaptive approach to governance that allows universities to remain responsive to societal, economic, and technological changes. Modern universities must not only focus on education but also engage in research, community development, and global cooperation, all while fostering innovation and aligning with both national and international standards. Strategic development at various levels—global, national, regional, and community—ensures that universities contribute to the advancement of knowledge, economic growth, and societal well-being. The integration of innovative management practices, the use of technology, and the emphasis on quality education are crucial in enabling universities to meet the demands of a rapidly changing world. As educational institutions continue to evolve in response to globalization and emerging challenges, the role of leadership becomes even more critical in ensuring that universities not only adapt but thrive in a competitive and interconnected global educational landscape. Ultimately, higher education is not only a tool for personal development but a key driver of social and economic progress, with universities serving as hubs of innovation, cultural exchange, and intellectual growth. The future of higher education lies in the ability

of institutions to continuously innovate, adapt, and collaborate, ensuring their ongoing relevance and impact on society and the world at large.

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O'ZBEKISTON RESPUBLIKASI FAVQULODDA VAZIYATLAR VAZIRLIGI QUTQARUVCHILARINING PSIXOLOGIK TAYYORGARLIGI

***Annotatsiya:** maqolada O'zbekiston Respublikasi Favqulodda vaziyatlar vazirligi qutqaruvchilari psixologik tayyorgarligining umumiy maqsadi, mazmuni va usullari keltirilgan. Umumiy, maxsus va maqsadli psixologik tayyorgarliklarni o'tkazish tartibi yoritilgan. Vazirlik tizimida qutqaruvchilarning kasbiy psixologik tayyorgarlik kurslarini tashkillashtirish va o'tkazish ahamiyati ko'rsatilgan.*

***Kalit so'zlar:** psixologik tayyorgarlik, Boshlang'ich tayyorgarlik va malaka oshirish markazi, kasbiy mehnat sharoitlari, psixologik mashg'ulotlar.*

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PSYCHOLOGICAL TRAINING OF RESCUERS OF THE MINISTRY OF EMERGENCY SITUATIONS OF THE REPUBLIC OF UZBEKISTAN

***Abstract:** the article presents the general goal, content and methods of psychological training of rescuers of the Ministry of Emergency Situations of the Republic of Uzbekistan. The procedure for conducting general, special and targeted psychological training is explained. The importance of organizing and conducting professional psychological training courses for rescuers in the ministry system is shown.*

***Key words:** psychological training, primary training and education center, professional working conditions, psychological training.*

O'zbekiston Respublikasi Favqulodda vaziyatlar vazirligi qutqaruvchilarining psixologik tayyorgarligining umumiy maqsadi mutaxassislarining kasbiy muhim fazilatlarini samarali shakllantirish va rivojlantirish uchun shart-sharoitlarni ta'minlash, aqliy va kasbiy salomatlikni saqlash uchun sharoit yaratish, shuningdek, professional uzoq umr ko'rishga erishish hisoblanadi.

Psixologik tayyorgarlik mazmuni va usullari bo'yicha umumiy, maxsus va maqsadli turlarga bo'linadi.

1. Umumiy psixologik tayyorgarlik mutaxassislar tomonidan xizmat vazifalarini bajarish sharoitida va favqulodda vaziyatlarda kasbiy vazifalarni samarali bajarish uchun zarur bo'lgan psixologiya sohasidagi bilim, ko'nikma va malakalarni egallashni nazarda tutadi. Qutqaruvchlar bilan malaka oshirish jarayonida o'tkaziladigan nazariy mashg'ulotlarni umumiy tayyorgarlik deb tasniflash mumkin.

2. Maxsus psixologik tayyorgarlik mutaxassislarning psixologik barqarorligini rivojlantirishga qaratilgan. Bu masalalar to'siqlar kursi va jismoniy tarbiya mashg'ulotlarini o'tish jarayonida hal qilinadi.

3. Maqsadli psixologik tayyorgarlik mutaxassisning muayyan vaziyatda harakat qilishga psixologik tayyorgarligini rivojlantirishni o'z ichiga oladi. Masalan, ma'lum bir favqulodda vaziyat oqibatlarini bartaraf etishga jo'nab ketishdan oldin.

Ta'kidlash lozimki, ФББ "Boshlang'ich tayyorgarlik va malaka oshirish markazi"da ta'lim olish jarayonida psixologik tayyorgarlik uchun ajratilgan vaqt ichida barqaror kasbiy ko'nikmalarni, masalan, aqliy o'zini o'zi boshqarish ko'nikmalarini rivojlantirish va shakllantirish mumkin emas. Shuning uchun, malaka oshirish va qayta tayyorlash kursning amaliy yo'nalishi ko'nikmalarni keyingi xizmat faoliyati davomida mustaqil ravishda rivojlantirish uchun tashabbuskorlikni shakllantirishga qaratilishi lozim.

Agar biz psixologik tayyorgarlik kursini o'rganish uchun tashabbuskorlik haqida gapiradigan bo'lsak, unda birinchi navbatda, qutqaruvchilar tomonidan navbatchilikni o'tash paytida va favqulodda vaziyatlarni bartaraf etishda ishtirok etish jarayonida, shuningdek, favqulodda vaziyatlar oqibatida jabrlanganlar orasida ruhiy zo'riqishlar sabablarini tushuntirish bo'yicha mashaqqatli ishni bajarishimiz kerak. Shu bilan birga, insonning ekstremal sharoitlarda yuzaga keladigan psixologik stress oqibatlarini psixologik tayyorgarlik, rehabilitatsiya va relaksatsiya orqali kamaytirish mumkinligini alohida ta'kidlash lozim.

Albatta, agar qutqaruvchilarning kasbiy mehnat sharoitlari ko'plab kuchli stress omillari bilan bog'liq bo'lsa, unda bunday sharoitda ishlashning ruhiy salomatlik uchun salbiy oqibatlarini ko'pincha o'z-o'zidan tuzatilishi amrimahol. Biroq, salbiy holatlarni rivojlanishini va mavjud zo'riqishlarning oqibatlarini kamaytirish mumkin va zarur. Buning uchun faqat qutqaruvchining xohishi va psixologlar bilan hamkorlik qilishga tayyorligi talab qilinadi.

Psixologik tayyorgarlik kurslari kasbiy faoliyat xususiyatlari bilan bog'liq buzilishlarning rivojlanish ehtimoli va zo'riqishlarni kamaytirishning samarali vositasidir. Psixologik tayyorgarlik doirasidagi o'xshash mazmundagi ishlar qutqaruvchilarning psixologlar bilan hamkorlik qilishga tayyorligini shakllantirishga va psixologik bilimlarni kasbiy faoliyat tarkibiga kiritishga sezilarli hissa qo'shishi kerak. Biroq, sinovdan yaxshi o'tgan qutqaruvchi, keyingi tayyorgarlik bosqichida, o'zini o'zi boshqarish yoki jabrlanganlar bilan ishlashning texnikasi va usullarini eslab qolishda qiyinchiliklarga duch keladigan vaziyatni tasavvur qilish qiyin emas.

Boshqacha bo'lishi ham mumkin: mutaxassis keyingi kursga muayyan muammolarni hal qilish misollari bilan keladi, o'z-o'ziga psixologik yordam ko'rsatish va g'ayrioddiy vaziyatlarda qurbonlarni qo'llab-quvvatlash variantlarini mustaqil ravishda topadi. Bizning fikrimizcha, ikkinchi variant oldingi psixologik tayyorgarlik kursida olingan bilim, malaka va ko'nikmalar qutqaruvchining kasbiy faoliyati tarkibiga kiritilganligini ko'rsatishi mumkin. Bu variant, albatta, afzalroqdir va psixologik trening kursini juda samarali deb baholashga imkon beradi.

Ushbu yondashuvning xususiyatlaridan kelib chiqib, biz ba'zi tamoyillarni shakllantirishimiz mumkin, ularga qat'iy rioya qilish amalga oshirilayotgan ish samaradorligi uchun zarur shartlar hisoblanadi:

1. Qutqaruvchilarning psixologik amaliyoti holatidan qat'iy nazar, ularning kasbiy tajribasining ahamiyati ustuvor hisoblanadi.

2. O'tmish tajribasi bugungi kunda tahlil qilish va shu osnoda kelajakda psixologik amaliyot bilan bog'langan holda bilim va ko'nikmalarni takomillashtirishga asos bo'ladi.

3. Har bir ishtirokchining tayyorgarlik darajasini qanday bo'lsa shunday qabul qilish. Qutqaruvchining ushbu masalaga qiziqishining mavjudligi o'z-o'zidan bir qadriyatdir.

4. Har kim o'z fikriga ega. Shu munosabat bilan mashg'ulotlarni o'zgacha uslubda (interfaol) o'tish.

Bunda darslarning turli shakllaridan foydalanish tavsiya etiladi: rolli o'yinlar, biznes o'yinlari, o'quv elementlari bilan seminar va boshqalar. Ko'rgazmali qurol sifatida favqulodda vaziyatlardan olingan foto va video materiallardan foydalaniladi. Ushbu yondashuvning maqsadga muvofiqligi qanday?, degan o'rinli savol tug'iladi. Bu savolga javob berish uchun qutqaruvchilarning yangi jihozlar va unga biriktirilgan ko'rsatmalar bilan tanishish holatini ko'rib chiqamiz. To'g'ri harakatlar va ushbu uskunadan o'z vaqtida foydalanish amalda faqat unga biriktirilgan ko'rsatmalar bilan tanishish va hatto eslab qolishni anglatmaydi. Inson bunday narsalarga o'quv sharoitida asbob-uskunalarini qayta-qayta ishlatish orqali erishadi.

Xuddi shu tamoyil psixologik mashg'ulotlarda, ya'ni ishtirokchilar tomonidan olingan bilimlarni amaliy rivojlantirishda kuzatiladi. Qutqaruvchilar ishining o'ziga xos xususiyatlari ko'pincha shoshilinch va tezkor qaror qabul qilishni o'z ichiga oladi. Bunday vaziyatlarda faqat nazariy tayyorgarlik etarli emas. Darsda rolli o'yinlar va simulyatsiya qilingan vaziyatlar orqali olish mumkin bo'lgan amaliy ko'nikma va malakalar bilan bilimlarni mustahkamlash kerak. Ushbu yondashuv va ish tamoyillari doirasida, misol sifatida, biz qutqaruvchilarning psixologik tayyorgarligi kursiga kiritilgan rolli o'yinlardan birini ko'rib chiqamiz - "Favqulodda vaziyat o'chog'ida izolyatsiya qilingan "jabrlanuvchi" bilan muloqot".

Ushbu mavzu juda dolzarb bo'lib, bunga yong'in, yo'l transport hodisalari, zilzila oqibatida bino va inshootlar konstruksiyalarini qulashi va boshqa holatlarni kiritish mumkin. Qutqaruvchik amaliyoti shuni ko'rsatadiki, "jabrlanuvchi"larning ko'pchiligi favqulodda vaziyat o'chog'idan olib chiqilgan zahoti halok bo'lishadi va

har doim ham olgan jarohatlari natijasida emas. Bunga misol qilib, 2023 yil Turkiyada sodir bo'lgan zilzila oqibatlarini bartaraf qilish jarayonidagi bir holatini keltirish mumkin, o'shanda qutqaruvchilar ikki kun davomida vayronalar ostidan o'z hushida bo'lgan odamni olib chiqish uchun ishlaganlar. Ular "jabrlanuvchi" bilan aloqada bo'lisgan, navbatma-navbat, tanaffuslarsiz ishlashgan. Hamma harakatlar insonni qutqarish uchun qilingan. Erkak kishini olib chiqishga erishildi, ammo qutqarib bo'lmadi, u shifokorlarga topshirilganda vafot etdi. Yuqorida tasvirlangan vaziyat, afsuski, qutqaruvchilar amaliyotidagi yagona holat emas. Nima uchun bu sodir bo'lmoqda? Inson o'z oldiga maqsad qo'yadi va unga erishish uchun bor kuchi bilan harakat qiladi. Bunday holda, asosiy va, qoida tariqasida, yagona maqsad - bu dahshatli tushni tugatish uchun hamma narsani qilishdir! Jabrlanuvchi o'zini qutqarish uchun bor kuchini sarflaydi, tanasining ichki zaxiralarini safarbar qiladi. Uning uchun hozir yashash, sevish, yaratish emas, omon qolish muhim... Keyin nima bo'ladi? "Jabrlanuvchi" qutqarildi. Dahshatli tush tugadi, u yorug'likni ko'rdi. Ko'pincha bu odam o'ziga bog'liq bo'lgan hamma narsani qildim, endi boshqalar (qutqaruvchilar, shifokorlar) qolganlari bilan shug'ullanishadi deb hisoblaydi.

Aynan shu bosqichda jabrlanuvchi keyingi voqealar uchun javobgarlikdan xalos bo'ladi - boshqa kurashadigan hech narsa yo'q, asosiy maqsadga erishildi. Endi u nihoyat dam olishi va ... o'lishi mumkin. Qutqaruvchilarning bunday daqiqalarda o'zlarini qanday his qilishlarini tasavvur qilish mumkin - ular nafaqat odamni olib chiqish uchun barcha mumkin bo'lgan va imkonsiz harakatlarni amalga oshirishgan, balki butun ish davomida u bilan aloqada bo'lganlar. Shunday vaziyatda bo'lgan qutqaruvchi o'ziga qayta-qayta savollar beradigan holatlar tez-tez uchrab turadi: "Men odamning omon qolishi uchun hamma narsani qildimmi? Men hamma narsani to'g'ri qildimmi?"

Psixologik tayyorgarlik mashg'ulotlarida "jabrlanuvchi" bilan qanday aloqada bo'lish kerakligi o'rgatiladi. "Jabrlanuvchi" bilan ishlashning isbotlangan, eng samarali strategiyalarini shakllantirish qutqaruvchiga jabrlanuvchi bilan ishlashda xatolarga yo'l qo'ymaslik imkonini beradi va salbiy oqibatlar yuzaga kelganda, unga savolga aniq javob berishga imkon beradi.

Xulosa o'rnida shuni ta'kidlash lozimki, Favqulodda vaziyatlar vazirligi qutqaruvchilarining psixologik tayyorgarligi muhim yo'nalishlardan biri hisoblanib, kasbiy faoliyatni samarali amalga oshirish uchun zarur bo'lgan bilim, malaka va ko'nikmalarni o'zlashtirishni o'z ichiga oladi. Ushbu malaka va ko'nikmalarni favqulodda vaziyatlar oqibatlarini bartaraf qilish jarayonida qo'llash orqali jabrlanganlar hayotini saqlab qolishga erishiladi.

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SUV OMBORLARINING UMUMIY XUSUSIYATLARI ULARNI YARATILISH TARIXI VA FOYDALANISH MASALALARI

***Annotatsiya:** Ushbu maqolada suv omborlarning geografik xususiyatlari, xo'jalikdagi ahamiyati, yaratilish tarixi, suv omborlarning qurilishi natijasida landshaftlarning o'zgarishi bayon etilgan.*

***Kalit so'zlar:** suv ombori, hovuz, kanal, qishloq xo'jaligi, flora, fauna, sho'rlanish, botqoqlanish, daryo, landshaft, ekologik omil, ko'l, soy, irrigatsiya, ihota, to'g'on.*

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GENERAL CHARACTERISTICS OF RESERVOIRS THE HISTORY OF THEIR CREATION AND ISSUES OF USE

***Annotation:** this article describes the geographical features of reservoirs, the importance of farms, the history of creation, the transformation of landscapes as a result of the construction of reservoirs.*

***Keywords:** Reservoir, Pond, canal, agriculture, flora, fauna, salinity, waterlogging, river, landscape, ecological factor, Lake, sound, irrigation, ihota, dam.*

Suv ombori - to'g'onlar yordamida suvni yig'ish va saqlash uchun quriladigan sun'iy suv havzasi hisoblanadi. Hidrologik adabiyotlarda yozilishicha, daryolardagi suv miqdori yil davomida mavsumdan-mavsumga va u yildan bu yilga o'zgarib turadi. Yer yuzidagi, ayniqsa, O'rta Osiyo kabi arid iqlimli hududlardagi ba'zi bir daryo va soylarning suv miqdori yil davomida shu qadar notekis va noqulay taqsimlanganki, oqibatda milliard-milliard metr kub suv xalq xo'jaligiga hech qanday foyda keltirmasdan behuda oqib ketadi. Ayrim paytlarda, masalan, toshqin va to'linsuv davrlarida to'lib-toshib oqib, katta zarar ham keltiradi. O'lkamiz sharoitida, qishloq xo'jaligida suvga bo'lgan talab ortgan mavsumlarda esa bunday daryo va soylardagi suv keskin kamayib ketadi, ayrim hollarda butunlay qurib qoladi.

Mana shunday sharoitda daryo va soylar suvidan to'la va samarali foydalanish hamda toshqinlarni oldini olish maqsadida ularning oqim rejimini boshqarib turish zarur. Bu muammoni daryolarda sun'iy ko'llar - suv omborlari barpo etish yo'li

bilan hal etish mumkin. Suv omborlari qurish o'lkamiz kabi qurg'oqchil hamda qishloq xo'jaligi sug'orishga asoslangan hududlarda ayniqsa zarurdir. Ko'pchilik suv omborlarini qurishda ekinzorlarni suv bilan ta'minlashdan tashqari, ulardan gidroenergetika, baliqchilikni rivojlantirish, yirik sanoat korxonalari va shaharlar suv ta'minotini yaxshilash maqsadida foydalanish ham nazarda tutiladi.

Sayyoramizning deyarli barcha hududlarida gidrotexnik inshootlarni qurish ishlari bajarilib kelinmoqda. Ularning eng muhimi har xil melioratsiya (so'g'orish va quritish) turlarini amalga oshirish maqsadida bunyod etilgan suv omborlar va kanallar kabi yangi suv omborini barpo etish kiradi.

Suv omborlarning o'zga xos xususiyatlarini o'rganish to'g'risidagi ma'lumotlar ko'plab gidrolog olimlarning monografiyalarida va ilmiy maqolalarida keltirib o'tilgan. Jumladan, A.B.Avakyan (1982), A.B.Avakyan va b.(1987). Y.S. Jasilyev (1980), S.L.Vendrov, K.N.Dyakonov (1976), Y.M.Matarzin b.(1977), V.A.Sharapov (1974), V.M.Shirokov (1974), o'zbek olimlarida SM.Mamarasulov (1964), V.L.Shulst, R.Masharipov (1969), T.Shoturayev, P.Baratov (1977), M.Qoriyev (1969), S.R.Saidov (2000) va boshqalar kiradi.

Tarixiy ma'lumotlarga ko'ra, O'rta Osiyo davlatlari hududida kichik suv omborlari-hovuzlar eski eraning oxiri va yangi eraning boshlaridayoq qurilgan. Ularni qurishdan maqsad kichik soylar suvini to'plab, so'ng undan sug'orish ishlarida foydalanish bo'lgan.

X-XII asrlarga kelib ancha yirik suv omborlari qurilgan. Ulardan biri X asrda barpo etilgan Xonbandi suv omboridir. Bu suv ombori Pasttog' darasining (Jizzax viloyati, Forish tumani) eng tor joyida qurilgan bo'lib, to'g'onining balandligi 15 metrdan ortiq bo'lgan hamda 1,5 mln m³ dan ko'proq suvni sig'dira olgan. O'rta asrlarda (XVI asr) qurilgan yirik suv omborlaridan biri Samarqand viloyati Oqchob qishlog'i yaqinida barpo etilgan Abdullaxonbandi suv omboridir. Olimlar tomonidan to'plangan arxeologik ma'lumotlar shu narsadan darak beradiki, har ikki suv omborlarining to'g'oni aniq hisob-kitoblar bo'yicha, oldindan tayyorlangan maxsus loyihalar asosida barpo etilgan.[5]

Ko'pgina qadimiy sivilizatsiyalar (tamaddunlar) qurg'oqchil hududlarda rivojlanib, yerlarni sug'orish hayotiy zarurat bo'lib, aholining o'troqlashishiga olib keldi va ilk davlat tuzilmalarining paydo bo'lishi va rivojlanishida muhim omil bo'ldi. Suv omborlarini yaratish, eng yirik qurilish ishlaridan biri bo'lib, o'sha davr uchun, eng yangi texnologiya va qurilish san'atidan foydalanishni anglatadi.

Birinchi suv omborlar, qadimgi Misrda, birinchi sulola asoschilari davrida, ya'ni miloddan avvalgi 3 ming yildan oldingi vaqt davomida yaratilgan. Fir'avn Menes davrida, poytaxt Memfis shahri qurilayotgan joyda Nil daryosini burish uchun, daryoning yuqori qismida, 20 km uzoqlikda uzunligi 450 m va balandligi 15 m bo'lgan Koshish to'g'oni qurdirgan. Taxminan, miloddan avvalgi 2800-2500 yillarda, Qohiradan 30 km janubda Garaviy vodiysida, balandligi 12 m va uzunligi 108 metr bo'lgan Saddel-Kafara to'g'oni qurilgan bo'lib, suv o'tkazgich yo'qligi sababli qurib bo'lingandan so'ng uni yuvib ketgan (Schnitter, 1965). Miloddan avvalgi 2300 yillar atrofida, sig'imi 1 kilometr kubdan ortiq bo'lgan "mashhur va sirli" Myoris suv ombori qurilgan (Qohiradan 80 km janubiy-g'arbda), keyinchalik

uni Gerodot, dunyoning mo'jizalaridan biri deb atagan. Ushbu suv ombori, Nildan kanal orqali yetkazib beriladigan suv bilan to'ldirilgan.[1]

Misrga qaraganda, Yaqin Sharqda suv omborlarini qurish bir oz kechroq boshlandi. Miloddan avval 2500 yilga yaqin, Tigr daryosida, Samarra shahridan yuqoriroqda, balandligi 12 metr bo'lgan Nimrud to'g'oni barpo etildi, ushbu to'g'on ba'zi ma'lumotlarga ko'ra, eramizning VII asrlariga qadar faoliyat yuritgan, to'g'on va suv ombori, ushbu davrning eng buyuk inshootlaridan biri bo'lib, uning suv oqimi yiliga 1300 m³/sekundiga bo'lgan katta daryoda qurilgan. Suv omboridan Naxrvon kanali boshlangan bo'lib, u Tigr daryosi bo'ylab 400 kmga cho'zilgan; ushbu kanalni to'yintirish maqsadida, keyinchalik chap irmoqlaridan bittasida to'g'on barpo etilgan. Eramizning IX asrida arablar, Nimrud to'g'onini qayta tiklashga harakat qilib ko'rdilar, lekin bu harakat muvaffaqiyatsiz yakunlandi.

Suv omborlari qurilishi va ulardan foydalanish XX asrda ommaviy tus olib, planetar darajaga ko'tarildi. Bir tomondan, suv omborlari iqtisodiy rivojlanishning omillaridan biri bo'lsa (suvga bo'lgan aholining ehtiyoji, energiya manbai, qishloq xo'jaligi, transport), ikkinchi tomondan, landshaft-ekologik omillaridan biriga aylanib, tabiatga salbiy ta'siri bilan namoyon bo'ldi (botqoqlanish, sho'rlanish, katta hududlarning suv tagida qolishi, kasalliklar, flora va faunaning o'zgarishi). Bu suv omborlarining geografiyasi, suv sig'imi, maydoni, shakli bilan bog'liqdir.

Suv omborlarining qurilishi va faoliyati natijasida tabiiy landshaftlar o'zgaradi, ularning yangi tiplari, inson tomonidan boshqariladigan, gidrotexnika inshootlari (to'g'on, kanal, damba va boshqalar), suv bosishi bilan bog'liq bo'lgan gidrogen landshaftlar sho'rlangan, botqoqlashgan maydonlar, tabiiy landshaftlarning tabiiy antropogen tiplari bilan almashishi kuzatiladi.[2]

Suv omborlarining qurilishi natijasida tabiiy landshaftlarning qiyofasi, tuzilishi, ulardagi kechayotgan jarayonlar va ekologik holati o'zgaradi. Bu esa, asosan, inson aralashuvi natijasida sodir bo'lishi bevosita yoki bilvosita yangi tipdagi landshaftlarning shakllanishi va paydo bo'lishiga olib keladi.

Xulosa qilib aytganda, suv omborlarini yaratishning asosiy maqsadi oqimni tartibga solish, iqtisodiyotning energetika, irrigatsiya, suv transporti, suv ta'minotini tartibga solish, suv omborlarini qurg'oqchil hamda qishloq xo'jaligini sug'orishga asoslangan hududlar uchun zarurligi e'tirof etildi.

Yuqorida ta'kidlab o'tilgan xulosalardan kelib chiqqan holda, quyidagi takliflarni bildiramiz:

- suv ombori atrofida terraslashtirilgan ixotazoralarni tashkil etilishi tog' vodiy shamollarining kuchini kamaytirib suv ombor yuzasidan suvlarning ortiqcha bug'lanib ketishining oldi olinadi.

- sel va suv toshqinlarini hamda kichik soyliklarning suv rejimini o'rganish orqali suv tanqischiligini bartaraf etish mumkin. Ya'ni, suv omborlardan foydalanish imkoniyatini yana kengaytiradi.

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ZAMONAVIY AXBOROT TEXNOLOGIYALARIDAN FOYDALANISH ORQALI MATEMATIK FANI ELEMENTLARINI O‘RGANISH

***Annotatsiya:** Zamonaviy jamiyatni axborot-kommunikatsiya texnologiyalarisiz tasavvur etib bo‘lmaydi. Ammo, o‘qitish sifatini oshirishda axborot-kommunikatsiya texnologiyalarining didaktik imkoniyatlaridan foydalanish masalasi yetarli darajada o‘rganilmagan. Ushbu maqolada matematika fani elementlarini o‘qitishda zamonaviy axborot texnologiyalaridan foydalanib o‘qitish sifat darajasini oshirish fikrlar yuritilgan.*

***Kalit so‘zlar:** axborot-kommunikatsiya, texnika, modellashtirish, grafik, konus, aylana, koordinata o‘qlari, parabola, funksiya, tekislik zamonaviy axborot texnologiyalari.*

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STUDYING ELEMENTS OF MATHEMATICS THROUGH THE USE OF MODERN INFORMATION TECHNOLOGIES

***Abstract:** Modern society cannot be imagined without information and communication technologies. However, the issue of using the didactic capabilities of information and communication technologies to improve the quality of teaching has not been sufficiently studied. This article discusses the use of modern information technologies in teaching the elements of mathematics to improve the quality of teaching.*

***Keywords:** information and communication, technology, modeling, graphics, cone, circle, coordinate axes, parabola, function, plane, modern information technologies.*

Bugungi kunda Respublikamizda matematika ta’limini rivojlantirish bo‘yicha salmoqli ishlar amalga oshirilmoqda: matematika fanini o‘qitishning maqsadlari, o‘quv materiallari mazmunini tanlash tamoyillari aniqlashtirish, darsliklar va boshqa o‘quv vositalarini zamon talabiga moslashtirish ishlari olib borilmoqda, o‘qitishning samarali shakllari va metodlari ishlab chiqilmoqda. Bu jarayon hozirgi vaqtdagi fanning, fan va texnika o‘rtasidagi o‘zaro integratsiyasining rivojlanishi, jamiyatning barcha sohalariga, yangi axborot texnologiyalarining keng joriy etilishiga asoslangan ilmiy-texnik revolyusiyaning natijalarini o‘z ichiga qamrab oladi.

Matematika fanining inson aqlzakovati, diqqatini rivojlantirish, maqsadga erishish uchun qat'iyat va irodani tarbiyalash, algoritmik intizomni ta'minlash, tafakkurini kengaytirishda muhim o'rin tutadi. Matematika olam haqidagi bilimlarning asosi bo'lib, ishlab chiqarish, fan va texnika taraqqiyotida, shuningdek, atrofimizdagi hodisa va hodisalarning o'ziga xos qonuniyatlarini ochishda muhim rol o'ynaydi [1].

Talabalarda matematikaga bo'lgan qiziqishlarini oshirishda ta'lim jarayonida amaliy va nostandart xarakterdagi masalalardan foydalanmasdan bo'lmaydi. Bunday masalalarni yechish uchun talabalarda analiz, sintez, analogiya, umumlashtirish, induksiya va deduksiya kabi mantiqiy mulohaza yuritish faoliyatini, intuitsiya kabi qobiliyatlarni rivojlantirib, talabalarni olingan natijalar ustida tanqidiy fikrlash qobiliyatini rivojlantirishga o'rgatadi. Ko'p hollarda amaliy va nostandart xarakterdagi masalalarning yechimini darhol topmasdan, axborot texnologiyalari vositasidan foydalanish orqali yechimni aniqlash mumkin[1].

$y = x^2 + 2x - 8$ funksiyani koordinata o'qlari bilan kesishish nuqtalarini, qiymatlar sohasini aniqlaymiz. Mazkur funksiya $y = ax^2 + bx + c$ kvadrat funksiya bo'lib uning grafigi paraboladan iborat bo'ladi. Agar funksiyada $a > 0$ dan katta bo'lsa, parabola shoxlari yuqoriga qaraydi va funsiya qiymatlari sohasi $[-\frac{\sqrt{D}}{2a}; +\infty)$ dan iborat bo'ladi. Afar $a < 0$ dan kichik bo'lsa, parabola shoxlari pastga qaraydi va funksiyaning qiymatlar sohasi $(-\infty; -\frac{\sqrt{D}}{2a}]$ dan iborat bo'ladi.

Mazkur funksiyaning koordinata o'qlari bilan kesishish nuqtalarini aniqlaymiz.

$$\begin{cases} y = 0 \\ x^2 + 2x - 8 = 0 \end{cases} \Rightarrow D = b^2 - 4ac = 2^2 - 4(-8) = 36$$

$$x_{1,2} = \frac{-b \pm \sqrt{D}}{2a} \Rightarrow x_1 = \frac{-2 + \sqrt{36}}{2} = 2, \quad x_2 = \frac{-2 - 6}{2} = -4.$$

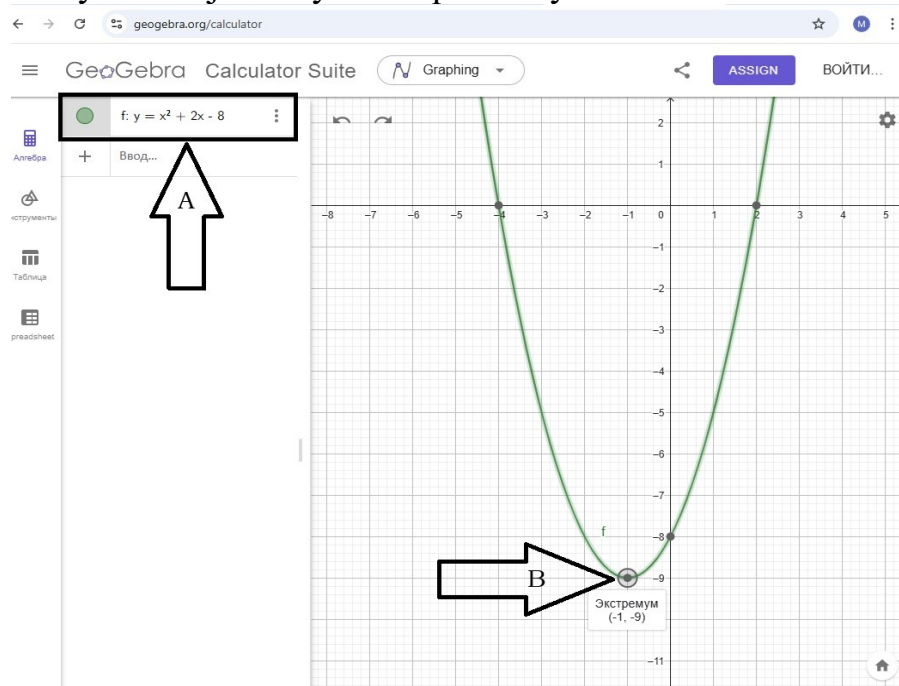
Demak funksiya Ox o'qini $(2; 0)$ va $(-4; 0)$ nuqtalarda kesib o'tadi. Endi Oy o'qini kesib o'tish nuqtasini aniqlaymiz. Buning uchun

$\begin{cases} x = 0 \\ y = x^2 + 2x - 8 \end{cases}$ sistemani ishlaymiz. Bundan $(0; -8)$ yechimga ega bo'lamiz. Bu nuqta funksiyaning Oy o'qini kesib o'tish nuqtasi hisoblanadi.

Mazkur funksiyada $a > 0$ dan katta bo'lganligi uchun bu funksiyaning qiymatlar sohasi $[-\frac{\sqrt{D}}{2a}; +\infty)$ dan iborat bo'ladi. $D = b^2 - 4ac = 2^2 - 4(-8) = 36$
 $[-\frac{\sqrt{D}}{2a}; +\infty) \Rightarrow [-\frac{\sqrt{36}}{2}; +\infty) \Rightarrow [-3; +\infty)$. Funksiya qiymatlar sohasi $E(y) \in [-3; +\infty)$ dan iborat bo'ladi.

Mazkur masalani axborot texnologiyalar vositasidan foydalanib yechamiz. Buning uchun <https://www.geogebra.org/> saytdan foydalanib talabalarga $y = x^2 + 2x - 8$ funksiyani koordinata o'qlari bilan kesishish nuqtalarini, qiymatlar sohasini aniqlaymiz. Saytning A punktiga $y = x^2 + 2x - 8$ funksiyani kiritamiz va funksiya grafigini programma chizib beradi. Funksiya grafigida Ox o'qini $(2; 0)$ va $(-4; 0)$ nuqtalarda Oy o'qini $(0; -8)$ nuqtada kesib o'tishi ko'rinib turibti (1-rasm).

Matematika fanini o'qitishda axborot texnologiyalaridan foydalanishning qulayliklaridan yana bir jihati ayrim o'quv vaziyatlarini modellashtirishdir[3].



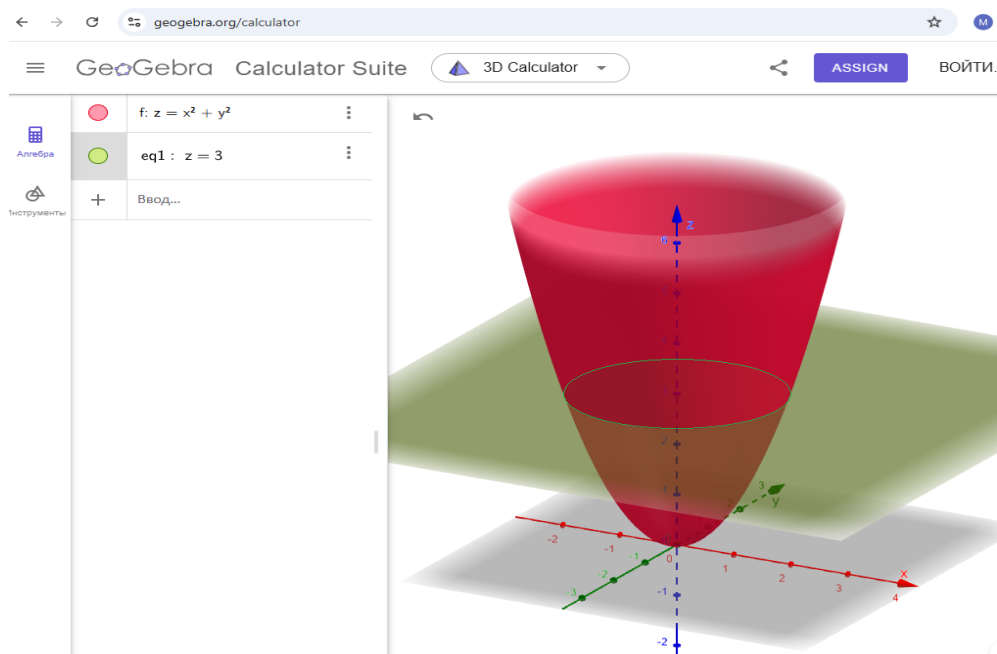
1-rasm

Matematika fanining fazodagi aylanma jismlarni biror tekislik kesilganda hosil bo'ladigan chiziqlarni aniqlashda grafik bilan ishlovchi dasturlardan foydalanilsa talabalarning tasavvur qilish qiyin bo'lgan materiallarni tushunishni osonlashtiradi. Quyidagi $z = x^2 + y^2$ aylanma jismni $z = 3$ to'g'ri chiziq bilan kesishdan hosil bo'ladigan ikkinchi tartibli chiziq tenglamasini aniqlaymiz.

Matematika fani tushunchalaridan ma'lumki, $\begin{cases} z = x^2 + y^2 \\ z = 3 \end{cases}$ tenglamalar sistemasini qanoatlantiruvchi nuqtalar to'plami kesishishdan hosil bo'lgan chiziqni ifodalaydi. Bu chiziq tenglamasi $x^2 + y^2 = 3$ dan iborat bo'ladi. Bu radiusi $\sqrt{3}$ ga teng bo'lgan aylana tenglamasidir.

Mazkur masalani ham <https://www.geogebra.org/> grafik muharriridan foydalanib, talabalarga hosil bo'ladigan chiziqni grafikda tasvirlaymiz (2-rasm).

Grafikdan ko'rinib turibiki, $z = x^2 + y^2$ funksiya grafigi konus sirt bo'lib, uni $z = 3$ tekislik bilan kesilyapti. Hosil bo'lgan kesim chizig'i aylanadan iborat bo'layapti.



2-rasm

Xulosa qilib aytish mumkinki, matematika fanini talabalarga o'rgatishda axborot texnologiyalaridan foydalanib o'qitish ijobiy natijalar beradi. Talabalarni turli funksiyalarni grafiklaridan foydalanib ularning xossalari tushunishlari va amaliy masalalarga mustaqil tadbiiq qila olish ko'nikmasini rivojlantiradi.

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MAKTABGACHA YOSHDAGI BOLALARNING YOSHGA DOIR PSIXOLOGIK XUSUSIYATLARI

***Annotatsiya:** Ushbu maqolada maktabgacha yoshdagi bolalarning yoshga doir psixologik xususiyatlari va ularning bola sog'lom rivojlanishidagi ahamiyatini bilib olishimiz mumkin.*

***Kalit so'z:** bola, mustaqil faoliyat, Maktabgacha yoshdagi bolalar, psixologiya, sog'lom*

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PSYCHOLOGICAL CHARACTERISTICS OF PRESCHOOL CHILDREN WITH AGE

***Annotation:** in this article we can find out the psychological characteristics of preschool children regarding age and their importance in the healthy development of the child.*

***Keyword:** child, independent activity, preschool children, psychology, healthy*

Bola uch yoshga to'lib maktabgacha yoshiga o'tgandan so'ng uning jismoniy jihatdan o'sishi bir qadar sekinlashadi. Bolaning jismoniy jihatdan o'sishidagi notekislik bu davrda ham davom etaveradi. Masalan, bola tug'ilgandan bir yoshga to'lguncha bo'yining o'sishini quyidagi jadvalda ko'rishimiz mumkin. Maktabgacha yoshda jismoniy rivojlanish ko'rsatkichlari: Yoshi 0–1 1–2 2–3 3–4 4–5 5–6 6–7 Bo'yi (sm) 25 40 8 4 6–7 7–8 10 Maktabgacha yoshdagi bolaning tanasi, xususan, oyoqlarining uzayishi tufayli gavdasidagi umumiy mutanosiblik o'zgaradi Bolaning 3 yoshdan 7 yoshgacha bo'lgan maktabgacha yoshi bolalik davrining katta bir qismini tashkil etadi. Asosan mana shu davrdan boshlab bolaning mustaqil faoliyatlari rivojlanadi hamda shaxsiy individual xususiyatlari (shaxsiy fazilatlar) tarkib topa boshlaydi. Rus pedagoglaridan P.F.Lesgaftning fikricha, insonning maktabgacha yoshidagi davri shunday bir davrki, ana shu davr mobaynida kelgusida qanday xarakter xislatlari paydo bo'lishi belgilanadi va

axloqiy sifatlarining asoslari yuzaga keladi. Insonning kamol topa borishida maktabgacha yoshdagi davrning ahamiyatiga doir P.F.Lesgaftning bu fikri rus pedagogi A.S.Makarenkoning quyidagi fikriga to'la mos keladi. A.S.Makarenko bolalarni juda kichik davridan boshlab tarbiyalash zarurligi haqida gapirib, tarbiyaning eng muhim asoslari bolaning besh yoshgacha bo'lgan davri mobaynida yuzaga keltiriladi. Mana shu davrda qilingan butun tarbiya, tarbiya jarayonining 90% ini tashkil etadi, degan edi. Haqiqatan ham bolaning maktabgacha yoshidagi davri shu qadar mazmundor va faol davrdiki, bu davr bolaning kelgusi o'sishida albatta o'z aksini qoldiradi. Shuning uchun maktabgacha yoshidagi davr ta'sir o'tkazish kuchi jihatidan g'oyat mas'uliyatlidir. Bola ilk yoshdan maktabgacha davrga o'tgach, uning butun yashash sharoitida jiddiy o'zgarishlar yuz beradi. Birinchidan, bola bog'cha yoshiga o'tgach, uning faoliyat doirasi ancha kengayib, mustaqilligi yanada ortadi. Uning o'yinlari, xatti harakatlari ham boshqacha mazmunga ega bo'la boshlaydi. Ikkinchidan, bolaning butun faoliyatida nutqning roli orta boradi. Uchinchidan, bola maktabgacha yoshga o'tgach, muayyan dastur asosida maxsus pedagog tomonidan tarbiyalana boshlaydi. Maktabgacha yoshdagi bolaning yashash sharoitida yuzaga kelgan bu o'zgarishlar uning jismoniy va psixik jihatdan o'sib kamol topishniga ta'sir etmay qolmaydi. Maktabgacha yoshdagi bolaning jismoniy jihatdan rivojlanishi Yuqorida aytib o'tganimizdek, bolaning jismoniy jihatdan eng tez o'sadigan davri bir-ikki yoshligiga to'g'ri keladi.

Bola uch yoshga to'lib maktabgacha yoshiga o'tgandan so'ng uning jismoniy jihatdan o'sishi bir qadar sekinlashadi. Bolaning jismoniy jihatdan o'sishidagi notekislik bu davrda ham davom etaveradi. Masalan, bola tug'ilgandan bir yoshga to'lguncha bo'yining o'sishini quyidagi jadvalda ko'rishimiz mumkin. Maktabgacha yoshda jismoniy rivojlanish ko'rsatkichlari: Yoshi 0–1 1–2 2–3 3–4 4–5 5–6 6–7 Bo'yi (sm) 25 40 8 4 6–7 7–8 10 Maktabgacha yoshdagi bolaning tanasi, xususan, oyoqlarining uzayishi tufayli gavdasidagi umumiy mutanosiblik o'zgaradi. Maktabgacha yosh davrida bolaning oyoqlari nisbatan ko'proq o'sadi. Biroq shunday bo'lsa ham 6–7 yoshgacha bo'lgan bolaning suyaklari hali yaxshi qotmagan, ya'ni tog'aysimon holatda bo'ladi. Maktabgacha yoshdagi bolalarning pay va muskullari hali baquvvat emasligiga qaramay juda harakatchan bo'ladilar. Bola 7 yoshga yetgach, umurtqa suyagining bo'yin qismida oldinga tomon, ko'krak qismida esa orqaga tomon ma'lum darajada egilish yuz beradi. Keyinchalik bolaning umurtqa suyagi mana shu shaklda saqlanib qoladi. Bola qaddi-bastining to'g'ri bo'lishida umurtqa suyagining ana shunday holda saqlanib qolishi juda katta ahamiyatga ega. Bog'cha yoshidagi bolaning bosh suyagi ham tez o'sadi. Bola uch yoshga to'lgandan so'ng bosh miya suyagining orqa va tepa tomonlari tez o'sadi. Maktabgacha yoshda bolaning ichki organlarida ham jiddiy o'zgarishlar ro'y beradi. Masalan, bolaning yuragi hajm jihatidan chaqaloq bolaning yuragiga nisbatan 4–5 barobar kattalashgan, biroq uning muskullari hali yetarli darajada mustahkamlanmagan bo'ladi. Mana shuning uchun bog'cha yoshidagi bolaning yuragi bir qisqarishda organizm uchun yetarli qon siqib chiqara olmaydi. Bola yuragining katta odamlar yuragiga qaraganda nisbatan tezroq urishining sababi ham mana shundadir. Chunonchi, agar 1 yoshdagi bolaning yuragi bir marta qisqarishda

10,2 kub/sm qon siqib chiqarsa, 7 yoshli bolaning yuragi bir marta qisqarishda 23 kub/sm dan qon siqib chiqaradi. Katta yoshdagi odamning yuragi esa bir marta qisqarishda 60 kub/ sm dan ortiqroq qon siqib chiqaradi. Maktabgacha yoshdagi davrda yurakning nisbatan tezroq ishlashi tufayli bolaning qon bosimi katta kishilarga nisbatan biroz kuchliroq bo‘ladi.

Maktabgacha yoshdagi bolalar nerv sistemasining o‘shishi Maktabgacha yoshdagi bolalar psixikasining rivojlanishida ularning nerv sistemalarida sodir bo‘ladigan o‘zgarishlar juda katta rol o‘ynaydi. Bolalar nerv sistemalarining eng kuchli taraqqiy etadigan davri 1 yoshgacha bo‘lgan davrga to‘g‘ri keladi. Yangi tug‘ilgan bola bosh miyasining o‘rtacha og‘irligi 380–400 g keladi. Bola bog‘cha yoshiga yetguncha uning miyasi g‘oyat tez rivojlanib, deyarli uch baravar ko‘payadi. Demak, bog‘cha yoshiga yetgan bolalar miyasining og‘irligi 1100–1200 g ga yetadi. Maktabgacha yoshdagi bolalar nerv sistemasining bundan keyingi takomillashishi davomida bosh miya po‘sti qismidagi markazlarni bir-biri bilan tutashtiruvchi nerv tolalari ham miyelin qobig‘i bilan qoplana boshlaydi. Bosh miyadagi nerv tolalarining miyelin qobig‘i bilan qoplanishi aks ettirish jarayoni, ya‘ni psixik jarayonlar va ularning rivojlanishi uchun juda katta ahamiyatga ega. Nerv tolalari miyelinizatsiyalashganda, birinchidan, qo‘zg‘alishlarning nerv tolalaridan tez o‘tishi ta‘minlansa, ikkinchidan, qo‘zg‘alishning faqat tegishli markazgagina borishini ta‘minlaydi. Buning natijasida organizmga tashqi muhitdan ta‘sir etib turuvchi turli qo‘zg‘atuvchilar ta‘siri tufayli yuzaga keladigan shartli reflekslar (muvaqqat bog‘lanishlar) nisbatan tez hosil bo‘ladi. Bundan tashqari, har bir qo‘zg‘alishning tegishli markazigagina aniq borishi bog‘cha yoshidagi bolalarning o‘z harakatlarini epchillik bilan idora qila olishlarini ta‘minlaydi.

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INFRAQIZIL NURLARNING QISHLOQ XO'JALIGIDA QO'LLANILISHI

***Annotatsiya:** Infraqizil nurlar qishloq xo'jaligida turli sohalarda keng qo'llanilmoqda. Ushbu texnologiya o'simliklarni parvarishlash, hosildorlikni oshirish va resurslardan samarali foydalanishda muhim rol o'ynaydi. Quyida infraqizil nurlarning qishloq xo'jaligida qo'llanilishining asosiy yo'nalishlari keltirilgan.*

***Kalit so'zlar:** Infraqizil nurlar, qishloq xo'jaligi, tuproq namligi, hosildorlikni oshirish, kasalliklarni erta aniqlash, mahsulotlarni saqlash, qayta ishlash.*

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APPLICATION OF INFRARED LIGHTS IN AGRICULTURE

***Abstract:** Infrared rays are widely used in agriculture in various fields. This technology plays an important role in plant care, increasing productivity and using resources efficiently. The following are the main applications of infrared rays in agriculture.*

***Key words:** Infrared rays, agriculture, soil moisture, increasing crop yields, early detection of diseases, storage of products, processing.*

Infraqizil nurlar qishloq xo'jaligida turli sohalarda keng qo'llanilmoqda. Ushbu texnologiya o'simliklarni parvarishlash, hosildorlikni oshirish va

resurslardan samarali foydalanishda muhim rol o'ynaydi. Quyida infraqizil nurlarning qishloq xo'jaligida qo'llanilishining asosiy yo'nalishlari keltirilgan:

1.O'simliklarni monitoring qilish. Infraqizil nurlar yordamida o'simliklarning sog'lig'ini monitoring qilish mumkin. IR kameralar o'simliklarning barglaridagi namlik darajasini aniqlashga yordam beradi, bu esa sug'orish tizimlarini optimallashtirishga imkon beradi. Shuningdek, o'simliklarning stress holatini aniqlash orqali kasalliklarni erta bosqichda aniqlash va davolash mumkin. Infraqizil nurlar yordamida o'simliklarni monitoring qilish qiziqarli va samarali usuldir. Bu texnologiya o'simliklarning sog'lig'i va o'sishini kuzatish uchun ishlatiladi. Infraqizil nurlar o'simliklarning barglari va boshqa qismlaridan qaytgan nurlarni o'lchash orqali ularning holatini aniqlashga yordam beradi.

2.Infraqizil nurlar yordamida o'simliklarni monitoring qilish. Infraqizil nurlar yordamida o'simliklarni monitoring qilish bir necha usullar orqali amalga oshiriladi. Bu usullar o'simliklarning sog'lig'ini, o'sishini va umumiy holatini kuzatish uchun juda foydali. Quyida asosiy usullarni keltiraman:

Spektral tahlil: Infraqizil nurlar yordamida o'simliklarning barglari va boshqa qismlarining spektral xususiyatlari o'rganiladi. Bu usul o'simliklarning fotosintez jarayonini, suv va oziq moddalarini qabul qilishini aniqlashda yordam beradi. Termografiya: Infraqizil kameralar yordamida o'simliklarning haroratini o'lchash mumkin. Bu usul o'simliklarning stress holatini, suv yetishmovchiligini yoki kasalliklarni aniqlashda qo'llaniladi.

NDVI (Normalized Difference Vegetation Index): Bu indeks infraqizil va ko'rinadigan nurlarni solishtirish orqali o'simliklarning yashil biomassasini aniqlashda ishlatiladi. NDVI yordamida o'simliklarning o'sish sur'ati va sog'lig'i haqida ma'lumot olish mumkin.

Uzoqdan zondlash: Dronlar yoki sun'iy yo'ldoshlar yordamida infraqizil nurlarni qo'llab, katta maydonlardagi o'simliklarning holatini kuzatish mumkin. Bu usul qishloq xo'jaligida keng qo'llaniladi. Bu usullar o'simliklarni samarali monitoring qilish va ularning holatini yaxshilash uchun muhim vositalar hisoblanadi. Sizga yan

Tuproq namligini nazorat qilish. Infraqizil texnologiya tuproq namligini aniqlashda ham qo'llaniladi. IR sensorlar tuproqdagi namlik darajasini o'lchab, sug'orish tizimlarini avtomatlashtirishga yordam beradi. Bu esa suv resurslaridan samarali foydalanishga va hosildorlikni oshirishga imkon beradi. Infraqizil nurlar yordamida tuproq namligini nazorat qilishning afzalliklari quyidagilardan iborat: o'lchovlar tez va oson amalga oshiriladi. Infraqizil nurlar tuproqdagi suv miqdorini aniq o'lchash imkonini beradi. Tuproqni qazish yoki boshqa usullar bilan buzmasdan o'lchash imkonini beradi.

Hosildorlikni oshirish. Infraqizil nurlar yordamida o'simliklarning fotosintez jarayonini kuzatish mumkin. Bu texnologiya o'simliklarning o'sish jarayonini optimallashtirish va hosildorlikni oshirish uchun zarur bo'lgan sharoitlarni yaratishga yordam beradi. Masalan, IR kameralar yordamida o'simliklarning yorug'likka bo'lgan ehtiyojini aniqlash va sun'iy yorug'lik tizimlarini boshqarish mumkin.

Kasalliklarni erta aniqlash. Infraqizil nurlar o'simliklarning kasalliklarini erta aniqlashda ham qo'llaniladi. IR kameralar o'simliklarning barglaridagi o'zgarishlarni aniqlash orqali kasalliklarni erta bosqichda aniqlash va davolashga yordam beradi. Bu esa hosildorlikni saqlab qolish va zararli kasalliklarning tarqalishini oldini olishga imkon beradi.

Infraqizil nurlar yordamida tuproq namligini nazorat qilish texnologiyasi juda samarali va aniq usul hisoblanadi. Infraqizil nurlar tuproqning namlik darajasini aniqlash uchun ishlatiladi, chunki tuproqdagi suv infraqizil nurlarni yutadi va qaytaradi. Bu usulda infraqizil sensorlar tuproq yuzasiga yo'naltiriladi va qaytarilgan nurlarni o'lchaydi. Qaytarilgan nurlar miqdori tuproqdagi suv miqdoriga bog'liq bo'ladi, shuning uchun bu usul tuproq namligini aniqlashda juda aniq natijalar beradi.

5. Mahsulotlarni saqlash va qayta ishlash. Infraqizil texnologiya qishloq xo'jaligi mahsulotlarini saqlash va qayta ishlashda ham qo'llaniladi. IR sensorlar yordamida mahsulotlarning sifatini nazorat qilish va saqlash sharoitlarini optimallashtirish mumkin. Bu esa mahsulotlarning uzoq muddat saqlanishini ta'minlaydi va sifatini saqlab qolishga yordam beradi.

Infraqizil nurlar (IR) yordamida mahsulotlarni saqlash va qayta ishlash texnologiyalari qishloq xo'jaligi va oziq-ovqat sanoatida keng qo'llaniladi. Bu usullar mahsulotlarning sifatini saqlash va ularning saqlash muddatini uzaytirishga yordam beradi. Mana ba'zi asosiy usullar:

Quritish. Infraqizil nurlar yordamida mahsulotlarni quritish samarali va tezkor usul hisoblanadi. IR nurlari mahsulotning ichki qismiga kirib, suv molekulalarini bug'lanishiga sabab bo'ladi. Bu usul sabzavotlar, mevalar, go'sht va boshqa oziq-ovqat mahsulotlarini quritishda qo'llaniladi.

Dezinfeksiya. Infraqizil nurlar mikroorganizmlarni yo'q qilishda ham samarali. Bu usul mahsulotlarni saqlash jarayonida ularning buzilishining oldini olish uchun ishlatiladi. IR nurlari bakteriyalar va zamburug'larni yo'q qilishda yordam beradi.

Pishirish va qovurish. Infraqizil nurlar yordamida mahsulotlarni pishirish va qovurish ham mumkin. Bu usul an'anaviy usullarga qaraganda tezroq va energiya tejankorroqdir. IR nurlari mahsulotning yuzasini tezda qizdirib, ichki qismiga ham bir tekisda issiqlik yetkazadi.

Saqlash. Infraqizil nurlar yordamida mahsulotlarni saqlash jarayonida ularning sifatini saqlash mumkin. Masalan, IR nurlari yordamida mahsulotlarni saqlash joylarida namlik va mikroorganizmlar nazorat qilinadi, bu esa mahsulotlarning saqlash muddatini uzaytiradi Bu usullar mahsulotlarning sifatini saqlash va ularning saqlash muddatini uzaytirishga yordam beradi. Sizga yana qanday ma'lumot kerak?

Infraqizil nurlarning qishloq xo'jaligida qo'llanilishi hosildorlikni oshirish, resurslardan samarali foydalanish va mahsulot sifatini yaxshilashda muhim ahamiyatga ega. Ushbu texnologiya kelajakda qishloq xo'jaligida yanada kengroq qo'llanilishi kutilmoqda.

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CORRELATION BETWEEN SOIL TEMPERATURE AND PLANT GROWTH IN LOWER ZARAFSHAN (DESERTIFICATION PROBLEMS)

***Abstract.** The paper describe that soil temperature of two meteorological stations located in the Lower Zarafshan region was studied for the purpose of desertification. Furthermore, the soil temperature was analyzed to demonstrate the impact of increasing temperature on floral activities. Our objective was to commonly compare the soil temperature data to find the anomalies as well as consistent rises in the soil temperature.*

***Keywords:** soil temperature, solar radiation, average temperature, average minimum temperature, soil moisture, desertification, plants grow.*

Introduction. Soil temperature is undoubtedly a key factor in assessing energy and mass exchange with the atmosphere. Dominantly, it regulates the water balance and ecohydrological processes viz., evapotranspiration and water uptake by plants (Lozano-Parra et al., 2018). In addition, soil works as a significant energy conduit to receive heat during the daytime and provide surface heat at night. Furthermore, Geiger et al. (2003) concluded that it absorbs heat during the hot season and releases it during the cold. The soil temperature depends on the ratio of the energy absorbed to that lost from the soil. This energy fluctuates daily, seasonally, and annually, affected by the variability in the air temperature, solar radiation, and length of days (Wu and Nofziger, 1999). The most important factor influencing how plants grow is the soil's temperature. The temperature of the soil has an impact on plant availability, transmission, and retention of water.

Study area: The Lower Zarafshan mainly includes the Bukhara and Karakol deltas in the lower part of the Zarafshan River. on average, it is 170 km from west to east, and 150 km from north to south, the total area is more than 28000 sq. km. constitutes. It is located between 38° 01' - 40° 01' North latitudes, 63° 00' - 65° 13' East longitudes. The Avtobach and Azkamar plateaus, considered the western continuation of the Karatov and Ziyovuddin mountains, are approaching, forming the Khazar corridor with an average width of 4-5 km. Then, there is the Bukhara oasis (Total area about 3,971 km. sq.) with a length of more than 90 km from north

to south and an average width of 40-45 km from west to east. In the east of the Lower Zarafshan area, Dengizkol (243 meters) and Jargoq plateaus (392 meters) are located. Sandukli sands, Kimrakkum sands, and Yakkachaka sands are located in the southern and southwestern parts of the region. The sands of the Kyzylkum desert surround the western part of the region. From the northern part, Tuzkuy Mountain (366 meters), Beltov Mountain, Kuljuktov Mountain (785 meters), Ayogitma bog separates it from the Kyzylkum desert. The absolute height of the Bukhara delta is

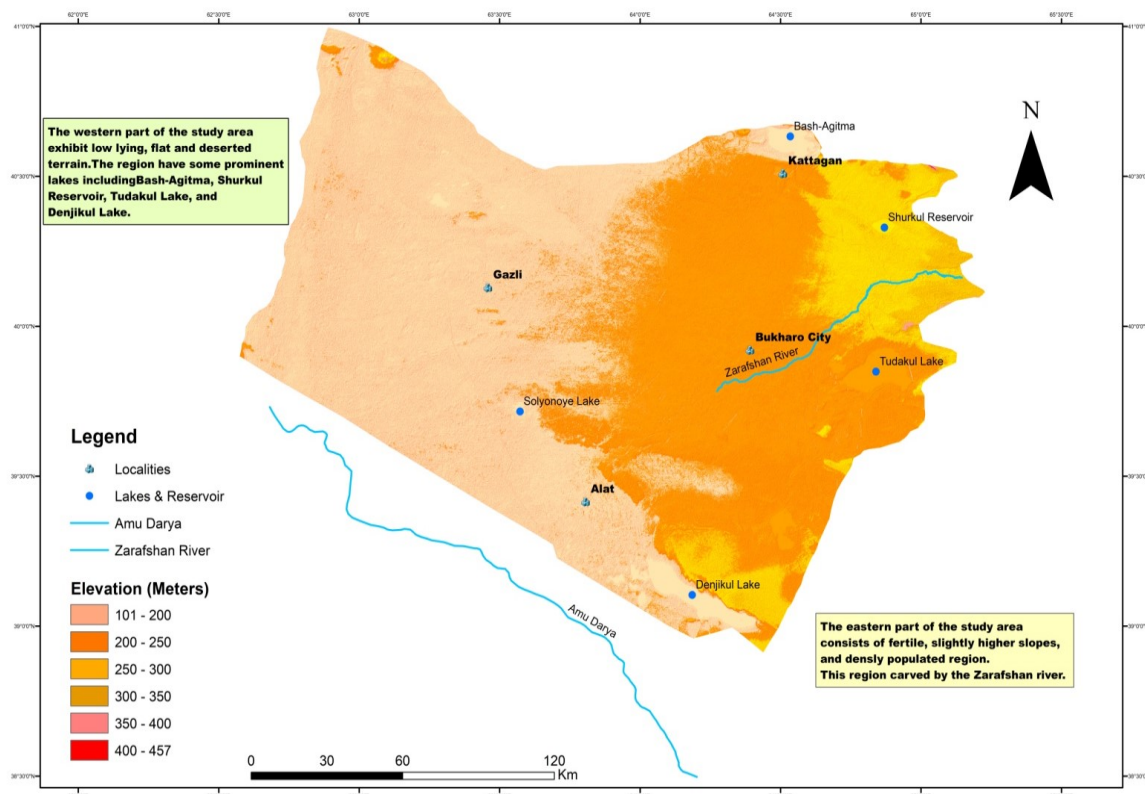


Figure1. Maps of Lower Zarafshan

200-250 m, it decreases and narrows towards the southwest, and the Karakol plateau approaches on both sides. The Zarafshan Valley expands to the southwest after the Karakol Corridor and its area is 832 km. sq. forms the Karakol delta, The absolute height of the delta is 200 m in the north-east, 180 m in the south-west, and 178 m in the part adjacent to the Amudarya valley. In winter, the average temperature in southern region is about to zero degree celcius while in summer it increases up to 45 degree celsius in the Lower Zarafshan. Because of relatively cold winters, this season is excluded from the vegetation growth, notwithstanding some exceptions. During spring season, the study area receives optimal rainfall, needed for plant growth. The region receives very less rainfall, it is limited to 100 mm in the Central Kyzlkum desert and southwest of Aral Sea. The Study area consists of different soil types viz., Alkali clay and loamy soil, Desert sand, Desert sand alkali soil, Desert soil, Gray-brown salty soil, Gray-brown alkali loamy soil, Gray-brown alkali, and loamy soil, Gray-brown alkali sandy soil, meadow soil and sand.

Data and Methods: The current study focuses on how plant growth is affected by the temporal variation of soil temperature in various study areas. Data on soil temperature was gathered from the Republic of Uzbekistan's Department of

Hydrometeorology in order to complete this task. Since the Soviet era, the nation has developed a widely dispersed network of weather stations. Based on the assumption that the data input for this study would be representative of the study area, four weather stations—Bukhara, Karakul —were chosen to obtain soil temperature data. Soil temperature data obtained from 1980- 2020 to display the monthly temperature variation in different regions. The soil temperature data was classified into yearly average temperature, yearly average maximum temperature, and yearly average minimum temperature. Further, the analyzed data was integrated and interpreted with different soil parameters viz., slope of terrain, moisture, soil types, and solar radiation. For this purpose, the ASTER digital elevation model (DEM) was obtained from usgs.gov.in. Furthermore, digital elevation data was put into a GIS environment to calculate different thematic layers viz. slope and elevation statistics (Khan et al., 2023).

Bukhara hydro-meteorological station: It is located close to Bukhara city and collects weather data including soil temperature. Average soil temperature ranges between 17.65 degrees Celsius (1980) and 18.3 degrees Celsius (2020). Soil temperature of Bukhara station shows considerable yearly fluctuation. The average soil temperature was 16.3 degrees Celsius (lowest) in 1994 while it was the highest in 2010 (19.3 degrees Celsius). Further, the soil temperature was categorized into four categories, based on 10-year intervals to integrate the anthropogenic and natural factors. Further, the temperature data was split into four decades to demonstrate the decadal variation (figure 03). The average temperature from 1980 to 1989 was 17.99 degrees Celsius, from 1990 to 1999 was 17.8 degrees Celsius, from 2000 to 2009 was 18.55 degrees Celsius and from 2010 to 2020 was 18.7 degrees Celsius. It indicates an almost 1-degree increase in the average temperature.

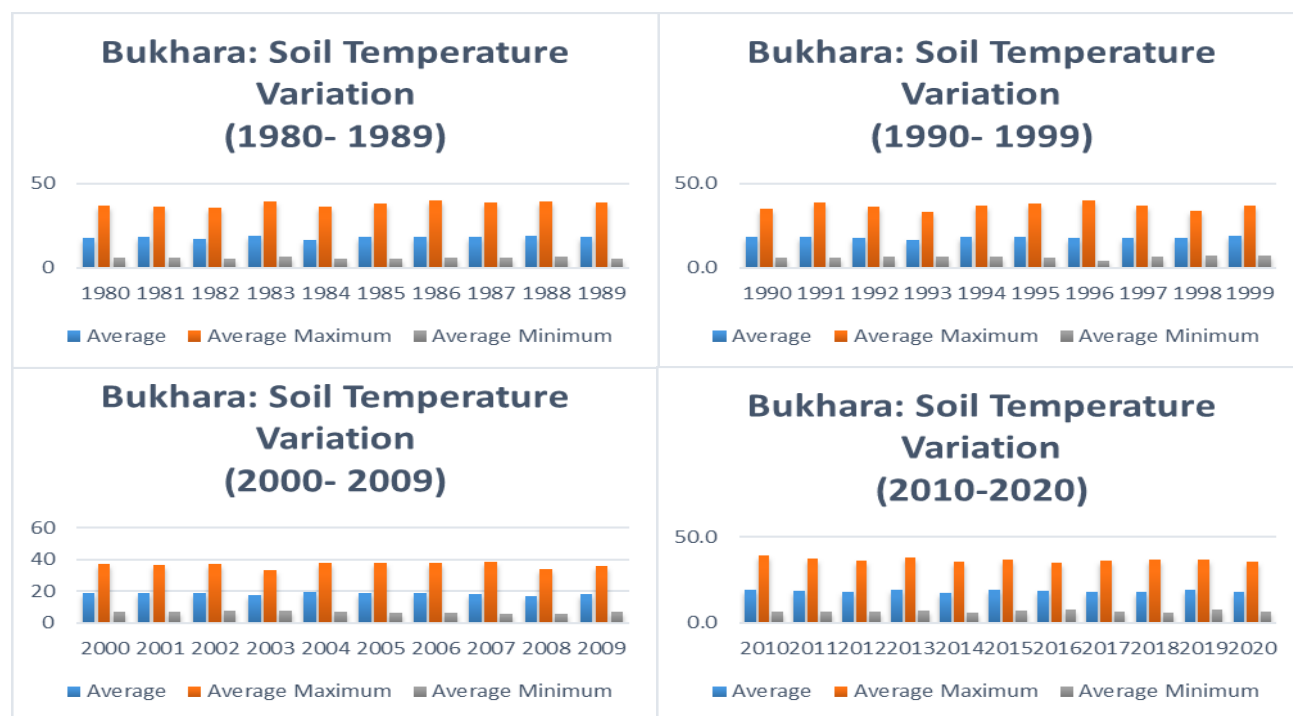


Figure 2. Soil temperature variation from 1980 to 2020 in Bukhara station.

Karakul hydro-meteorological station: Karakul station is located in the southernmost part of the study area near Dengizkol lake. The soil temperature was collected from 1980 to 2020 and displays a range between 17.3 degrees Celsius (1984) and 20.1 degrees Celsius (2019). Soil temperature data reveals that the temperature increased consistently except few years while some years have recorded low average temperatures. The average temperature has increased by almost 2 degrees Celsius in the region. For detailed analysis and estimating the trend, the temperature data was classified into four sections. These sections are based on decadal change in the average temperature, average minimum temperature, and average maximum temperature. In 1980, the average maximum temperature was 36.3 degree Celsius while it was 39.3 degrees Celsius in 2020. It means average maximum temperature was changed by 3 degrees. Average minimum temperature was 7 degrees Celsius in 1980 while it was not increased. It indicates that local phenomena impact average minimum temperature.

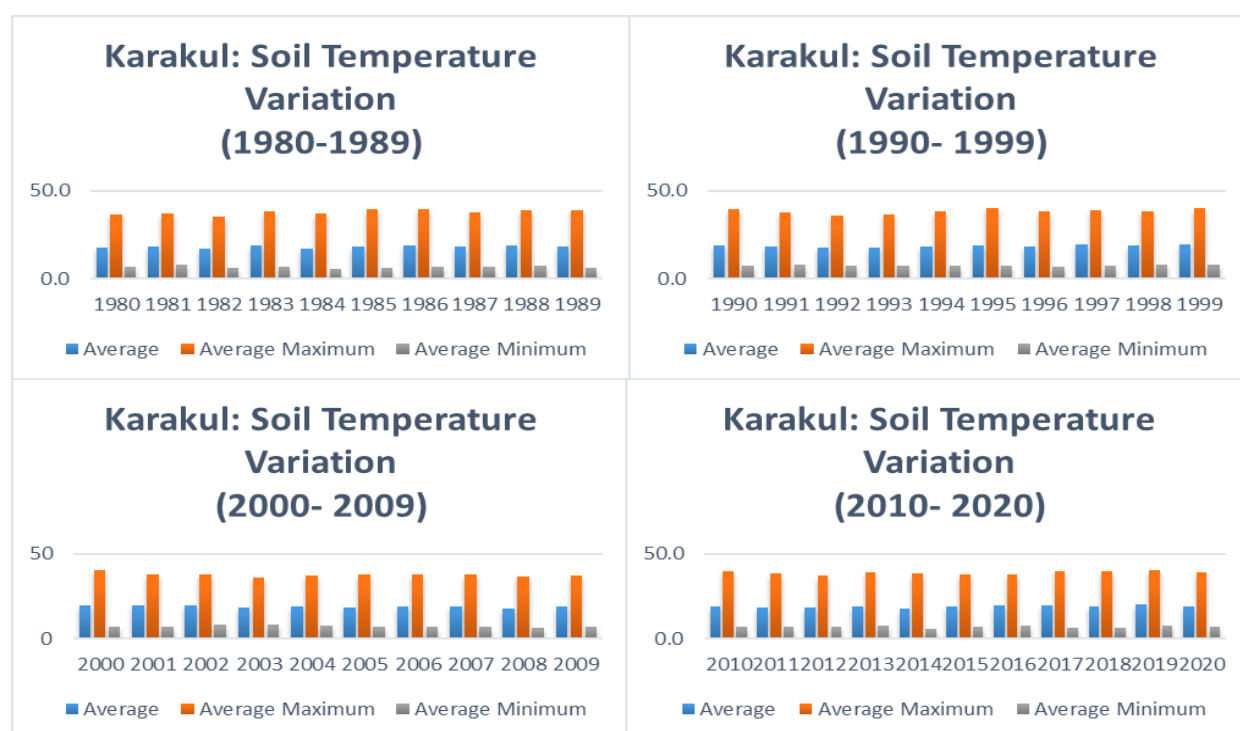


Figure 3 Soil temperature variation from 1980 to 2020 in Karakul station

Discussion: Two stations' soil temperature data indicate rising in the temperature from 1980 to 2020. It also indicates that the average maximum temperature and average minimum temperature also increased during the last 40 years. This increase in soil temperature adversely affects the physical, chemical, and biological activities and different processes, responsible for optimum plant growth in the Lower Zarafshan. In the below graph, average, average maximum, and average minimum soil temperatures are portrayed to exhibit the temporal variation in the last 40 years. On the basis of soil temperature data analysis, it was observed that the soil temperature unequivocally increased during last 40 years. It impacted significantly the plant growth in the region. Continuously growing soil temperature can be a considerable cause of land degradation and desertification.

It was observed that the soil temperature has increased in the last 40 years in the Lower Zarafshan. It means the region experiences consequences of rising temperature which adversely affects plant growth and leads to infertility of soil. To visualize the impact of soil temperature variation on plant growth the different properties of plants have been considered. The average minimum and maximum temperature at four hydro-meteorological stations increased in the last 40 years.

Table 1. shows the average minimum, average maximum, and average temperature at four meteorological stations.

Temperature Measurement Unit: Celsius					
Period: 1980- 2020					
Name of Station	Average	Average Maximum	Average Minimum	Average Increase	
Bukhara	17.1- 19.1	33.2- 39.3	4.3- 7.9	+1	
Karakul	16.8- 20.3	35.4- 40.3	5.4- 8.5	+1.8	

Data reveal that the region went through different anthropogenic and natural disturbances where anthropogenic activities are dominant to increase the temperature.

The plant takes its nutrition, water, and other necessary elements from the soil. Therefore, soil temperature is the most significant parameter for attaining optimal growth. High soil temperature promotes plant growth through higher nutrient and water uptake while low soil temperature diminishes the growth of plants by reducing the nutrient and water uptake. Further, it slows down the photosynthesis process in the plants. It was observed that the Bukhara region experiences low soil temperature for a considerable period every year during winter. It implies that plant growth is very minimal or nonexistent during the winter. The influence of soil temperature on plant growth is related to the fact that warmth promotes crop development through increased water and nutrient uptake, while cold inhibits water uptake due to lower water viscosity and slows down the process of photosynthesis. It was observed that the increasing temperature has changed the pattern and regime of evapotranspiration in the study area.

Conclusion: The soil is essential to the survival of plant life and provides water, nutrients, and mechanical support. It stores heat to activate the different life-supporting processes and many biological activities are temperature dependent. The temperature of the soil affects the plants' growth and concentration of nutrients. The temperature of the soil increased steadily in the study area. It prevents the growth of plants and causes desertification. However, the effect of rising temperatures on

plant growth depends on the types of soil and the availability of soil moisture. Additionally, the area's southeast was found to have a greater negative influence on plant growth than its northeastern counterpart due to high temperatures. Furthermore, in order to determine the more plausible and trustworthy variables for evaluating the declining agricultural productivity and rising desertification, a thorough investigation is required.

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CURRENT STATUS OF ANCIENT HYDROTECHNICAL STRUCTURES AND THE NEED FOR MODERNIZATION OF CERTAIN TYPES AND TYPES

Abstract: This article provides a detailed description of the current state of ancient hydraulic structures in Uzbekistan and the need to modernize some types and subspecies.

Keywords: : type, subspecies, modernization, takyr, kurush, kaynar, kugush, well.

Ancient hydraulic structures located on the territory of the Republic of Uzbekistan can be studied in the following groups according to their current state:

A group of ancient hydraulic structures that are still functioning. This group mainly includes ancient canals such as Dargam, Tuyatortar, Shofrikon, Khaykanyk, and Khanka. Most of them are laid over loess or loess layers, so they practically do not require reconstruction. Because loess has poor filtration. It is enough to install modern water separators at some points or lay special impermeable coatings in the aquifers. The Khojai Imkonagi mine ditch, which has been preserved on the territory of our republic, also belongs to this group.

A group of modernized ancient hydraulic structures. This group includes reservoirs, wells, springs, chutes, levees, and novae, as well as their sub-types. Because modern reservoirs are improved descendants of those ancient reservoirs in our republic. Wells - boreholes, springs - artesian wells, pipes made of metal or asbestos of various sizes, troughs, lifts, banks, cherts, spews, and demps are being replaced by improved electric water-drawing devices. The role of sluices, dams, and sluices is being played by sluices that are opened, raised, and lowered by electric devices. The original form of the mentioned types has been preserved only in very rare cases or is used only in extreme cases. Glaciers have given way to huge electrified icehouses. Water pipes, sewers, and modern sewage systems, mills, and mills are driven not by water, but by electric motors.

A group of ancient hydraulic structures that need to be modernized. The strong demand for fresh water and its constant growth, the need to use some types and subspecies enriched with modern materials and reconstructed, are among the most urgent issues of the day. They are as follows:

It is necessary to protect the low-lying, water-collecting areas of modernized alluvial plains from intensive absorption of accumulated atmospheric precipitation with special cellophane, concrete or asphalt coatings. In this way, an average of 1 km² of artificial barren land will allow the accumulation of 10,000 m³ of clean,

fresh drinking water. Because this indicator is typical for barren areas such as the Karakum, where the annual precipitation is 80-90 mm (V.N. Kunin-1955, p. 223). The author estimates that the amount of precipitation is not annual, but in the winter-spring months, that is, without drying out the surface layer of the ravine, almost nothing is spent on absorption. Because the surface layer, consisting of fine-grained silt deposits, has a very low infiltration rate. However, in this case, intensive evaporation cannot be combated. Therefore, it is advisable to store the accumulated fresh water reserves in special, closed-topped cavities dug out of the ground. The simplest of them is a cistern, and the more complex one is a cistern.

To make a modernized cistern, the most central point of the cistern, that is, where the accumulated pond is relatively far away, is selected, and a hole is dug there, the perimeter and bottom are covered with cement. The upper part is covered with light plastic covers, and steps are placed from any side of the resulting modern cistern to go down and (take) water. This is a very simple and therefore inexpensive device, even if each of them has the ability to collect 100 m³ of water, or even more, each of them will be able to provide a flock of 600 sheep with fresh water all year round in desert conditions. Because 10,000 m³ of water is enough to water 6,000 sheep all year round (V.N. Kunin-1955, p. 224).

Modern, rock formations can be established not only in the desert, but also in hilly areas, along seasonal streams. Because the possibility of using the current formed in winter and spring is promising at such points.

Modernized Tank. There is also a strong demand for modernized models of cisterns at a time when the global desertification process is accelerating, as in our time. Concaves, which are the main elements of the relief of desert areas, serve as an important indicator for the construction of modernized cisterns. Seasonal-ephemeral lakes formed along such points have an average area of 3 square meters. km. in those with the size (areas with annual precipitation of 80-90 mm) about 40,000 m³ (tons) of clean, fresh snow-rain water is collected. This indicator is equal to the amount of water for 1000 railway tanks (A.Babaev-1983, str-81). So, to save so much water from excessive evaporation and seepage, it would be possible to build 1,300-1,400 modernized cisterns with an average water capacity of 300 m³ around one ephemeral lake. The bowl and dome of the modernized cisterns can be made of reinforced concrete structures, and this work would be done separately. It is advisable to build them in cooperation with future cistern builders based on their design skills. Modernized cisterns can be built not only in desert areas, but also in the steppe zone, in general, wherever there is an opportunity and need to store water. There are a large number of them in desert areas is formed based on the number of ephemeral lakes. As we noted above, it is possible to create dozens of modernized cisterns around an average-sized ephemeral lake. Map No. 1 shows the geography of the scarp formations along similar small depressions along the southwestern territory of Uzbekistan.

Modernized pond and gulfak pond. These types are important for collecting and storing water, and in particular, they have undergone natural selection to be formed on the basis of the natural geographical conditions of the desert and adir

region. Therefore, in our time, there is an opportunity and a need to organize them in the same regions. The modernization of these types of ancient hydraulic structures can consist of a number of simple structures. That is, their main part is made of concrete linings and has various sizes. If we take into account that the ancient pond or gulfak pond accumulates an average of 1800-2000 m³ of water, it would be appropriate to build their modernized versions with the same water capacity. Because, firstly, the existing low-water springs in the adir region, which are the main source of saturating gulfak ponds, rarely have the opportunity to accumulate more than the indicated amount of water per day. Secondly, especially in the desert region, the accumulation of water in the basin of more than the specified amount over a long period of time can lead to its qualitative deterioration. Modernized wells and cisterns. The ancient representatives of this species had a geographical distribution only along the desert regions. In our time, their geography has expanded to include not only the desert, but also the adir region, because the groundwater level in the adir region of our republic has decreased sharply, and this indicator was 15-18 m in the 2010s, while in our time this indicator is 40-50 m. Therefore, the organization of a system of modernized wells and cisterns in the adir region will allow us to change this process for the better, or at least stabilize the dynamics of further decline in the groundwater level. To achieve this, it is more effective to not only recharge groundwater, but also to take measures to reduce groundwater withdrawals.

A group of ancient hydraulic structures that are of archaic importance and do not require modernization. This group includes ancient hydraulic structures such as a circle, a ditch, a water tank, a lift, a spillway, and a dam. Because they have lost their original significance in our time due to their function, they are of great scientific, historical, and geographical interest.

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FUNDAMENTALS OF MODERNIZATION OF THE TAX SYSTEM

***Abstract:** The article examines the differences between foreign and domestic scientists on improving the tax system. Analysis of content, necessity and significant modernization of the tax system. Additionally, conclusions and recommendations on the modernization of the tax system have been developed.*

***Key words:** tax, modernization, system, tax policy, technology, payment.*

Introduction. In the conditions of the market economy, the tax system is one of the state's means of managing the economy. The effectiveness of the tax system is important in ensuring economic development and social stability in the country. Therefore, the need to modernize the tax system and improve its conceptual foundations is increasing. This process is carried out in order to ensure the digital development of the economy, expansion of international cooperation and effective management of state finances.

Modernizing the tax system is an important effort to improve the efficiency, compliance and equity of tax administration. This process is especially relevant in an economic environment affected by technological development and changing needs of society, and a comprehensive approach to tax reform should include simplification of tax structures, application of innovative technologies and creation of strong management systems.

One of the main aspects of the modernization of the tax system is the simplification of tax structures. Simplified tax systems facilitate tax compliance and increase the efficiency of tax collection processes.

The result of the modernization of the tax system largely depends on how the state tax policy meets the requirements of the international financial and credit institutions financing the project of modernization of the country's tax system, and how these requirements take into account the specific characteristics of the modernization of the tax system and the national economy. The importance of the problem of modernization of the tax system is also shown in the fact that now not only large enterprises, but also small and medium-sized businesses are being integrated into the world market economy.

Tasks of modernization of the tax system: the main goal of modernization of the tax system in Uzbekistan is to create a more favorable environment for economic growth, investments and innovations. By simplifying tax procedures, reducing compliance costs, and increasing tax administration capacity, the government aims to improve the business environment, promote entrepreneurship, and stimulate economic activity. In addition, modernization efforts are aimed at broadening the tax base, enhancing revenue collection, and ensuring long-term fiscal sustainability.

The urgency of modernizing the tax system is that its successful implementation will lead to improved compliance with tax legislation, increased revenues and strengthening of trust in tax authorities.

According to researcher W.H. Normurzaeva: “One of the most important elements of economic policy in ensuring the stability of the economy of our country is the further liberalization of tax policy, simplification of the taxation procedure, reduction of the tax burden, protection of the rights and freedoms of business entities, and an end to interference in their activities.”

According to Oliver Wendell Holmes, a state's tax administration plays an important role in raising the revenue needed to finance government expenditures. No country can survive without taxes. In today's world, taxes are not limited to revenue collection, they represent a "fiscal contract" between society and the state, i.e. "payment for civilization".

The analyzes carried out on the modernization of the tax system cover, first of all, key aspects such as digitization, optimization of tax rates and increasing transparency. Digitization of the tax system has increased the possibilities of simplifying and ensuring transparency of interactions between taxpayers and the state. Including, having full and accurate information about the activity and income of tax payers by the tax authorities will greatly contribute to the reduction of tax violations and the hidden economy.

People's willingness to pay taxes is inextricably linked to their sense of citizenship. This internal readiness, that is, tax culture, is strengthened by trust in the state, in particular, trust in the honesty of the tax administration. Therefore, a corruption-free tax administration is the basis for ensuring good governance, creates the basis for the formation of a strong fiscal contract and determines the willingness of the population to pay taxes voluntarily.

The tax system should be transparent to increase trust between the state and citizens. Citizens should be given clear and open information about how tax revenues are used. In this regard, the Tax Committee under the Cabinet of Ministers of the Republic of Uzbekistan, based on the requirements of the decree "On measures to increase the level of transparency of the activities of state bodies and organizations and introduce an evaluation system" [11], has carried out analytical and scientific research for the general public. has been providing transparent and reliable information that ensures consensus and public control. According to the results of 2023, the Tax Committee took the second place in the Republic of Uzbekistan with a value of 82.6 (+12.1) [12] in the transparency index conducted between the committees and inspections operating in the Republic of Uzbekistan. Also, modern tax systems should be based on the principles of digitization and automation. Digital systems ensure faster and more accurate tax collection, tracking and reporting, and strengthen tax discipline.

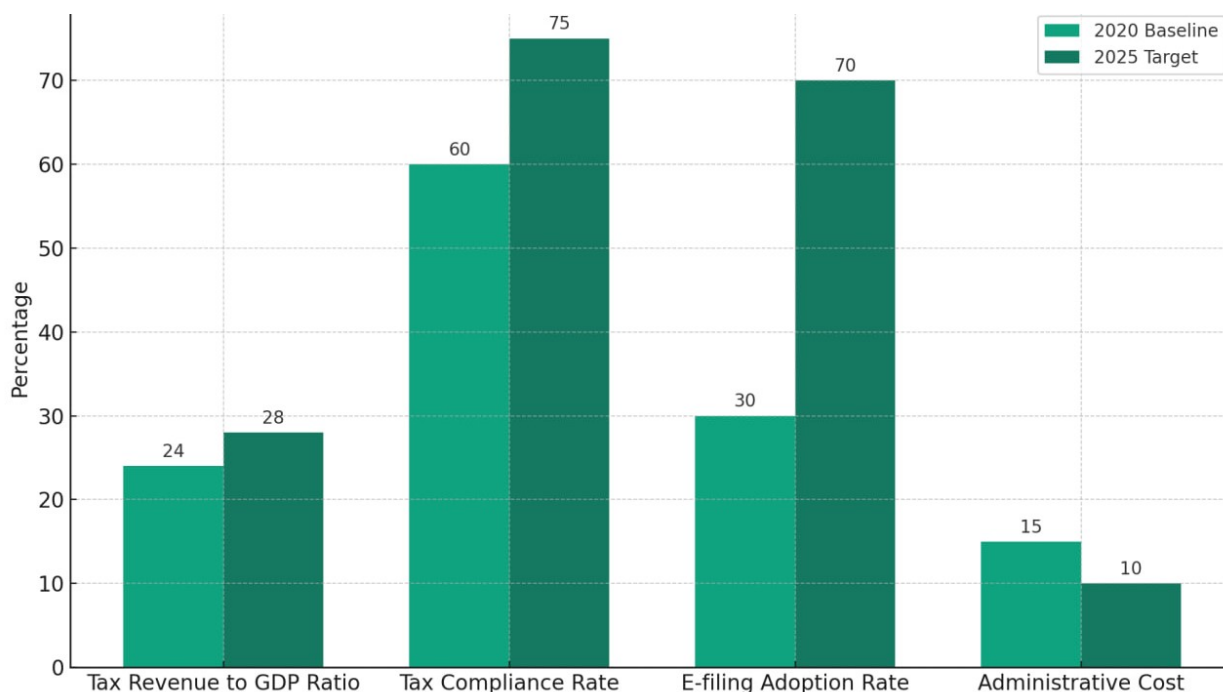


Diagram 1. Achievements in the modernization of the tax system.

This shows that the modernization of Uzbekistan's tax system can significantly increase tax revenue mobilization, compliance with legislation and administrative efficiency by 2025. The key to achieving these results is thorough implementation of reforms aimed at simplification, digitization, broadening the base and strengthening enforcement. Such reforms will not only support fiscal stability, but also provide a more equitable and growth-friendly tax system.

In the context of globalization, it is important that the tax system conforms to international standards. Cross-border tax cooperation helps reduce tax evasion, track international income and broaden the tax base. In addition, the tax system should be flexible to market conditions and economic changes. When new technologies and innovations appear, the tax policy should be able to quickly adapt to them. These principles are important principles for the stable and effective operation of the tax system, which contribute to the economic and social development of the country.

Conclusions and suggestions. Based on our analysis, we made the following conclusions and suggestions:

- in addition to simplifying the tax system, the integration of technologies plays a key role in the modernization of the tax system;
- the technologies of the industrial revolution have fundamentally changed traditional industries and require adaptation to them in order to maintain the relevance and effectiveness of tax systems;
- the focus of tax system reforms on technology and information management will significantly increase the capabilities of tax authorities in the future;
- for the successful implementation of the modernization of the tax system, a tendency to continuous improvement and adaptation is required;
- it is important to create monitoring mechanisms and management systems to combat tax reform failures.

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EXPERIMENTAL STUDY OF PEDAGOGICAL CONDITIONS FOR THE USE OF NATIONAL TRADITIONS IN THE HARMONIOUS UPBRINGING OF THE PERSONALITY OF PRESCHOOLERS

***Abstract:** in this article, an attempt was made to study by experience the pedagogical conditions for the use of national customs in the harmonious upbringing of the personality of preschoolers and, in addition, an attempt was made to highlight the content of the article using national customs.*

***Keywords:** preschoolers, national traditions, harmonious personality, the game "family", the requirements of the state.*

The development of national forms of interests and abilities of children of preschool age is one of the important tasks set before the preschool educational organization. The interests and abilities of children of preschool age - spiritual resources and the requirements and needs of the present tense are manifested in the mutual practical and theoretical communication of educators with the educator, aimed at a specific goal. When raising children of preschool age on the basis of universal values, it is necessary to understand its essence. Values are divided into several types in their essence. In particular, nson and his life are considered the highest value.

It is absurd to say about the value of something in a place where a person is infected. Therefore, respect for human dignity, improving his marriage, developing his knowledge and cultural level, maintaining health, protecting his life form the main direction of the policy of our state. The arch of fundamental changes in our society, reforms are aimed at ensuring that people's lives are full, rich, beautiful, that a person feels truly free, that the result of his work, his own destiny, that he is the owner of his country. In the educational organizations of the schoolgcaha, the activities of our educators in the field of understanding the interests of el u yurt, people, nation and Homeland, further enhancing their glory, studying science and culture, the rich heritage of our ancestors, history, religion and values, worthy assessment of our young generations have great importance.

As we noted above, the Uzbek people are the heirs of special teran teachings dedicated to national, spiritual values and moral decency. Also, from pedagogical and psychologist scientists X.Kadyrova, Tillaeva G., Yusupov Q., Boboev N., Haldibekova F., Yusupov A. Musurmonova O. and other factors and tools for the formation of personality spirituality, having carried out many works in the field of national culture and spirituality.N.Telia's research explores issues of national and cultural values and their formation. The main role in this is played primarily by the family, while the contribution of the preschool organization also plays an important role in this regard. M.P.YUsupova, R.M.Kadyrova, D.Abdurahimova, H.B.Tulenova, D.R.Boboeva, V.I.Loginova, P.R.Samorukova, V.I.YAdeshko,

F.A.Sokhina, G.X.Jumasheva, H.I.Kasimova, M. SH.Rasulova, M.A.Solihova, K.S.SHodieva, SH.A.The problems of the content of the activities of preschool educational institutions, the spiritual and moral, physical and psychological education of preschool children, the formation of treatment culture and speech skills in them, the preparation of children for school education were analyzed by sadigova and others. A.Khayitov and others have prepared educational tools for MTTS.

Conducting research in preschool educational organizations will be devoted to the solution of specific educational problems, and qualitative changes in education will be achieved. Children of the middle group of preschool educational organizations of Termez city Termez city 27 - 8 of Surkhandarya region took part in the experimental test work. In the process of performing experimental test work, we conducted experiments with the aim of identifying folk oral creativity in preschool children through games.

To determine the initial level of patriotism in preschool educational organizations, a specific stage of experimental search for preschool children was carried out works.

The purpose of the detection stage: to study the initial level of patriotism in older preschool children.

At the stage of determining experimental work, the following tasks:

1. Determination of criteria and indicators for assessing the level of national customs in children 6-7 years old.
2. Description of the levels of national traditions in children 6-7 years old-high, medium, low.
3. The choice of diagnostic methods for assessing the level of national customs in children 6-7 years old

The family game

Goal. Encourage children to creatively increase family life in games. Improving the ability to independently create a gaming environment for the intended plot. Formation of valuable moral feelings (humanity, love, sympathy, etc.).

Preparation for the game. Class games are "like we have a baby in our house", "there's dad and grandfather in the House, but mom is not at home", "mom's holiday", "family holiday", "doll's birthday". Conversations about relationships in the family. Preparatory and joint games with children of small groups.

Gameplay. To develop the game, the educator can first talk to children on the topic "where parents work". Revealing the moral essence of Adult Activities: responsible attitude to their tasks, mutual assistance and the collective nature of Labor.

In addition, the educator encourages children to creatively increase family life in games. Suggests children to build a house according to the idea using building material. In the process of building a house, he teaches children to agree on joint actions, draw up an initial project plan and bring the work to the end. Then he brings toys (dolls, furniture, dishes, etc.), game attributes (aprons, scarves).

After that, the educator, together with the children, analyzes the following game situations: "when my mother is not at home", "guests have come to us", "I will help my mother", "family holiday" and others.

The game "when mom is not at home" can be organized together with young children, who together explain in advance the purpose of the game: to teach children to define roles, plan the game, play independently.

The game "guests have come to us" should teach children to invite guests, welcome guests, give gifts and behave at the table.

In the game "I will help my mother", the educator must introduce labor elements into it: washing doll sheets, repairing clothes, repairing books, cleaning the room. In the process of playing, the educator must choose toys, objects, change them, design the game environment using various auxiliary materials, use their own homemade products, use natural material.

The educator must introduce new content into the plots of his favorite children's games. For example, the Game "family holiday" preschool education involves showing a concert in an organization using children's musical instruments: piano, metallophone, tambourine, curls, pipes, triangles, etc." family members "sing songs and dances, read poems, make jokes, riddles. This game requires preliminary work, the educator can in advance, together with the children, at their request, distribute who and what he will do on the holiday.

Talking to children, the educator tries to identify the peculiarities of the story, song, proverb, matals, riddles, fairy-tale characters. This is how the peculiarities of the characters in different poems, fairy tales are studied. We conducted scientific research within the framework of the topic "the use of national customs in the harmonious education of the personality of preschool children." It consists in achieving the fulfillment of state requirements for preschool education, that is, preparing for school a child who is physically healthy, mentally and spiritually mature, able to communicate with various members of society, clearly perceiving being, socially adapting to life, appreciating our nationwide values, and also living independently and consciously. In the hearts of children, it is advisable to compose traditions of love and respect for their people, to educate national pride, to instill in them the kindness, hospitality, hard work and humility of the Uzbek people, to form knowledge about the independence, anthem, coat of arms and flag of Uzbekistan. The topics of the activities carried out in order to form national customs in the pupils of preschool educational institutions should not contribute to the comprehensive development of the child, the upbringing of a perfect person with high manners, national pride.

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3. Abduqodirov A.A., Pardaev A.X. Pedagogik texnologiyalarga oid atamalarning izohli lug'ati. – T.: Fan va texnologiya, 2012. – 44 b.

THE ESSENCE AND ESSENCE OF THE USE OF INTERACTIVE TECHNIQUES IN THE DEVELOPMENT OF THINKING OF PRESCHOOL CHILDREN

***Annotation:** this article highlights the importance and ways of using interactive techniques in the development of preschool children's thinking, the development of creativity and logical thinking in children.*

***Keywords:** interactive method, thinking, independent thinking, ability, dating, cooperation, process, thinking, emotional development, results analysis, discussion and evaluation.*

The application of modern methods of training leads to the achievement of high efficiency in the process of activity. It is advisable to choose these methods based on the didactic task of each activity. Enrichment with various methods that activate children while maintaining a traditional form of activity leads to an increase in the level of assimilation of breeders. Today, in a number of developed countries, the methods that form the basis of great experience in the application of modern pedagogical technologies that guarantee the effectiveness of the educational process are referred to in the name of interactive methods. Interactive education methods are now the most common and widely used in educational organizations of all types. At the same time, there are a large number of types of interactive educational methods, and those suitable for the purposes of carrying out all the tasks of the educational and educational process are currently available. In practice, they can be duly applied by distinguishing suitable ones for specific purposes. This situation has now caused the problem of choosing interactive learning techniques correctly to pursue specific goals. To do this, it is required to rationally organize the process of activity, gain the interest of educators and continuously stimulate their activity in the process of activity, organize activities on the topic in small pieces, use questions and answers when opening their content, work in small groups, apply techniques such as mnemonics, steam, triz technologies, role-playing games, and encourage educators to independently perform practical exercises. An interactive method is to solve an activity or problem in mutual communication, in mutual discussion, in the mindset of thinking, in harmony. The advantage of this method is that the entire activity prepares the learner for an independent life by teaching them to think independently.

Interactive educational methods regularly organized training and educational work in fully illuminated processes provide for the effectiveness and content management of creativity in children, mainly when explained through examples. In the periods when such methods are covered, it will be mainly aimed at the easy and high-quality implementation of work to answer questions, work in a unit, group

work, perform role-thinking staging, work individually with other children and prepare reading and writing literacy for others.

Interactive methods are of great importance in the development of preschool children's thinking. Interactive methods help to increase the activity, interest and creativity of children. The main advantages of these methods are as follows::

1. Encourage activity: interactive techniques educate children through play and practical activities. This method makes the process of teaching for Children interesting and engaging, as a result of which they are actively involved and ready to master new knowledge.

2. Development of thinking skills: children develop thinking skills by applying interactive techniques in problem solving, experimentation, and creative thinking. For example, through constructive games or experiments, children learn to solve interesting problems.

3. Enhancing social skills: interactive techniques teach children to work together, exchange ideas, and collaborate in group work. It develops social skills and gives children the skills they need to be successful in society.

4. Supporting independent thinking: by giving children the opportunity to express their thoughts and make independent decisions, interactive methods develop their independent thinking and decision-making abilities.

5. Supporting emotional development: games and interactive activities create a stress-free and cheerful environment for children, which improves their emotional state. Children receive experiences that help them express their feelings and understand the feelings of others. Self-assessment and willingness to change: interactive methods give children the opportunity to evaluate their results, learn from their mistakes and be prepared to change. This forms in them a sense of self-assessment and striving for improvement. Interactive methods play an important role in the development of children's thinking and social skills, while increasing their interest in reading and learning. Therefore, the use of these techniques in the educational process is of great importance for the development of children as a whole. Of course, we will continue about how interactive methods are used for preschool children and their impact on development. Interactive methods are understood as those that activate and motivate learners to think independently, and are educated at the heart of the educational process. When these techniques are used, the educator encourages the learner to take an active part. The learner is involved throughout the process. The useful aspects of the approach in which the learner is at the center are manifested in:

- reading-learning with higher educational performance;
- high level of stimulation of the learner;
- consideration of previously acquired knowledge as well;
- adaptation of the educational process to the goals and needs of the learner;
- support of the initiative and responsibility of the learner;
 - to be learned by performing in practice;
 - the creation of conditions for BI-biased feedback.

Thus, the use of interactive methods in the process of teaching subjects has its own peculiarity. The careful study and practice of each interactive method used in educational practice expands the thinking of educators and has a positive effect on their ability to find the right solution to the problem. Increases the creativity and activity of children. When various theoretical and practical problems are analyzed through interactive methods, the expansion and deepening of knowledge, skills, qualifications of children is achieved. From the above, it becomes known the need to duly analyze interactive educational methods and, on this basis, classify them.

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UMUMIY O'RTA TA'LIM MAKTABLARIDA YANGI BAHOLASH TIZIMINI JORIY ETISH VA UNING SAMARADORLIGI

Annotatsiya: Maqolada Prezident va ixtisoslashtirilgan maktablar o'quv dasturlarini joriy etish orqali umumta'lim maktablaridagi baholash tizimining o'zgarishlari tahlil qilingan. Yangi formativ va summativ baholash tizimlari tajriba-sinov sifatida joriy etilib, o'quvchilarning bilimi, amaliyotga qo'llash ko'nikmalari, mulohaza va tahlil qilish salohiyati baholanishi ta'kidlangan. Shuningdek, tanlov fanlari, yangi avlod darsliklari va ularning ahamiyati haqida ma'lumot berilgan. Ushbu yangiliklar o'quvchilarning bilimni adolatli baholash va ularni kelajakdagi kasbga tayyorlashni maqsad qilgan.

Kalit so'zlar: umumta'lim maktablari, baholash tizimi, formativ baholash, summativ baholash, tanlov fanlari, yangi avlod darsliklari.

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INTRODUCTION OF A NEW ASSESSMENT SYSTEM IN GENERAL SECONDARY SCHOOLS AND ITS EFFECTIVENESS

Abstract: The article analyzes changes in the assessment system of general education schools through the implementation of Presidential and specialized school curricula. It highlights the introduction of formative and summative assessment systems that evaluate students' knowledge, practical application skills, and analytical abilities. Information about elective subjects, new-generation textbooks, and their significance is also provided. These innovations aim to ensure fair assessment of students' knowledge and prepare them for future careers.

Keywords: *general education schools, assessment system, formative assessment, summative assessment, elective subjects, new-generation textbooks.*

Davlatimiz rahbari raisligida joriy yilning 28 avgust kuni maktab ta'limidagi masalalarni muhokama qilish va ustuvor vazifalarni belgilab olish yuzasidan o'tkazilgan videoselektor yig'ilishida ta'lim sifatini oshirish maqsadida umumta'lim maktablarida Prezident va ixtisoslashgan maktablar o'quv dasturi, baholash tizimi joriy etilishi belgilandi. Unga ko'ra, ta'lim sifatini oshirish maqsadida respublika bo'yicha 500 ta maktabda Prezident va ixtisoslashgan maktablar o'quv dasturi, baholash tizimi joriy etiladi. Bunda Prezident va ixtisoslashgan maktablar ularga "tayanch maktab" bo'ladi. Bir yilda ularning ishi baholanib, yangi tizimni samarali qo'llagan o'qituvchilarga 40 foizgacha ustama beriladi. [1]

Shundan kelib chiqqan holda 2023-2024-o'quv yilidan Surxondaryo viloyatida ham 32 ta umumta'lim maktabi tanlandi. Ularda yangi baholash tizimi tajriba-sinovdan o'tkazilmoqda. Bu jarayonga maktablarning 5-11-sinf o'quvchilari jalb etilgan. Ushbu maktablarga viloyatda mavjud Prezident va ixtisoslashgan maktablar "tayanch maktab" sifatida birlashtirilgan. [5]

An'anaviy baholashda o'quvchilar bilimi 5 balli tizimda baholanib, kunlik bahosi ko'proq choraklik bahosini chiqarishda asosiy rol egallaydi va bu unchalik ham xolis baholashga kirmaydi, – dedi maktabning matematika o'qituvchisi Amrillo Saidov. – Chunki o'qituvchi bolalarni 5 balli tizimda nisbiy baholab keladi. Yangi baholash tizimi esa mezonlarga asoslangan bo'lib, bunda o'quvchining aniq qaysi bilimi, qaysi ko'nikmasi asosida baholanishi oldindan ishlab chiqilgan. Shu asosida ularning bilimi, olgan bilimni amaliyotga qo'llashi, mulohaza, mushohada qilish ko'nikmalari ham baholanadi. Tajriba-sinov jarayonlarini endigina boshlaganimizga qaramay, shu qisqa vaqt mobaynida nafaqat o'quvchilar va o'qituvchilarda, balki ota-onalarda ham mas'ullik hissi keskin oshganini kuzatyapmiz. Bu maktab va oilaning bir maqsad yo'lida birlashishiga ham xizmat qilmoqda. [5]

Sentyabrdan boshlab respublikadagi 124 ta maktabda tanlov fanlari amaliyoti tajriba-sinov tarzida joriy etiladi. Bu yildan 10-11-sinf o'quvchilari 11 ta majburiy fandan tashqari, 2 ta o'zlari istagan yo'nalishda kerakli fanlarni o'qish imkoniyatiga ega bo'lmoqda. Bunda tanlov fanlari 4 ta yo'nalishga bo'lingan.

Tanlov fanlar tajriba-sinov tarzda yo'lga qo'yilayotgani uchun bu yil ularni 4 ta yo'nalishda taqdim etyapmiz. Ular: *kimyo-biologiya, fizika-matematika, ona tili, adabiyot-chet tili, matematika-chet tili* yo'nalishlarida bo'lyapti. Bunda yuqori sinf o'quvchilarimiz kelajakda tanlagan kasbi uchun kerak bo'ladigan fanlar doirasida chuqurroq bilim olishlari ko'zda tutilmoqda. Mana shu jarayonni tashkil etish uchun avvalo o'quvchilarning qiziqishi va qobiliyatlari inobatga olinishi lozim. Shu maqsadda so'rovnomalar o'tkazildi, uning natijalariga ko'ra, tanlov yo'nalishlari tanlab olindi va ixtisoslashtirilgan ta'lim muassasalarining dasturlari moslashtirildi. Ya'ni ixtisoslashtirilgan ta'lim muassasalarining yuqori sinflari uchun yaratilgan dasturlar asosida ta'lim jarayonini tashkil etish ko'zda tutilmoqda.

Qo'shimcha qilinishicha, yangi amaliyot uchun ixtisoslashtirilgan maktablarning o'quv dasturlari, qo'llanmalari umumta'lim muassasalari o'qituvchilariga taqdim etilgan. Shuningdek, yangi o'quv yilidan maktab ta'limiga summativ va formativ baholash tizimi joriy etilishi haqida ham ma'lumot berildi. Ta'kidlanishicha, buning uchun Toshkent shahridan 60 ta, boshqa hududlardan esa 181 ta maktab tanlab olingan. Shunga ko'ra, yangi baholash tizimi eskisidan ancha farq qiladi.

Bugungi kunda o'quvchilarimiz ta'lim muassasalarida 5 balli sistemada baholab kelinmoqda. Har olgan kunlik bahosi ko'proq choraklik bahosini chiqarishda asosiy, muhim rolni egallagan. Va bu unchalik ham xolis baholashga kirmaydi, chunki o'qituvchi bolalarni 5 balli tizimda nisbiy baholab keladi. Yangi baholash tizimi mezonlarga asoslangan bo'lib, bunda o'quvchining aniq qaysi bilimi, qaysi ko'nikmasi asosida baholanishi oldindan ishlab chiqilgan bo'ladi. Shu asosida ularning bilimi, olgan bilimni amaliyotga qo'llashi, mulohaza, mushohada qilish ko'nikmalari ham baholanadi.

Formativ baholash asosan o'quvchini yo'naltirish, rag'batlantirish xususiyatiga ega. Bu o'quvchiga ko'proq rag'bat, motivatsiya berishga xizmat qiladi. *Summativ* baholash esa ma'lum bir bob yakunida o'quvchi egallashi kerak bo'lgan standart, bilim va ko'nikmalar baholanadi", – deydi mas'ul. Shuni qayd etish joizki, summativ va formativ baholash tizimi ta'limi rivojlangan deyarli barcha mamlakatlarga joriy etib bo'lingan, bu tizim kelgusida maktab ta'limida inson omili, nisbiy baho berishga barham berish, o'quvchilarni haqqoniy baholashga xizmat qiladi.

Eslatib o'tamiz, yangi avlod darsliklarini ishlab chiqish g'oyasi Shavkat Mirziyoyevning hukumat boshqaruviga kelgan vaqtida, 2016 yilda ilgari surilgan edi. O'sha yili darsliklarni ishlab chiqishda xorijlik mutaxassislar ham qatnashishi ma'lum qilingandi. 2020 yilda darsliklarni tayyorlash yuzasidan maxsus bot tashkil qilinib, jamoatchilik takliflari yig'ilgandi. Darsliklarni tayyorlash mas'uliyati Respublika ta'lim markaziga yuklatilgandi. 2021 yilda Sherzod Shermatovdan so'ng o'sha vaqtdagi Xalq ta'limi vazirligiga rahbar sifatida tayinlangan Baxtiyor Saidov yangi darsliklarni tayyorlashni tezlashtirish bo'yicha topshiriq bergandi. O'sha yilning o'zida fan tajribasi asosida darsliklar ishlab chiqilishi ma'lum qilindi. Shu bilan yangi avlod darsliklari masalasiga o'tgan yili dekabr oyida Mirziyoyevning pedagoglar bilan o'tgan uchrashuvida tilga olinib, yangi o'quv yilidan barcha boshlang'ich sinflar uchun joriy etilishi ma'lum qilindi.

Shu yil may oyida esa 10-11-sinflarning tanlov fani tajribasi yo'lga qo'yilishi haqida xabar qilingandi. Bunda o'quvchilarga 11 ta emas, 8 ta majburiy, 2 ta tanlov fankimyo-biologiya, matematika fizika, tarix-huquq, ona tili va adabiyot-chet tili bo'lishi aytilgandi.

Bundan shunday xulosa qilishimiz mumkinki, yangi baholash tizimiga umumta'lim maktablari o'tishi bu bolalarning bilimni adolatli baholashni samarali yo'lini ochib beradi.

Foydalanilgan adabiyotlar

- 1.** O‘zbekiston Respublikasi Prezidentining —O‘zbekiston Respublikasi Xalq Ta’limi tizimini 2030-yilgacha rivojlantirish konsepsiyasini tasdiqlash to‘g‘risidagi 2019-yil 29-apreldagi PF-5217 sonli Farmoni.
- 2.** 2017-2021 yillarda O‘zbekiston Respublikasini rivojlantirishning beshta ustuvor yo‘nalishi bo‘yicha Harakatlar strategiyasi. O‘zbekiston Respublikasi Prezidentining 2017 yil 7 fevraldagi PF-4947 sonli Farmoni.
- 3.** O‘zbekiston Respublikasi Vazirlar Mahkamasining “Xalq ta’limi tizimida ta’lim sifatini baholash sohasidagi xalqaro tadqiqotlarni tashkil etish chora-tadbirlari to‘g‘risida” 2018-yil 8-dekabrda 997-sonli qarori.

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MATEMATIKA FANINI O‘QITISHDA TALABALARNING MUSTAQIL ISHLASH KOMPETENSIYANI RIVOJLANTIRISH

***Annotatsiya.** Ushbu maqolada matematika fanini o‘qitishda talabalar mustaqil ishlash kompetensiyani rivojlantirishda tayanch didaktiv tamoyillar tavsifi hamda oliy ta‘lim tizimida matematika fanini o‘qitishda mustaqil talabaning mustaqil ishlashini takomillashtirish va talabalar shaxs sifatida fikr yuritish qobiliyatlarini rivojlantirish, shuningdek matematika fanidan talabalarning mustaqil ishlarida amaliy ahamiyati va ko‘rsatkichlari tahlil qilinadi. Talabalarda mustaqil ishlashga qiziqishini shakllantirishga asoslangan.*

***Kalit so‘zlar.** Mustaqil ishlash, kompetensiya, platforma, kognitiv vizual, matematika, algebra, geometriya.*

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INDEPENDENT WORK OF STUDENTS IN THE TEACHING OF MATHEMATICS DEVELOPMENT OF COMPETENCE

***Annotation.** This article describes the basic didactic principles for developing students' independent work competence in teaching mathematics, and analyzes the practical significance and indicators of students' independent work in teaching mathematics in the higher education system. It is based on the formation of students' interest in independent work.*

***Keywords.** Independent work, competency, platform, cognitive visual, mathematics, algebra, geometry.*

Ta‘lim sohasida Respublikamiz miqyosida olib borilayotgan barcha islohotlar yosh avlodning porloq kelajagini ta‘minlashga qaratilgan. Istiqloqlarning ilk yillaridayoq bu borada qabul qilingan bir qator qonun va hujjatlar fikrimiz dalilidir. Jumladan, O‘zbekiston Respublikasida ta‘lim tizimini tubdan takomillashtirishga qaratilgan “Ta‘lim to‘g‘risida”gi qonun, ushbu sohadagi islohotlarni bosqichma-bosqich amalga oshirishga mo‘ljallangan “Kadrlar tayyorlash milliy dasturi” hamda uning uzviy davomchisi sifatida “O‘zbekiston Respublikasini rivojlantirishning O‘zbekistonning taraqqiyot strategiyasi”ni keltirib o‘tish joiz.

Talabani matematika fanidan mustaqil fikrlashga o‘rgatishda o‘qituvchidan darslikda keltirilgan tushuncha va ma‘lumotlarning to‘g‘riligini tekshirish va isbotlash, eng qulay usullardan foydalanish, har bir ma‘lumot va tasdiqlash haqida

mustaqil fikr yuritish, vaziyatda ijodiy bo'lish talab qilinadi. Talaba har qanday vaziyatda o'z fikringizni bildirishda qiyinchiliklarga duch keladi.

Talaba mustaqil ishlashda matematikadan topshiriqlarni bajarishda ko'p qiyinchiliklarga duch keladi. Shu sababli, talabalar mustaqil bilim olishi uchun ular bilan turlicha yondashish kerak.

- matematika fanini o'qitishda har bir mavzuga etibor berish;
- matematika fanini o'qitish uchun ajratilgan vaqtga rioya qilish;
- matematikani fanini o'qitish jarayonida usullaridan to'g'ri foydalanish;
- matematikani fanini o'qitish bir qator mezonlarga amal qilish kerak;
- matematika fanini o'qitishning maqsad, vazifalari va tamoyillariga muvofiqligi;

- matematika fanini o'qitish uslubining o'rganilayotgan fan mazmuniga muvofiqligi;

O'qituvchi talabalarni mustaqil ishlashga o'rgatish bilan birga, rivojlanish sohasida kompetentsiya darajasini oshirish yo'nalishini belgilab berishi va faoliyat natijalarini baholashi mumkin. O'qituvchining talabalarni an'anaviy va raqamli axborotni mustaqil o'zlashtirishga, olingan ma'lumotlarni hayotiy vaziyatlarda qo'llashga o'rgatish malakasi ma'naviy-ma'rifiy merosni o'rganish natijasida egallagan ko'nikmalari hamda olingan bilimlarga bog'liq.

Talabalar yaxshi tushunsa, ularga mustaqil ishlash uchun topshiriqlar beradi va ularni fikrlashga undaydi. Mustaqil ishlash ko'nikmalari shakllanmagan bo'lsa, unda ularning kompetentsiyasi va mustaqil ishlashi rivojlanadi.

Natijalarni baholash mezonlari quyidagiga asoslanadi:

- talabalar tomonidan o'quv materialini o'zlashtirish;
- amaliy topshiriqlarni bajarishda talabaning nazariy bilimlaridan foydalanish imkoniyati;
- taqdimotning asoslilik va aniqligi;
- matematikani o'rganishning maqsad va vazifalariga muvofiq kompetentsiyani shakllanish darajasi.

Hozirgi vaqtda ta'lim jarayoni rivojlanib borayotganligining guvoxi bo'lmoqdamiz. Bu holatda talabalarga matematik misollarning yechimlarini an'anaviy usullarda yechishlarining o'zi yetarli bo'lmaydi. Sababi, bugungi kun bu talabalarga matematik masalarning yechish yo'llari mustaqil yechish uchun dasturlardan foydalanish bo'yicha yo'nalish berish zarur[4].

Shu maqsadda quyida matematik masalarning yechimlarini keltiramiz va yechimlarini topish masalalarini ko'ramiz. Masalan, matematikani fanini o'rganishda oliy ta'lim talabaning mustaqil ishlash kompetentsiyasini rivojlantirish uchun matritsa mavzusini tanlab olamiz. Unda 3x3 matritsaning teskari matritsasini topamiz.

Misol 1. Berilgan A matritsaga teskari bo‘lgan A^{-1} matritsani toping.

$$A = \begin{pmatrix} 1 & -1 & 2 \\ 3 & -3 & 7 \\ 2 & -3 & 5 \end{pmatrix}$$

Yechish. Buning uchun quyidagi matritsani tuzamiz:

$$\left(\begin{array}{ccc|ccc} 1 & -1 & 2 & 1 & 0 & 0 \\ 3 & -3 & 7 & 0 & 1 & 0 \\ 2 & -3 & 5 & 0 & 0 & 1 \end{array} \right)$$

Birinchi ustunni 1 ga, so‘ngra -2 ga ko‘paytirib, mos ravishda ikkinchi va uchinchi ustunga qo‘shamiz:

$$\left(\begin{array}{ccc|ccc} 1 & 0 & 0 & 1 & 1 & -2 \\ 3 & 0 & 1 & 0 & 1 & 0 \\ 2 & -1 & 1 & 0 & 0 & 1 \end{array} \right)$$

Ikkinchi ustunni 2 ga va 1 ga ko‘paytirib, mos ravishda birinchi va uchinchi ustunga qo‘shamiz:

$$\left(\begin{array}{ccc|ccc} 1 & 0 & 0 & 3 & 1 & -1 \\ 3 & 0 & 1 & 2 & 1 & 1 \\ 0 & -1 & 1 & 0 & 0 & 1 \end{array} \right)$$

Uchinchi ustunni -3 ga ko‘paytirib, birinchi ustunga qo‘shamiz va ikkinchi ustunni -1 ga ko‘paytiramiz:

$$\left(\begin{array}{ccc|ccc} 1 & 0 & 0 & 6 & -1 & -1 \\ 0 & 0 & 1 & -1 & -1 & 1 \\ 0 & 1 & 0 & -3 & 0 & 1 \end{array} \right)$$

Ikkinchi va uchinchi ustunlarni almashtiramiz:

$$\left(\begin{array}{ccc|ccc} 1 & 0 & 0 & 6 & -1 & -1 \\ 0 & 1 & 0 & -1 & 1 & -1 \\ 0 & 0 & 1 & -3 & 1 & 0 \end{array} \right)$$

Natijada A ga teskari A^{-1} matritsaga ega bo‘lamiz:

$$A^{-1} = \begin{pmatrix} 6 & -1 & -1 \\ -1 & 1 & -1 \\ -3 & 1 & 0 \end{pmatrix}$$

Matritsalar mavzusida matritsa uchun kalkulyator mavjud bo‘lib unda quyidagi amallar bajariladi. Onlayn kurs platformamizning dasturiy vositasi sifatida har doim onlayn rejimda ishlaydigan millionlab foydalanuvchiga ega *math10.com* saytiga murojat qilamiz.

Saytning bosh saxifasida, forum, testlar, masalalar, algebra, geometriya, matematik o'yinlar, masalalarni yechish, matematika bo'limlari mavjud.

2x2, 3x3, 4x4 o'lchamdagi matritsalar determinanti hisoblanadi, 2x2, 3x3, 4x4 o'lchamdagi matritsaning rangi hisoblanadi, 4x4 o'lchamdagi matritsaning teskari matritsasi hisoblanadi, matritsani matritsaga ko'paytirish, chiziqli tenglamalar sistemasini matritsa usulidan foydalanib yechish va har xil o'lchamdagi matritsalarini hisoblash mumkin[6].



Ballar: 0 Muvaffaqiyat: 0%

Math Problems, Tests, Forums

Uy	Matematika forumi/Yordam	Muammoni hal qiluvchi	Amaliyot	Ish varaqlari	Testlar
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- Muammoni hal qiluvchi
- Bosh faktorizatsiya
- Kasrlar
- Faktoring
- Matritsalar va tenglamalar tizimlari

Uy / Muammoni hal qiluvchilar / Matritsalar va tenglamalar tizimlari

Bosqichli matritsalarini hal qiluvchilar (kalkulyatorlar).

Siz kasrlardan foydalanishingiz mumkin, masalan, 1/3.

Matritsaning determinantini, rankini va teskarisini hisoblang

Matritsa hajmi:

qatorlar: x ustunlar:

Matritsani kiriting:

1	-1	2
3	-3	7
2	-3	5

Dastlabki matritsa:

1 -1 2
3 -3 7
2 -3 5

Hisob-kitoblar:

[AI] =

1 -1 2 | 1 0 0
3 -3 7 | 0 1 0
2 -3 5 | 0 0 1

1-qatorni -3 ga ko'paytiring va 2-qatorga qo'shing
. 1-qatorni -2 ga ko'paytiring va 3-qatorga qo'shing.

1 -1 2 | 1 0 0
0 0 1 | -3 1 0
0 -1 1 | -2 0 1

3-dan 2-qatorga qo'shing.

1 -1 2 | 1 0 0
0 -1 2 | -5 1 1
0 -1 1 | -2 0 1

2-qatorni -1 ga ko'paytiring va 3-qatorga qo'shing.

$$\begin{array}{ccc|ccc} 1 & -1 & 2 & 1 & 0 & 0 \\ 0 & -1 & 2 & -5 & 1 & 1 \\ 0 & 0 & -1 & 3 & -1 & 0 \end{array}$$

1-qatorni 1 ga bo'ling.

2-qatorni -1 ga bo'ling.

3-qatorni -1 ga bo'ling.

$$\begin{array}{ccc|ccc} 1 & -1 & 2 & 1 & 0 & 0 \\ 0 & 1 & -2 & 5 & -1 & -1 \\ 0 & 0 & 1 & -3 & 1 & 0 \end{array}$$

3-qatorni 2 ga ko'paytiring va 2-qatorga qo'shing.

3-qatorni -2 ga ko'paytiring va 1-qatorga qo'shing.

$$\begin{array}{ccc|ccc} 1 & -1 & 0 & 7 & -2 & 0 \\ 0 & 1 & 0 & -1 & 1 & -1 \\ 0 & 0 & 1 & -3 & 1 & 0 \end{array}$$

2-qatorni 1 ga ko'paytiring va 1-qatorga qo'shing.

$$\begin{array}{ccc|ccc} 1 & 0 & 0 & 6 & -1 & -1 \\ 0 & 1 & 0 & -1 & 1 & -1 \\ 0 & 0 & 1 & -3 & 1 & 0 \end{array}$$

Natija:

$$\begin{array}{ccc} 6 & -1 & -1 \\ -1 & 1 & -1 \\ -3 & 1 & 0 \end{array}$$

Shunday qilib, matematika fanidan matritsalar ustida amallar mavzusini o'qitishda *math10.com* sayti imkoniyatlaridan foydalanishda brainstorming metodikasi bilan tanishib chiqdik, *math10.com* sayti imkoniyatlari matritsalarini simvolik ko'rishda yechishga, ular ustida turli shakl almashtirishlarni bajarishga hamda yechimni topishga imkon beradi. Bundan tashqari talabalarni mustaqil ishlash faoliyatini rivojlantirishda raqamli texnologiyalarning o'rni muhim va turli matematik ilovalardan foydalanish uchun ko'rsatmalarni belgilash har bir pedagogning izlanishi bilan bog'liq.

Math10.com saytining imkoniyatlari har bir o'rganuvchi uchun muhim dasturiy ta'minotga ega. Saytida yaratilgan mustaqil ishlash faoliyatining platformasiga qiyinchiliksiz talabalar kira oladi. Kognitiv-vizual yondashuv vositalari orqali talabalar matematik tushunchalarni faqat raqamlar va so'zlarga ishonishdan ko'ra tezroq va osonroq ifoda etishlari mumkin. Ushbu fikrlarga qo'shilgan holda ushbu *Math10.com* saytining ilovalaridan foydalanib unda ishlash

va elektron resurslarni qurish nazariyasi va amaliyoti yetarlicha asoslab berilgan. Shu bois mustaqil ishlarni o'rgatish metodikasini takomillashtirishda va Math10.com kabi foydalanuvchilarga qulay ta'lim dasturlarini samarali qo'llash bo'yicha izlanishlar olib borishimiz zarur. Raqamli texnologiyalar keng qo'llanilayotgan zamonaviy davrda ularni matematika fanida qo'llash zarur. Demak, mustaqil ishlarni o'rgatishning muhim qismi talabalar o'rtasida do'stlik va hamkorlikni tashkil etishdir. Bu yerda o'qituvchi shakllantirish, birlashtirish, nazorat qilish va qaror qabul qilish rolini o'ynaydi[5].

Xulosa qilib shuni aytish mumkinki, matematika fanini o'qitishda talabalarning mustaqil ishlash kompetentsiyani rivojlantirish jarayonlarini o'qituvchi omilisiz amalga oshirish juda qiyin ayniqsa, mustaqil ishlashga o'rgatish uchun pedagogik ishning asosiy natijalari pedagogik mahoratga bog'liq. Talabalarga mustaqil ishlashi uchun topshiriqlar berishdan oldin o'qituvchi ba'zi masalalarni batafsil tushuntirishi va o'rnak bo'lishi kerak. Bundan tashqari, u har bir harakati va xatti-harakati orqali o'quvchilar nimani xohlashlarini tushunishga harakat qilishi kerak. Mustaqil ishlash kompetensiyasini rivojlantirishda muvaffaqiyatga erishishi talabalarni o'qitilayotgan fanga qiziqtirish qobiliyatidadir.

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STUDYING THE ELEMENTS OF WORD FORMATION IN THE ORGANIZATION OF AGRICULTURAL TERMINOLOGY IN ENGLISH

Abstract: The work analyzes the structural, semantic and functional features of terminology in the noted languages. It is established that two-part combinations prevail over complex ones consisting of three, four or more components.

Key words: component, semantics, structure, terminological word-combination, terminology, the process of functioning of terms, specific agriculture term, agricultural sector, term.

In modern English there are a large number of affixes, both native and borrowed. V.V. Vinogradov notes that affixes that have lost their meaning, become unproductive and productive only as an object of a particular part of speech, cease to be affixes and only potentially retain the property of singularity [2, p. 120]

Terms in English, as in other languages, are divided into simple, derivative, complex and compound.

Simple terms consist of one root, most of them relate to ancient terms of the English language and are borrowed from other languages: baffle 1. energy damper; spreader; pier (on a waterfall or a waterhole); roughness checker [1]; bald 1. without vegetation (feathers, wool), naked; plucked 2. deprived of vegetation; without leaves, etc.

Derivative terms in modern English, including derived agricultural terms, are numerous, but they mainly consist of a root, an affix, two or more affixes: bogginess [1]; brackishness [1]; branchless [1]; embankment; dam; embankment; bank; coastal bank [1]; hardiness endurance; strength; stability; vitality; hardening (of plants); resistance to adverse external conditions, etc.

Compound terms consist of two or more bases: badland - badland, badland, infertile eroded rugged terrain; brushland land overgrown with bushes [1]; ballhead round head [1], birdhouse poultry house [1]; hotbed n. greenhouse, steam bed; cropland (land under crops), etc.

Also, in English there are phrasal or compound terms. By origin they are simple and derivative, being nouns and adjectives. Agricultural terms are single-component, two-component, three-component and multi-component: fallow land (land under fallow); leased land (leased land), camping of cattle - camp keeping of cattle[1], caribou of seed - seed seam, seedling, cement of livestock - census of cattle, change of seeds - change of seeds, duration of action - duration of action (e.g., of a pesticide), of diapause - duration of the diapause period (of

insects); duration of dormancy - duration [period] of rest; duration of fertilizer effect - duration of the effect of fertilizers [1], etc.

Affixation is defined as a way of forming new words by adding word-forming affixes to various stems.

The function of an affix should be understood as its intended purpose, that is, for what purpose and for what purpose it is used and what it can convey in contrast to other units of nomination. Dead affixes are completely connected to the word base and are distinguished by means of a diachronic analysis of word development. Living affixes are divided into productive and non-productive affixes. Most prefixes and suffixes that are productive in the formation of agricultural terms in English came from Latin and Greek. For example, the suffix *-ism* is a Latin suffix that is very productive in the formation of agricultural terms. This suffix, due to its existence in many languages of the world, is approved as an international suffix; it forms, mainly, new nouns from a noun: ectoparasitism ectoparasite, external; embryology embryonic state [1]; ergotism ergotism, poisoning with ergot [1], etc.

In turn, affixal word formation, i.e., the morphological type of word formation is divided into prefixal and suffixal, which are discussed below. a) Prefixal word formation

Prefixation is the formation of a word by adding a prefix to the root of the word. The main function of prefixes in English is to change the lexical meaning of a part of speech.

We have identified the following prefixes in English that are productive in the formation of agricultural terms in English and have various semantic shades in agricultural terminology. These include the following prefixes:

dis- came into English from Latin and is productive in the formation of agricultural terms, it forms verbs of negative action. The prefix *diss-* forms verb stems, expressing the meaning of the action opposite to that expressed in the stem: dissolve (dissolve); disbranch - (to cut off branches, (to trim) a tree); disengagement cutting—clearing the forest; dishorn - to remove a horn; dissilient - bursting, etc.

il- is used with some adjectives and nouns. It gives the opposite meaning to the terms. In agricultural terminology in English, there are some terms formed with this prefix:

The prefix *im-* is more typical in English for adjectives. There are many derivative agricultural terms that are formed with this suffix in English: immature - 1. unripe, unripe, immature 2. underdeveloped; underdeveloped 3. immature 4. unformed (about soil) 5. unsettled (about a trait) 6. premature immaturity 1. immaturity 2. underdevelopment; immedicable incurable; immiscible immobile motionless; fixed; immobility immobility; immobilization 1. agroh. immobilization, fixation, binding 2. immobilization, immobilization 3. stunning (at slaughter); immunity (to) n insensitivity; imperishable adj. durable, resistant, non-perishable; improper adj. unsuitable, unsuitable;

ir- is a prefix of Romance origin. It forms noun and adjective terms. It gives a negative meaning to agricultural terms: irreversible .

non- [from Latin non 'not']. The prefix non- comes from the Latin word "not". This suffix forms nouns and adjectives in the agricultural terminology in English. It is productive in the formation of adjective terms, gives a negative meaning to the term: nonfarm - non-agricultural; nonprotein ~ non-protein.

anti- [from Greek anti 'against']. The word-forming element (or prefix) anti-, a word element of Greek origin, forms mainly nouns and adjectives in English in the sublanguage agriculture: antiacid anti-acid, reducing acidity, etc.

neo- [from Greek neos 'new'] The word-forming element (or prefix) neo-meaning "new, recent", is widely used in the sublanguage of agriculture in English, it forms adjectives and nouns that come from the Greek word neos ("new") and entered English as terms with the word element "neo": neoblast neocyte neocyte, immature form of leukocyte neoformation new growth.

In the sublanguage of agriculture in the English language, there are some suffixes that can be considered productive in the formation of agricultural terms, below some of them are classified according to their semantics, origin and productivity.

The suffix **-ness** is a native suffix that is a productive suffix that forms a noun. This suffix was productive even in Old English. In the sublanguage of agriculture, nouns are formed by joining them to an adjective. In agriculture, it denotes the quality and state of something or some phenomenon that exists in our lives: adaptiveness; adhesiveness stickiness, tackiness; etc.

The suffix **-ance** [from French **-ance**, from Latin **-antia**, **-entia** (from present participial stems **-ant-**, **-ent-**), is borrowed from French and forms nouns in English.

The suffix **-ity** [from French **-ité**, from Latin **-itas**, **-itatis**], which arose from Old French **-ite**, which appeared in this language from the suffix of Latin origin **-ite**. In the sublanguage of agriculture, it is used to form abstract nouns expressing a state or condition: complementarity; congeniality similarity; kinship; curability 1. cutting (of a carcass) 2. American live. yield of cuts; debility weakness, decreased tone, etc.

-ed. The suffix **-ed** is one of the productive suffixes of the English language. It forms adjectives, mostly from nouns: puddled compacted (about soil); puffed plump, loose (about soil crust) pug 1. chaff, finely chopped straw; chaff (especially clover).

A productive term-forming suffix is **-able**. It is used to form agricultural terms. It is of Latin origin, in English it forms adjectives from nouns and verbs: cultivable 1, arable, arable (about land) 2. suitable for cultivation (about plants); irrigable - irrigated; curable - curable; detachable - detachable, removable, detachable, removable; incurable ~ incurable; etc.

The suffix **-less** mainly forms adjectives from nouns: backboneless - invertebrate; barkless - barkless; stringless - fiberless brittle beans (not having coarse fibers in the valves); beardless - awnless; seedless - seedless; pitted;

seedless - boleless - standardless; branchless - without branches, naked, with cut branches; breadless - breadless; cloudless - cloudless, clear (about the weather), etc.

The suffix -ate forms verbs, came to English from Latin: cold-eviscerated - gutted in a cooled form (about a bird); comate - woolly; concentrate - concentrate; concentrated; condensate - condensate; contaminate - pollute; infect; copulate - copulate, copulate; corticate(d) - covered with bark; costate I - ribbed 2. veiny, etc.

One of the distinctive properties of affixes is that they are still used with the form they were borrowed from. Regarding the share of affixes in the formation of certain terms related to agriculture, it should be noted that most of them are nominal parts of speech, i.e., a noun or adjective.

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THE EFFECT OF ALTERING THE BIOSTIMULANT APPLICATION RATE ON THE STEM HEIGHT OF REPLANTED OILSEED SUNFLOWER PLANTS

Abstract. *Microfertilizers, biostimulants, microfertilizers and growth substances contained in the immunostimulant have been found to have a positive effect on the growth of the local Dilbar variety, on the weight of 1000 seeds and on the yield. The use of MERS microfertilizer made it possible to increase the productivity of one plant by 362.9-430.4 grams, the use of Fitovak immunostimulant by 288.1-388.0 grams, and the use of Biodux biostimulant by 107.7-287.7 grams.*

Keywords: *biostimulant, sunflower, standard, immunostimulant, microfertilizer, norm, yield, growth, development.*

Introduction. Biologically active substances (BAS), including plant phytohormones - regulators (stimulators) of plant growth and development (RPGD) are becoming increasingly important in modern conditions. Their application in agriculture, plant science and forestry has the potential to produce results that cannot be achieved by other means. The use of RPGD makes it possible to better realize the genetic potential of crops, to increase the resistance of plants to stress factors of biotic and abiotic nature, and as a result, to increase the yield and improve the quality. Plant growth stimulants are special nutrients that accelerate plant metabolism and stimulate the accumulation of green mass in representatives of the flora. Plant growth regulators are now widely available. They are available in different types. Some of them affect the formation of roots, increase the germination rate of seeds, Others affect the development and growth of the stem more, regulate flowering, are able to regulate the formation of seeded nodes.

The level of study of the problem. One of the advanced technologies of sunflower cultivation is the use of mineral fertilizers, which is one of the main factors of increasing productivity. It is important to nutrition the sunflower in time according to its demand, therefore, it is possible to obtain a high-quality and high yield if the amount and duration of the mineral fertilizer applied to it are determined [2].

Plant growth regulators cannot replace mineral fertilizers, but complement them in the plant nutrition system, increase the coefficient of use of soil and fertilizers. "UZGUMI" biofertilizer is applied mainly before planting seeds and is sprayed when sunflowers form 3-5 leaves. In this case, the yield increases by 0.22-0.31 t/ha and the oil content by 0.3-0.5%. [7]

It is necessary to use the latest scientific achievements and apply the innovative technologies of our advanced farms in order to achieve high productivity in sunflower cultivation and obtain a large amount of income and profit from it [1].

Under the influence of plant regulators, it increases the effectiveness of pesticides applied to seeds and during the growing season. Some growth regulators reduce white and gray rot diseases of sunflower, and sugar beet diseases by 30-50% or more [3,8].

Employees of the Institute of Agroresurc of Ukraine (Ponomarenko SP, 2003] note that for the agricultural producer growth regulators are no less valuable than mineral fertilizers and plant protection products. A new direction of improving sunflower production technology is the development of a system of effective use of modern plant growth regulators that control individual stages of plant growth and development to activate their immunity and, as a result, increase the yield and quality of sunflower seeds. (Sonin K.E., 2010; Petrichenko V.N., 2010). Therefore, the development of technology for the use of biostimulants that regulate growth and increase immunity is of the utmost importance. [4,5,6].

Research results. Several doses of microfertilizers and biostimulants were applied to the Dilbar variety of sunflower, and the effects on field germination of seeds, the transition of sunflower phases, the height of the plant, the number of leaves, the size of baskets, the number and weight of seeds were studied. According to experiments, the height of the stem of the local Dilbar variety of sunflower is about 2 meters because it is planted in irrigated land. In the experiment, the height of the Dilbar variety grew to an average height of 161.7 sm in the control variant, it was found that the use of biostimulants had a positive effect on the plants, and the height of the plant grew from an average of 179.0 sm to 213.8 sm in these variants.

When UzGUMI biostimulant was applied to sunflower seeds at 0.6 l/ton, the average height of the plant was 197.6 sm, and the biostimulant had a positive effect on the growth of the plant stem, making it 35.9 sm taller than the control option. In the variant where Fitovak immunostimulant was applied to the seed in the amount of 300 ml/ton, the height of the plant was found to be 213.8 sm, and it was 52.1 sm higher than the control and 16.2 sm higher than the standard UzGUMI. In the variant where Fitovak immunostimulant was used in the amount of 200 ml/ton per seed, it was observed that the height of the plant grew at the same height (213.4 sm) as in the variant where the quantity of 300 ml/ton was used in the seed, but increasing the rate of the immunostimulant to 400 ml/ton per seed showed a decrease in the effect on the growth of the plant stem, and the stem height increased by 15.2 sm compared to the second option and 14.8 sm compared to the first option. The use of Fitovak immunostimulant made it possible to increase the height of stems by 51.7 sm compared to the first option, 52.1 compared to the second option, and 36.9 sm compared to the third option compared to the control option.

Discussion. If increasing the rate of MERS microfertilizer led to the growth of plant stem, it was found that in Bioduks and Fitovak biostimulants, on the contrary, increasing the rate of biostimulants had a negative effect on the growth of plant height.

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THE DIFFERENT RATES AT WHICH BIOSTIMULANTS AFFECT SUNFLOWER OILSEED

Abstract. *biostimulants, microfertilizers and growth substances contained in the immunostimulant have been found to have a positive effect on the growth, development and formation of seeds in the basket of sunflower of the local Dilbar variety, on the weight of 1000 seeds and on the yield. The use of MERS microfertilizer made it possible to increase the productivity of one plant by 362.9-430.4 grams, the use of Fitovak immunostimulant by 288.1-388.0 grams, and the use of Biodux biostimulant by 107.7-287.7 grams.*

Keywords: *sunflower, biostimulant, standard, immunostimulant, microfertilizer, norm, yield, growth, development.*

Introduction. In our country, special attention is being paid to the consistent development of the chemical industry and the expansion of the production of various chemical products for agriculture. New types of fertilizers are being created by our scientists, produced on the basis of local raw materials, which accelerate the growth of plants, increase their productivity, resistance to various diseases and cold.

Materials and methods. As a repeated crop, field experiments were conducted at the Thin Fiber Cotton Research Institute. The experimental field is an irrigated grassland barren soil with a reddish color barren soil that has undergone severe erosion. Soil total nitrogen is 0.4%, phosphorus is 0.6%, potassium is up to 1.5-2%, mobile phosphorus is 15-20 mg/kg, mobile nitrogen is 3-5 mg/kg, mobile potassium is 150-200 mg. /kg around. The amount of biohumus in the soil of the studied experimental area is 0.5-0.6% in the layers and decreases towards the lower layers. Methods of conducting field experiments (UzPITI 2007y), "Metodika polevogo opyta" (B. Dospekhov, 1985y) were used in the research. Field experiments were systematically arranged as simple, 4 replicates, 8 variants. The area of the field unit taken into account is 24 m² in each option. The number of counted plants is 20. In the experiment, seeds of the Dilbar variety of sunflower were treated with "UZGUMI" biofertilizer 0.6 l/t, Fitovak 200 ml/t, Bioduks 2.0 ml/t and MERS 0.1% - 3.0 ml/t, then 7-8 leaves in the formation phase, biofertilizer "UZGUMI" was used at the rate of 0.4 l/ha, Fitovak immunostimulator 300 ml/ha, Biodux 2.0 ml/ha, and MERS 0.1% - 0.5 l/ha.

Research results. Several doses of microfertilizers and biostimulants were applied to the Dilbar variety of sunflower, and the effects on field germination of seeds, the transition of sunflower phases, the height of the plant, the number of leaves, the size of baskets, the number and weight of seeds were studied.

One basket develops in oilseed sunflower, in the experiment, the formed complete seeds in one basket were counted in the experimental plants and the following were found. In the control variant, the total number of complete seeds in one basket was 956.6 units. It was determined that UzGUMI produced 298.0 more seeds on average compared to the control. The variant using MERS microfertilizer at 2.0 ml/t yielded an average of 1387.0 seeds from one basket, and it was distinguished by the production of more seeds than all the variants studied in the experiment. The use of biostimulants, especially MERS microfertilizer and Fitovak immunostimulant (1344.6 units), was found to have a positive effect on the increase in the number of seeds in the basket. The amount of seeds in one basket was 430.4 more than the control, and 132.4 more than the UzGUMI standard in the case of MERS microfertilizer 2.0 ml/t. Among the options that used biostimulants, the option that formed the least seeds was observed in the option that used Biodux biostimulant at the rate of 1.0 ml/t (1064.3 units). In this variant, compared to the control, 107.7 seeds were formed and UzGUMI formed 190.3.7 seeds less than the standard.

Table 1. The effect of biostimulants on the productivity of one plant and the weight of 1000 seeds.

	Consumption rate ml,l/t (factor V)	Productivity of one plant, gram	1000 seed weight, grams
Sample	-	94,8	87.9
UZGUMI (benchmark)	0,6l/t	112,9	97.5
Microbiofertilizer MERS	2,0 l/t	144,2	107,5
	3,0 l/t	140,9	95,6
	4,0 l/t	124,9	89,4
Biostimulant Biodux	1,0 ml/t	119,6	106,3
	2,0 ml/t	119,0	104,6
	3,0 ml/t	131,0	93,8
Иммуностимулятор Фитовак	200 ml/t	143,6	99,6
	300 ml/t	126,0	100,5
	400 ml/t	126,0	91,3

It was found that the productivity of one plant was positively affected by the use of biostimulants in different rates, especially when MERS microfertilizer was used from biostimulants, a high yield was achieved. This microfertilizer is applied at the rate of 2.0 ml/ton of seed and 144.2 grams, 3.0 ml/t during the growing season. 140.9 grams and 4.0 ml/t when used. 124.9 grams were obtained when used. This

means an additional yield of 49.4, 46.1 and 30.1 grams per plant, respectively, compared to the control. 31.3, 28.0 and 12.0 grams of additional yield was obtained in comparison with UzGUMI standard. The yield obtained from one plant when using the biostimulant Biodux. In the experiment, it was found that the yield was less than the variants using other biostimulants. 1000 seed weight was found to be heavier in the variant using MERS microfertilizer compared to other biostimulants used in the experiment. In this case, in the variant used in the amount of 2.0 ml/t, compared to the control, UzGUMI was heavier by 10.0 grams compared to the standard. When Fitovak immunostimulant was used, the results were similar to the options where MERS myrobiofertilizer was used and 300 ml/t. in the used option, it was determined that the weight of 1000 seeds was 100.5 grams. Applying Biodux biostimulant at 1.0 ml/ton of seed resulted in 106.3 grams per 1000 seeds, while increasing application rates indicated that the seeds could be relatively light. The lightest weight of 1000 seeds was observed in the control variant (87.9 grams). (Table 1).

Discussion. It was found that the growth substances contained in various biostimulants have a positive effect on the growth, development and yield of the local sunflower variety Dilbar.

It led to an increase in the number of seeds in one basket, and the application of microfertilizer, immunostimulator and biostimulants depending on the type had a positive effect on the increase in the number of seeds in the basket, compared to the control, the number of seeds in one basket increased from 42.4 to 107.7, and these seeds were distinguished by the formation of more seeds and the fact that these seeds were large and whole. stood up Based on this, it was proved that the weight of 1000 seeds is higher than 100.5-107.5 grams.

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INTENSIVE CARE AND PREVENTION OF ERECTILE DYSFUNCTION IN MEN SUFFERING FROM COVID-19

***Annotation.** As experience gained in the fight against COVID-19, it became clear that the signs indicating a predisposition to a more severe course of the disease should include not only old age, obesity, hypertension and diabetes mellitus, but also male gender. It is noted that one of the consequences of coronavirus infection is endothelial dysfunction. In this condition, the mucous membrane of small blood vessels is disturbed, and the tissues they feed cease to be supplied with blood normally and lose their functions. According to the study, this dysfunction of the blood vessels can lead to the development of impotence in men who have recovered from COVID-19.*

***Key words:** coronavirus infection, erectile dysfunction, testosterone, libido, erection, prostate.*

In the modern era, COVID-19 is the biggest challenge facing healthcare professionals and scientists around the world. High the contagiousness and severe course of the disease have become a serious test for the global healthcare system. All over the world, measures were taken to limit the spread of the disease, up to the re- proliferation of multidisciplinary and specialized clinics to increase the ability to provide emergency care to patients with coronavirus infection, suspend elective surgeries, inpatient and outpatient care for seriously ill patients, including urological profile [1, 2, 3, 4]. Significant efforts and funds have been devoted to the treatment of COVID -19, while the interaction of the virus with various organs and systems of the human body has been poorly studied so far [10,11, 12, 13].

As experience gained in the fight against COVID-19, it became clear that the signs indicating a predisposition to a more severe course of the disease should include not only old age, obesity, arterial hypertension and diabetes mellitus, but also male sex [6, 7, 8, 9]. It is noted that one of the consequences of coronavirus infection is endothelial dysfunction. In this condition, the mucous membrane of small blood vessels is disturbed, and the tissues they feed cease to be supplied with blood normally and lose their functions. According to the study, this dysfunction of the blood vessels can lead to the development of impotence in men who have recovered from COVID-19.

The purpose of the study is to study the effect of coronavirus infection on erectile function.

Material and research methods. From 2021 to 2022, 46 men who had COVID-19 pneumonia and complained of a pronounced decrease in libido, erectile function and the quality of sexual intercourse after the illness were consulted in the

urology department of the clinic of the Andijan State Medical Institute. The duration of the disease ranged from 3 to 6 months. The age of the patients ranged from 38 to 57 years. All of them had at least one PCR-positive respiratory swab for COVID-19. Anamnestically, all patients, based on computed tomography (CT) of the chest, were diagnosed with pneumonia of varying severity. Patients with a mild course of COVID-19, complicated by CT-1 pneumonia, were treated on an outpatient basis, under the supervision of a local therapist. Patients with moderate and severe course (pneumonia CT-2 and CT-3) were hospitalized in specialized COVID hospitals, where they underwent the main stages of therapy. At the same time, 75% of them were on the support of humidified O₂, and 11% of patients were treated in COVID intensive care using non-invasive artificial lung ventilation in the CPAP mode (continuous positive airway pressure mode –ContinuousPositiveairwaypressure).

The diagnostic complex included a physical examination, general blood and urine tests, a biochemical blood test, an ultrasound examination of the prostate and scrotum organs, a study of the level of a common prostate -specific antigen, a study of hormonal status - the total level of testosterone (T), luteinizing hormone (LH), prolactin was determined (P).

Patients were surveyed using the following questionnaires: IIEF (Theinternationalindexoferectilefunction, International Index of Erectile Function, IIEF-5);

Over the past 6 months:					
1. How do you rate your confidence that you could get and keep an erection?	Very low 1	Low 2	Moderate 3	High 4	Very high 5
2. When you had erections with sexual stimulation, how often were your erections hard enough for penetration?	Almost never/never 1	A few times (much less than half the time) 2	Sometimes (about half the time) 3	Most times (much more than half the time) 4	Almost always/always 5
3. During sexual intercourse, how often were you able to maintain your erection after you had penetrated (entered) your partner?	Almost never/never 1	A few times (much less than half the time) 2	Sometimes (about half the time) 3	Most times (much more than half the time) 4	Almost always/always 5
4. During sexual intercourse, how difficult was it to maintain your erection to completion of intercourse?	Extremely difficult 1	Very difficult 2	Difficult 3	Slightly difficult 4	Not difficult 5
5. When you attempted sexual intercourse, how often was it satisfactory for you?	Almost never/never 1	A few times (much less than half the time) 2	Sometimes (about half the time) 3	Most times (much more than half the time) 4	Almost always/always 5
<p>IIEF-5 scoring:</p> <p>The IIEF-5 score is the sum of the ordinal responses to the 5 items.</p> <p>22-25: No erectile dysfunction</p> <p>17-21: Mild erectile dysfunction</p> <p>12-16: Mild to moderate erectile dysfunction</p> <p>8-11: Moderate erectile dysfunction</p> <p>5-7: Severe erectile dysfunction</p>					

IPSS (International Prostate Symptom Score, International Prostate Symptom Index, a scale for the overall assessment of prostate diseases); AMS (Aging Males Symptoms, Male Aging Symptoms Questionnaire).

The results of the study showed that during the physical examination, no significant pathology was detected in the applied men. General clinical blood and urine tests, the results of a biochemical blood test were within normal limits.

Ultrasound examination (ultrasound) showed that the volume of the pancreas was less than 45 cm³, the volume of residual urine was 0-50 ml.

All those who applied noted a decrease in sexual desire of varying severity, from sluggish periodic desires to their complete absence within 1 to 3 months after suffering COVID-19 pneumonia.

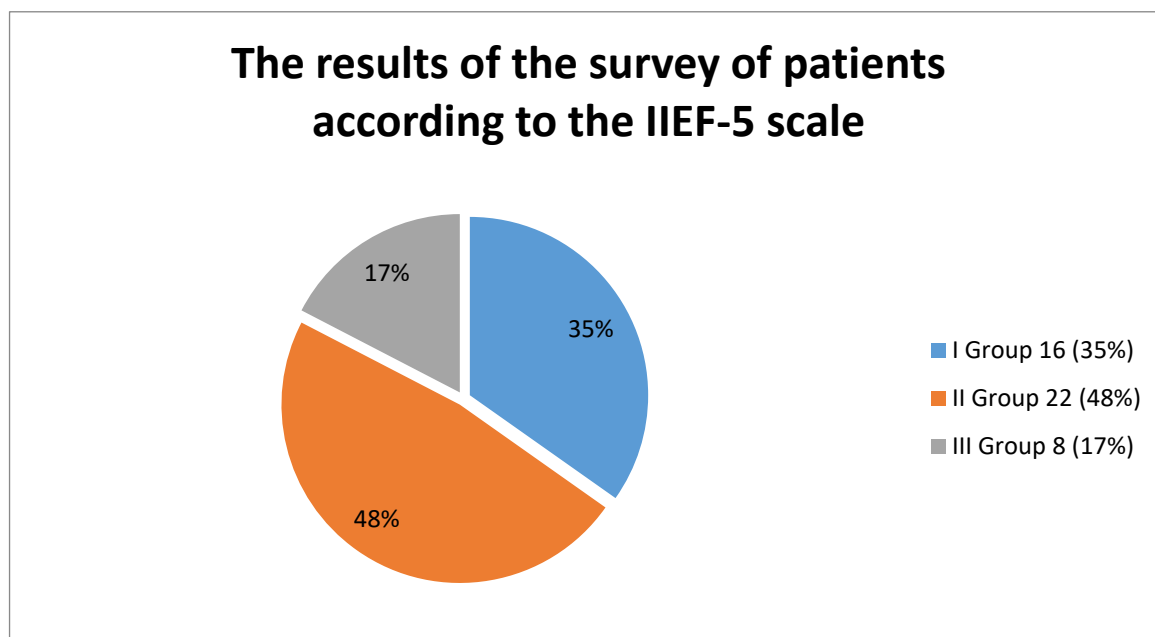
Many of them forced themselves to have intercourse by force of will, in most cases (67%) under the psychological pressure of their sexual partners. This eventually led to conflicts, which further aggravated the emotional situation.

According to the results of the survey of the International Index of Erectile Function, patients were divided into 3 groups:

Group 1 - 16 men, whose total score on the IIEF-5 scale was 17-21, were included in the group with a mild degree of erectile dysfunction;

Group 2 - in 22 patients, the total score was 12-16, which combined them into a group with a moderately mild degree of erectile dysfunction

Group 3 - 8 patients with severe erectile dysfunction, as the sum of the test was 5-7 points.



After undergoing COVID -19, patients of groups 1 and 2 noted that they were most concerned about difficulties with the onset and maintenance of an erection, incomplete satisfaction from sexual intercourse, and group 1 patients noted on a 3-4 point system (sometimes or in half of the cases), and patients of the 2nd group - according to a 2-point system (which means rarely).

The consequences of COVID -19 in patients of group 3 were expressed in the absence of morning erection, complete dissatisfaction with sexual intercourse, and lack of libido. Values relative to the generally accepted testosterone value of more than 12 nmol / l correspond to the norm, according to the recommendations of ISSAM (International Society for the Study of Aging and Men's Health). In our study, the laboratory testosterone level in these groups was: in patients of group 1 - 12.0 nmol / l and above, in group 2 - testosterone levels were reduced to 10.0 nmol / l, in group 3 - testosterone levels were reduced to 8.0 nmol / l.

Findings:

1. The topic of viral lesions of the organs of the male reproductive system with negative consequences for erectile fertility component for urological practice is also expanding due to the consequences of the coronavirus infection.
2. COVID infection has a negative effect on erectile function by reducing testosterone levels.

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SURXON DAVLAT QO‘RIQXONASI ORNITOFAUNASI VA ULARNING BIOEKOLOGIK XUSUSIYATLARI

***Annotatsiya:** Maqolada Surxon davlat qo‘riqxonasining tabiiy-geografik o‘rni, qushlar hayotining bioekologik xususiyatlari haqida ma’lumotlar berilgan. Ekologik muhit muvozanatini ta’minlashda qushlarning ahamiyati qayd etilgan.*

***Tayanch so‘zlar:** Surxon davlat qo‘riqxonasi, qushlar faunasi, populyatsiyasi, dimorfizm, ekologik faollik.*

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ORNITHOFAUNA OF SURKHAN STATE SANCTUARY AND THEIR BIOECOLOGICAL CHARACTERISTICS

***Abstract:** The article provides information on the natural-geographical location of the Surkhan State Reserve, bio-ecological features of birdlife. The importance of birds in ensuring the balance of the ecological environment is noted.*

***Key words:** Surkhan state reserve, bird fauna, population, dimorphism, ecological activities.*

Surxon davlat qo‘riqxonasi Surxondaryo viloyatida, O‘zbekistonning janubi-sharqiy hududida joylashgan. Qo‘riqxona 1980-yilda tashkil etilgan bo‘lib, u 50 ming gektar hududni qamrab oladi Surxon davlat qo‘riqxonasi 1986 yil 8 sentabrda tashkil etilgan. U “Orol-Payg‘ambar” va “Ko‘hitang” bo‘limlaridan iborat. Umumiy maydoni 27676 ga ni tashkil etadi.

Qo‘riqxonadagi o‘rmon va dasht hududlari birgalikda hududning 60% ini tashkil qiladi. O‘rmon hududlarida archa, terak, va chakanda daraxtlari keng tarqalgan bo‘lib, bu joylar qushlarning in qurishi va oziqlanishi uchun qulay sharoit yaratadi. Suv manbalari va botqoqzorlar migratsion qushlar uchun to‘xtash va oziqlanish joyi hisoblanadi.

O‘zbekiston Milliy universiteti va Bioekologiya instituti olib borgan tadqiqotlarga ko‘ra, so‘nggi yillarda iqlim o‘zgarishi natijasida hududdagi

o'simliklar qoplami va hayvonot olami sezilarli darajada o'zgarishlarga uchramoqda. Xususan, qo'riqxonaning janubiy qismida o'simliklar kamayishi tufayli qushlarning oziqlanish manbalari 15% ga qisqargan.

Qushlar ekologik muhitning muvozanatini ta'minlaydi. Oziqlanishi davomida hasharotlar va mayda kemiruvchilar populyatsiyasini boshqaradi, o'simliklar urug'larini tarqatadi va tuproq unumdorligini oshirishga hissa qo'shadi. Shuningdek, qushlar qo'riqxonaning ekoturizm salohiyatini oshiradi.

Qo'riqxonada dengiz sathidan 300-500 metr balandlikda joylashgan. Iqlimi quruq subtropik bo'lib, yiliga o'rtacha yog'ingarchilik miqdori 300 mm ni tashkil etadi. Qo'riqxonada tog'lar, dashtlar, suvli botqoqzorlar va daryo bo'ylari mavjud.

Qo'riqxonada jami 270 dan ortiq qush turi aniqlangan. Shulardan 25 turi migratsion, 70 turi esa doimiy yashovchi hisoblanadi. 2023-yilgi statistik ma'lumotlarga ko'ra, qo'riqxonadagi eng ko'p uchraydigan qushlar jayronlar, qirg'iyalar, burgutlar, va laylaklardir.

Qo'riqxonada hududida xalqaro muhofazaga olingan 15 ta qush turi mavjud. Xususan, qora laylak va kumush laylak xalqaro Qizil ro'yxatga kiritilgan bo'lib, ularning populyatsiyasi so'nggi 5 yil ichida 10% ga kamaygani qayd etilgan.

Qo'riqxonada hududidagi eng keng tarqalgan qush oilalari Anseridae (g'oz va o'rdaklar), Accipitridae (burgut va qirg'iyalar), va Falconidae (lochin va oqqushlar) hisoblanadi. Anseridae oilasi oziqlanish jarayonida hasharotlar populyatsiyasini boshqarishda katta ahamiyatga ega.

Qushlar yashash joylariga moslashgan holda turli muhitlarda yashaydi. Botqoqli hududlarda yashovchi suv qushlari, masalan, o'rdaklar, mayda baliqlar va suv o'tlari bilan oziqlanadi. O'rmon va dasht hududlarida yashovchi qushlar esa asosan hasharotlar va mayda kemiruvchilar bilan oziqlanishga moslashgan.

Tadqiqotlar shuni ko'rsatadiki, qo'riqxonada hududidagi qushlarning 40% i hasharotlar bilan, 25% i o'simliklar va urug'lar bilan, 20% i kichik baliqlar bilan, va qolgan 15% i kichik hayvonlar bilan oziqlanadi. Bunday oziqlanish xilma-xilligi qo'riqxonaning oziq zanjirida muhim ahamiyat kasb etadi.

Aksariyat qushlar bahor mavsumida ko'payadi, va urg'ochi qushlar o'z inlarini daraxt shoxlarida, qoyalar orasida yoki suv bo'ylarida quradi. Qushlarning jinsiy dimorfizmi, ya'ni urg'ochi va erkak qushlarning tashqi ko'rinishdagi farqi, ko'pincha ko'payish mavsumida kuchayadi.

Qo'riqxonada kuz va bahor mavsumlarida ko'plab migratsion qushlar kuzatiladi. 2022-yilda olib borilgan hisob-kitoblarga ko'ra, qo'riqxonada qishlash uchun qolgan migratsion qushlarning soni 25 mingga yetgan.

Hududdagi suv manbalari oxirgi 10 yilda 20% ga kamaygan. Suv manbalarining kamayishi suvli hududlarga bog'liq qush populyatsiyalarining kamayishiga sabab bo'lmoqda. Qo'riqxonadagi o'simliklar qoplamasi ham qurg'oqchilik va boshqa tabiiy hodisalar tufayli 15% ga qisqargan.

Yerlarning qishloq xo'jaligiga moslashtirilishi va brakonerlik qushlarning tabiiy yashash joylarini qisqartirmoqda. Hududda brakonerlik holatlari yildan-yilga

o'sib, 2022-yilda 20 ta brakonerlik holati qayd etilgan. Buning natijasida ayrim noyob turlar yo'qolish xavfi ostida qoldi.

Brakonerlik va invaziv turlar qo'riqxonaning mahalliy qush populyatsiyasiga tahdid solmoqda. O'zbekiston Milliy ekologiya qo'mitasi olib borgan tadqiqotlarga ko'ra, brakonerlik va tabiiy resurslarning noto'g'ri foydalanilishi 15 ga yaqin qush turining populyatsiyasiga salbiy ta'sir ko'rsatmoqda.

O'zbekiston hukumati qushlarni himoya qilish bo'yicha bir qator qonunlar va ekologik dasturlar ishlab chiqdi. Ushbu hujjatlar asosida qo'riqxonada qushlarni nazorat qilish tizimi yo'lga qo'yilgan bo'lsa-da, uni yanada kuchaytirish talab etiladi.

Qushlarni himoya qilish uchun qo'riqxonada muntazam monitoring tizimi joriy etilib, brakonerlikka qarshi chora-tadbirlar kuchaytirilmoqda. Shuningdek, kuzatuv kameralari va dronlar yordamida qush populyatsiyasi holati doimiy ravishda kuzatib borilishi lozim.

Ekologik tadbirlar orqali mahalliy aholining ekologik xabardorligini oshirish, ularni qo'riqxonaga faoliyatiga jalb qilish va atrof-muhitni himoya qilishda ularning o'rnini oshirish uchun maxsus trening va seminarlar tashkil etish lozim. 2023-yilda o'tkazilgan ekologik treninglarda mahalliy aholining 30% i ishtirok etgan.

“Surxon” davlat qo'riqxonasi O'zbekistonning noyob va muhim ekologik hududi hisoblanib, undagi qushlar biologik xilma-xillikning muhim qismi bo'lib xizmat qiladi. Qush populyatsiyasini saqlash nafaqat qo'riqxonaga, balki mintaqaga ekologik muvozanatini ta'minlash uchun ham muhimdir.

Qo'riqxonada monitoring tizimini kuchaytirish, brakonerlikka qarshi chora-tadbirlarni kengaytirish, va mahalliy aholining ekologik xabardorligini oshirish tavsiya etiladi.

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IMPACT OF DESERTIFICATION ON SOME GEOSYSTEMS OF UZBEKISTAN

Annotation. This article discusses the impact of desertification on the geosism of lower Zarafshan natural geographical okru, located in the extreme southwest of the Republic of Uzbekistan, the development of desertification, the analysis of the main natural and anthropogenic factors that cause desertification.

Keywords: geosystem, natural conditions, natural factors, desertification, natural, anthropogenic, County, landscape.

The desertification processes currently occurring globally are also widely represented in the region of Central Asia with a sharply continental climate. The island's marine basin, which is particularly adjacent to the Qizilqum and Karakum deserts, has been declared an ecological disaster zone. Therefore, the processes of desertification given are studied by scientists of the Department of geography at the Institute of Seismology of the Academy of Sciences of Uzbekistan, the Institute of geography of the Academy of Sciences of Kazakhstan. Current geocological problems of such international importance are A.G. Boboev (1986, 1990, 2000), A.P. Petrov (1972), I.S. Zonn (1981, 1984), A.A. Rafikov (1988), V.M. Chupahin (1990), A.V. Chigarkin (1977), A.A. Abdulkosimov, S.B. Abbosov (1977, 2004), L.A. Alibekov (2000), C. Black, K.N. Scientific research by toderich (2000) and others: featured in monographs and scientific papers.

The lower Zarashan natural District is under the influence of two groups of factors, the processes of change, development and desertification of all Geosystems, as well as the acute geocological situations that have arisen. These are a group of natural and anthropogenic factors that, integrally, affect all geosisms.

Within the framework of Arid geochemical complexes, including the lower Zarafshan River, plant depletion causes in a word, are involved in the formation, development of desertification processes and a number of natural factors. These are factors such as: geological, climate, hydrogen, soil erosion, salinity and waterlogging of soils, zoogen.

Geological factors. One of the natural factors that give rise to the processes of reduction (desertification) of vegetation (degradation) is geological factors. These factors determine the specific geostructure, tectonics of each place, the lithological and mechanical composition of the beds, their characteristics, the reclamation status of geosisms. The composition, geotectonic and structural features of the mother genera, which served as the basis for the formation of geosisms, provide

opportunities for desertification of all types with their ability to predispose to various natural geographical processes. For example, desert geosystems with sand beds deflate due to processes and turn into migratory sands and barchans, dry-climate berk bottom geosystems under the influence of geochemical processes, various salts accumulate and form salt marshes, water erosion in the beds of loess and chalk is activated, forming ravines and disturbed lands. Thus, desertification processes in arid geosystems are formed and developed on a large scale.

In lower Zarafshan, the desertification process of geosystems is also closely related to geotectonic structures. Here, geotectonic structures are mainly made up of outcrops and dips. The absolute height of tectonic uplifts reaches 600-800 m, in some places it exceeds even 900 m. Such tectonic uplifts are the main space for erosion-denudation processes. The slopes of tectonic uplifts are degraded due to erosion and denudation processes, the soil cover is washed away, the amount of humus in it is reduced, the plant cover is thinned, etc. As a result, the productivity of arid climate mountain geosystems decreases, and desertification processes increase as the productivity of desert pastures decreases.

Tectonic bottoms, on the other hand, are dominated by the second kind of natural geographical processes, namely salinity and waterlogging processes with the process of accumulation. For example, the Karakol delta of the Zarafshan River was formed due to the process of accumulation in a tectonic trough. The accumulative deposits here are distributed in close connection with the tectonic structure. The thick sands of the Karakol delta of Zarafshan are concentrated precisely in tectonic bottoms. The large accumulation of salts also corresponds to this Delta zone. Therefore, the process of salinization in all Geosystems of the lower Zarafshan Delta and their soil cover, along with salinization in places where the ground waters lie close to the surface of the Earth, has prevailed. Such phenomena, developing year after year, activate desertification processes in lower Zarafshan County, creating a sharp geoecological situation.

Climatic factors. In the process of desertification of arid geosystems, climatic factors play a leading role in the process of frequent droughts. The most recent droughts in our country, including in this district, occurred in 1999, 2000 and 2001, 2007, 2008. As a result, the aridity of the climate increased, the amount of annual precipitation decreased sharply, the water flow of rivers and streams during the growing season decreased to a minimum, and agricultural crops faced a water shortage. As a result, farms suffered significant material and economic losses.

The high total solar radiation (140-150 kcal/cm²), the annual radiation balance (2200-2400 MJ/m²), the high air temperature (46-48° C), the low atmospheric precipitation (80-100 mm), the extreme scarcity of moisture, the high amount of possible evaporation (1200-1500 mm) and other climatic elements create climatic conditions characteristic of arid regions. The combined expression of these in nature is manifested in the periodic occurrence of droughts.

The desertification process of the geocomplexes of the Lower Zarafshan district was also greatly influenced by changes in climatic conditions in previous geological periods. M.I. Budiko's (1974, 1977) paleoclimate, K.K. As a result of

paleogeographic studies by Markov et al. (1965), it was found that in the Eocene, forest and forest-steppe geosystems dominated the entire territory of Central Asia and Lower Zarafshan. Desertification of these geosystems occurred in the Middle Oligocene as a result of a sharp cooling and continentalization of the climate. This process was especially intensified by the Pliocene. By the Quaternary period, the aridification of the climate intensified even more, and desert geosystems began to emerge. Thus, the desertification process intensified in the Lower Zarafshan district, and the area of desert geosystems expanded. N.S. Orlovsky (1981) noted that after the continental glaciation, a single climate change occurred. This was a period of climatic warming that lasted about 2 thousand years, 7-5 thousand years ago. At that time, the climatic conditions in the northwestern part of India and Pakistan and in the south of Central Asia were somewhat drier. This process coincides with the end of the Oligocene. Approximately 10,300 years ago, a humid phase began due to an increase in precipitation. However, 3,800 years ago, the dry period resumed and continues to this day with minor changes. Hydrogenic factors. Another group of factors that trigger the natural (impoverishment) mechanism of desertification of arid (dry) geosystems are hydrogenic factors. Hydrogenic factors include the nature of surface runoff or runoff, the location of groundwater levels close to or deep in the earth's surface, and the process of their mineralization. The reasons for the extremely low atmospheric precipitation in arid regions are also very low quantitative indicators of surface runoff. In some areas of the Lower Zarashon, especially in impermeable lowlands, the close proximity of mineralized groundwater to the surface leads to strong evaporation in the scorching summer heat, the accumulation of large amounts of salts in the soil, and the development of saline soils. Such hydrogenic factors activate desertification processes, leading to the proliferation and expansion of saline desert geosystems.

One of the factors determining the specific characteristics of soils in the alluvial-delta plains of the district is the softness, porosity, and fragility of their upper layer, which also has a significant impact on the development of desertification processes. This type of desertification processes is most clearly visible in the northwestern and southwestern parts of the district, namely in the delta of the Zarafshan River. This also allows the area of saline desert geosystems to increase from year to year.

Vegetation factor. In regions with arid geosystems, the development of desertification processes on a large scale and the destruction of geosystems are directly related to phytogenic factors. Desertification processes occur due to the sparseness of the vegetation cover characteristic of arid geosystems. Just as the geosystems of Lower Zarafshan are diverse, the thickness of the vegetation forming the landscape is also diverse. For example, the level of vegetation coverage of fortified hilly and sandy landscapes with dunes is 50-70%, and that of moderately fortified sandy landscapes is 30-50%. The level of vegetation coverage of the stony desert, saline desert and barren desert geosystems widespread in the region does not exceed 10-15%.

It is worth noting that the thicker the vegetation that forms the landscape in arid geosystems, the less the impact of wild and domestic animals on the vegetation cover, and vice versa, the rarer the vegetation that forms the landscape, the stronger the impact of animals. Thus, in the first case, the phytogenic degradation and desertification of arid geosystems are stronger.

Animal factor. The desert fauna has formed in the district, the main part of which is made up of burrowing species. Among them, rodents that lead an active life occupy a special place. Burrowing rodents, especially voles, loosen the soil, remove soft soil dug around their burrows, destroy the soil structure and, at the same time, accelerate erosion processes.

The occasional migration of locusts also contributes to the desertification process of the arid geosystems of Lower Zarafshan. The locust column cleans the biomass of the natural and anthropogenic complexes it encounters during its migration, turning them into bare land.

Anthropogenic factors. All types of human activities that affect desertification processes can be combined or divided into several groups. These are economic, social, military and legal factors.

Economic factors. The group that has the strongest impact on the desertification of the region among anthropogenic factors is economic factors. Inappropriate use of geosystems, failure to comply with agrotechnical rules in the development of deserts, and disregard for the integrity of geosystems and their inter-component relationships create conditions for the disruption of the ecological balance and the emergence of various geoecological situations.

Desertification of geosystems as a result of livestock grazing. Lower Zarashon and neighboring Kyzylkum natural districts are among the most developed areas of livestock and pasture farming in our Republic. Here, continuous grazing of livestock, especially large numbers of Karakul sheep, throughout the year leads to the current state of desert geosystems, their productivity, and a gradual decrease in plant species. Therefore, excessive grazing of livestock in certain places within arid geosystems is one of the leading factors enhancing anthropogenic desertification processes.

According to geobotanists (Gael, 1951; Morozov, 1964), the effect of livestock on the vegetation cover of pastures and the productivity of their biomass can be both positive and negative. This means that in deserts with a continental climate, strong wind activity, and a low level of stability of sparse vegetation cover, excessive grazing of livestock leads to the degradation of desert pastures and an increase in the area of desertified geosystems [4].

The poor water supply of pastures and the very sparse network of wells further complicate the desertification process. In areas within a radius of 2-3 km from the wells, the native plants of the deserts are changing significantly due to excessive grazing of livestock and their constant movement from the surrounding areas to wetlands, and in areas within 0.5-0.7 km of the wells, the humus layer of the soil is completely lost. As a result, the number of plant species in phytocenoses has decreased by 2-4 times. Among them, there are also endangered and rare plant

species [5]. The ongoing desertification processes are leading to a disruption of the balance of biological diversity in Lower Zarafshan and a sharp decrease in biomass in pastures.

Thus, currently, most researchers support the idea that as a result of uncontrolled grazing of livestock in the sandy and kumquat desert geosystems of Lower Zarafshan, sandy geosystems have been severely degraded, and shifting sands and dunes have formed in their place.

According to O.I. Morozova (1959), excessive grazing of livestock in sandy deserts leads to negative changes - the movement of consolidated sands, changes in relief forms, depletion of vegetation cover and its species, lowering of the groundwater level, and a sharp decrease in the amount of biomass.

As is known, the composition of desert plants is dominated by wormwood, sedge, sedge, and ephemerals adapted to arid climatic conditions. If desert pastures are used for their intended purpose, and livestock is grazed on them moderately, the density of plants will almost not be reduced, and shifting sands and dunes will not form.

A.M. Boboev (1989), analyzing the interaction and connection between oases and the desert areas surrounding them, recognized that several concentric circles of influence can form around each oasis. The width of the concentric circles depends on the size of the oases, the number of people living in them, the level of provision with production technology, and other factors. The influence zone of oases located among sandy desert geosystems is determined by the degree of sharp changes in geosystems. Examples of such changes include the degradation of geosystems of various taxonomic colors, the appearance of dunes, the rise in the groundwater level in some places, and the salinization of soils.[1].

V.A. Nikolaev (1972), based on the analysis of numerous sources, proposes to implement the following norms for the radius of grazing of livestock in pastures. Such indicators should not exceed 2.5 km in mountain pastures, 5 km in mountain zones, and 7 km in the Kyzylkum desert, Lower Zarafshan, and southwestern Turkmenistan [2].

Social factors. Social factors also play an important role in the intensification of desertification processes within the arid geozones of Lower Zarafshan. Especially in desert conditions, the lack of centralized fuel supply of the local population forces them to collect firewood from the surrounding desert areas and use it in everyday life. In the conditions of this district, firewood is mainly prepared from trees, shrubs, and semi-shrubs. That is why in large areas around populated areas and oases, tree-like and shrubby plants such as white and black saxauls, kandim, Circassian, and sand acacias have become very rare.

The ruthless cutting down of xerophytic trees, shrubs, and semi-shrubs, which in desert conditions protect the fragile soil cover and the stable development of consolidated sand massifs, and perform the functions of retaining natural moisture for a longer period during the growing season, creates favorable conditions for the dynamic development of deflation and further aridification of the climate of the regions. As a result, the number of valuable and medicinal plant species in the flora

is decreasing, and biological diversity is gradually becoming poorer. As a result, the increasingly active desertification processes cause great damage to the diversity of desert vegetation and the sustainable development of geosystems, creating complex and acute regional geoecological situations.

The desertification process of arid geosystems is also greatly influenced by the unorganized and disorderly recreational activities of society. The removal of wildflowers that beautify the desert landscape during the spring holidays of urban and district residents in the deserts also has a negative impact on biological diversity and accelerates the desertification process.

The sharp decrease in species in the fauna and flora of Lower Zarafshan is even leading to the disappearance of some rare and valuable plant and animal species.

Military factors. Another factor influencing the anthropogenic desertification of geosystems in Lower Zarafshan district is military factors. Among the active forces of the Republic of Uzbekistan, the main place is occupied by the ground forces. They are armed with modern military equipment and conduct their military exercises in the desert zone. During military exercises, numerous tracked, heavy trucks and thousands of soldiers cover hundreds of kilometers across the sandy desert.

The combat actions of the ground forces during exercises and training, the digging of trenches stretching over long distances, and the occasional testing of various weapons contribute to the development of technogenic, wind and water erosion of the weak, unstable soil and vegetation cover of geosystems. As a result, the cover of psammophytes and halophytes becomes sparse. The area of technogenic geosystems expands, the biological diversity of deserts decreases, and geoecological situations become more acute.

Legal factors. One of the factors that fully cover the processes of anthropogenic desertification and call for a full understanding of its essence is legal or legal factors. The more the legal aspects of the use of nature in desert conditions are protected, thoroughly developed and strictly implemented in life, the more likely it is to prevent and slow down the desertification process [3]. Therefore, to achieve this, documents, decisions and laws on the rational use of land, water, subsoil resources, protection of flora and fauna, environmental protection and other geoecological areas must be comprehensive and meet the requirements of any problems. At the same time, the flawless implementation of all adopted documents, decisions and legal laws in practice can undoubtedly lead to a slowdown in the process of anthropogenic desertification and a gradual reduction in the area of anthropogenic deserts. Otherwise, if the decisions made and the laws developed are ineffective and their implementation is not controlled, the process of anthropogenic desertification will develop more widely not only in Lower Zarafshan, but also in other regions of our Republic, creating acute geoecological situations.

In the current era of scientific and technological development and the constant growth of the population of our country and the world, not only natural factors, but also anthropogenic factors have a great impact on the development of desertification processes in the Lower Zarafshan natural geographical district. Our geoecological

studies have revealed that the influence of anthropogenic factors is stronger than natural factors in the desertification process of arid geosystems in the Lower Zarafshan district, and the consequences of this are manifested in various forms.

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CHARACTERISTICS OF TEACHING LISTENING IN ENGLISH LESSONS

Abstract: This study aims to explore the key challenges and main approaches to teaching listening in English lessons. The objectives include examining teaching methodologies, defining the concept of listening, and identifying methods to address linguistic difficulties encountered in listening. The practical significance of this research lies in its potential use for developing lecture courses on foreign language teaching methods and for writing academic papers or coursework. Listening is a critical skill for effective communication in English, requiring focus and attention, especially when learning a second language, which demands even greater concentration.

Keywords: listening, English, teaching methods, senior students.

Listening is a distinct type of speech activity, more complex than speaking, reading, or writing. One of the critical skills for successful communication in English is listening. Learning English, especially as a second language, can be challenging and demands significant mental effort. Concentration and attentiveness are essential when learning any language through listening, and these demands are heightened in a foreign language. Students often discover the amount of focus required after they begin practicing listening. People who struggle with concentration also face difficulties in listening. Listening to another language requires even more attention than usual.

There are numerous types of listening, each serving distinct functions and playing unique roles across various fields of study. Both foreign and domestic methodologies classify listening types based on two main criteria:

- (1) the communicative objective (learning task)
- (2) the connection to expressive spoken speech.

When considering the relationship with expressive spoken language and its auditory form, the following types of listening are recognized [Tsvetkova, 1995]:

- Listening as a part of oral communication (interactive listening);
- Listening to understand dialogues or multi-person conversations (listening to interaction);
- Auditory perception and comprehension of monologue speech (transactional listening).

In addition to these types, other essential forms of listening include Communicative Listening and Guided Listening.

The aim of this research is to explore the challenges and key techniques of conducting listening exercises during English lessons. In listening to English texts,

it's important to focus on keywords to grasp the meaning of the context. The best way to enhance listening skills in English is to seek online resources that offer repeated exposure to content, which can be replayed for better understanding. English Club TV, for example, is a useful resource for non-native speakers. Programs such as "Speak Up" and "Art of Conversation" provide excellent material for developing listening skills.

In everyday life, even when listening to someone close to us, we often focus on only half of the conversation. This highlights the need to improve our listening abilities. Teaching listening requires practice and patience, especially for non-native speakers, but with perseverance and attention, it is achievable. Active listening, where the listener consciously tries to fully comprehend the spoken message, is a good starting point. Students should also learn to interpret non-verbal cues, such as facial expressions and body language, although they don't need to become experts in this field. Watching videos online or on TV can help students pick up on physical clues, such as facial expressions and gestures, which can aid in understanding.

English Club TV, with programs like "Speak Up" and "The Art of Talking," can be invaluable for students learning English. Listening is a foundational skill in English, and many students find it challenging. Using media as a learning tool is critical, as it can engage students and hold their attention in lessons. Teachers must strike a balance between theoretical knowledge and practical application when teaching listening skills. It's essential that educators understand what makes listening difficult for learners and how to address those challenges.

Listening has historically been the least explored area in foreign language teaching, partly because it was once viewed as a passive skill that didn't require direct instruction. However, recent theory and practice have shown that listening is central to language acquisition. Kochkina notes that language development largely occurs through listening, and this skill often poses the most difficulties for learners. The biggest challenge is that listeners cannot control the speaker's pace or delivery, unlike reading, where a student can adjust the speed and reread as needed. Listeners must process information in real-time, which adds complexity.

To help students develop listening skills, linguists recommend starting with short, simple texts and gradually increasing their length and complexity. Initially, texts should contain familiar vocabulary and simple sentence structures, and new vocabulary should be introduced slowly. As students progress, the volume and variety of sentences, phrases, and vocabulary should increase.

Another challenge in listening is the speaker's pace. Slowing down more important information helps with comprehension, while secondary information is delivered faster. Pauses in speech can also assist with understanding, though overuse of pauses can lead to fatigue. Teachers should regularly expose students to spoken English in class, helping them prepare for real-world communication.

Some teachers may rely too heavily on textbook exercises without adapting them to their students' needs. It's important to try different activities in class to find what works best. Various audio and audiovisual materials should be used, including photographs, movies, TV shows, and audio recordings. While auditory materials are

harder to process due to the lack of visual cues, they are vital for exposing students to a variety of speakers and accents.

Teachers can use recordings in class, both of their own voices and of others, to help students practice listening. Activities such as repeating after a speaker, answering questions, and listening to dialogues can help students improve their listening skills. Over time, more complex tasks, such as listening to radio broadcasts or watching news clips, can be introduced. Familiarizing students with the topic beforehand can help them better understand the content.

Correcting students' mistakes during listening activities is also part of the learning process. Rather than interrupting a student, teachers can use gestures or allow classmates to help, giving the student a chance to self-correct. This process of self-correction can reinforce learning more effectively than immediate teacher correction.

Nowadays, teachers should incorporate diverse listening materials, including songs, video clips, and even cartoons, to engage students and develop their listening skills. Different sources of information, from audio recordings to visual aids, play an essential role in language learning, especially when alternating between them to build comprehension step by step.

Listening activities should serve multiple purposes: understanding, remembering, evaluating, and drawing conclusions. These activities help prepare students for real-world communication in English.

Conclusion. Listening training is a crucial aspect of learning English, as effective communication cannot occur without the ability to listen. The concept of listening encompasses the perception and comprehension of spoken language. Its communicative role is particularly significant in the early stages of learning English.

Moreover, listening can now be considered a form of developmental learning. This is because the act of listening to spoken language helps improve memory through the retention of different types of texts, broadens students' knowledge, and enhances attention through the use of metaphorical expressions. Additionally, it fosters attentiveness to the speaker by encouraging active listening and understanding. All of these factors highlight the importance of integrating listening skills into English lessons in elementary school.

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BIOLOGIYA TALABALARI UCHUN ELEKTRON RESURSLARNI YARATISH VA ULARDAN FOYDALANISHGA TAYYORGARLIK YO'LLARI

***Annotatsiya:** Maqolada ta'lim tizimida zamonaviy axborot texnologiyalarini qo'llashning o'rni va ahamiyati yoritilgan. Ayniqsa, biologiya fanini o'qitishda axborot texnologiyalari yordamida ta'lim jarayonini interfaol tashkil etish, talabalarni mustaqil ta'lim olishga yo'naltirish va ularning kasbiy tayyorgarligini oshirishga alohida e'tibor qaratilgan. Maqolada multimedia taqdimotlari, elektron o'quv qo'llanmalardan foydalanish, Internet resurslaridan foydalanish bo'yicha ko'nikmalarni shakllantirish tajribalari tahlil qilingan.*

***Kalit so'zlar:** axborot texnologiyalari, biologiya ta'limi, multimedia, elektron qo'llanmalar, Internet resurslari, ta'lim innovatsiyalari.*

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WAYS OF PREPARING BIOLOGY STUDENTS FOR THE DEVELOPMENT AND USE OF ELECTRONIC RESOURCES

***Abstract:** The article explores the role and importance of modern information technologies in the education system. Special attention is given to the use of information technologies in biology education to organize interactive learning, guide students toward independent learning, and enhance their professional preparation. The article analyzes experiences in developing skills for using multimedia presentations, electronic learning resources, and Internet-based materials.*

Key words: information technology, biology education, multimedia, electronic resources, Internet resources, educational innovations.

Respublikamizda ta'lim tizimini modernizatsiyalash borasida amalga oshirilayotgan islohotlarning asosiy talablaridan biri talabalarning kompyuter savodxonligi darajasini oshirish, ularni axborot texnologiya vositalaridan foydalanish imkoniyatlarini orttirishdan iborat. Mazkur masalani amaliy echimini ta'minlash yo'llaridan biri pedagogik kadrlar–fan o'qituvchilarining zamonaviy axborot texnologiyalari vositalaridan shu jumladan, kompyuter texnikasidan ta'lim jarayonida muntazam foydalanishini ta'minlashga erishish zarur.

Bugungi kunda ilm-fan jadal taraqqiy etayotgan, zamonaviy axborot-kommunikatsiya vositalari keng joriy etilgan jamiyatda barcha fan sohalarida bilimlarning tez yangilanib borishi, ta'lim oluvchilar oldiga ularni tez va sifatli egallash bilan bir qatorda, muntazam va mustaqil ravishda bilimlarni egallash vazifasini qo'yimoqda.

Termiz davlat pedagogika institut tabiiy fanlar fakultetida biologiyani o'qitishda yangi axborot texnologiyalari vositalaridan foydalanishni yo'lga qo'yish bilan birga bo'lg'usi biologiya o'qituvchilarini kasbiy pedagogik faoliyatlarida mazkur vositalarni qo'llash ko'nikmalarini shakllantirishga alohida e'tibor berilmoqda.

Biologiya darslarida talabalar biologiya fanini o'qitishda axborot texnologiyalari vositalaridan foydalanish bo'yicha orttirilgan tajribalar, moddiy bazasi, didaktik xususiyatlari va ta'lim jarayonida qo'llash metodikasi bilan tanishtirib borilmoqda. Shuningdek, biologiyadan elektron o'quv qo'llanmalar, Internet ta'lim resurslaridan foydalanish yo'lga qo'yilgan bo'lib, elektron darsliklarni tahlil qilish va talabalar mustaqil ta'limini tashkil etish maqsadida "Bilim olishning intellektual tizimini yaratish va joriy etish" amaliy tadqiqot doirasida muayyan ishlar amalga oshirildi. Shuningdek, talabalarning o'zlashtirgan bilimlarini mustahkamlash hamda "darsni dasturiy quvvatlash" maqsadida quyidagicha topshiriqlar taqdim etiladi:

1. Umumiy o'rta ta'lim maktablarida foydalaniladigan darsliklar va o'quv qo'llanmalar ro'yxatini to'ldirish.

2. Elektron darslik yoki o'quv-metodik qo'llanmalardagi (muayyan mavzular yoki yaxlit bo'lim bo'yicha) nazariy materiallar hajmi va ilmiylikini aniqlash.

a) matn hajmi, ilmiylik, tushunarlilik va suxandon nutqi ravonligi;

b) illyustrativ (tasviriy) materiallar (rasm, sxema, jadval, xarita, videolavha va animatsiyalar) sifati, joylashtirilishi va ilmiylik;

v) o'zlashtirish apparati (materiallarni mustahkamlash uchun test savollari banki, interfaol, muammoli vaziyatli, amaliy topshiriqlar, nazorat savollari)ning ta'minlanishi;

g) qo'llanmalarda materialni bayon qilish mantiqi;

d) matn ma'lumotlarini videoqator va tovush bilan hamohang o'zaro muvofiq kelishi;

3. Qo‘llanma muallifining metodik ko‘rsatmalari bilan tanishtirish.
4. Dasturning texnik sifatini aniqlash:
 - a) qo‘llanmani ishchi holatga keltirish tezligi;
 - b) qo‘llanmada yo‘naltiruvchi apparatning (kerakli ma‘lumotni topishning qulayligi, o‘quvchilarning noto‘g‘ri javobi yoki to‘satdan bosib yuborilgan vaqtda avvalgi materialga qaytish imkoniyati va h.k.) sifati;
 - v) qo‘llanmadan matnlarni, testlarni, illyustrasiyalarni qog‘ozga chiqarish imkoniyati.

Web saytlar yaratish.

Ma‘lumki, multimedia texnologiyalaridan zamonaviy talablar darajasida ta‘lim jarayonida foydalanish samarali natija beradi . Uning samarasini izohlovchi sabablar–bu o‘qitish vositasining yangiligi, videoqatorlar mosligi, tovush va matn hamohangligida kuzatish imkoniyatining mavjudligi (ham ko‘rish, ham eshitish) va h.k. bo‘lib, bularning hammasi “didaktikaning oltin qoidasi”ga mos keladi. Multimedia texnologiyalari tasviriy materiallarni boyitish, unikal videolavhalar va animasiyalar bilan to‘ldirish, murakkab jarayonlar dinamikasini ko‘rsatish imkonini beradi. Kompyuter texnikasi yordamida ko‘plab ko‘rgazma vositalarini (jadvallar, videofilmlar, slaydlar) elektron ko‘rinishga keltirish, uzoq va kompakt holatda saqlash imkoni mavjud.

Biologiya darslarida talabalarni “darsni quvvatlash” dasturini mustaqil tayyorlash, mavjud elektron qo‘llanmalar ssenariysini o‘zgartirish va to‘ldirish, ularni pedagogik amaliyotdan o‘tkazishda tegishli talablarga muvofiq qo‘llash borasida bilimlarga ega bo‘lishini ta‘minlashga yo‘naltirib boriladi .

Ma‘lumki, izlanish ko‘nikmalarisiz, talabalar tomonidan zaruriy ma‘lumotlarni saralash va qo‘llashda tarmoqli hamda multimediali texnologiyalardan foydalanishdagi psixologik qo‘rquv va hadiklarni bartaraf etishga erishib bo‘lmaydi.

O‘tkazilgan pedagogik amaliyot davomida talabalar bilan biologiyani o‘qitishda axborot texnologiyalaridan foydalanish bo‘yicha olib borilgan darslarimiz mobaynida muayyan mavzular bo‘yicha taqdimotlar tayyorlash, Internet saytlaridan ma‘lumotlar qidirish, taqdimotlarni tayyorlashda foydalanilgan manbalarga bog‘liq saytlarni ko‘rsatish, olingan ma‘lumotlarni ilmiyligi va ishonchligiga baho berish, biologik xatoliklarni ko‘rsatish zarurati bo‘lganda texnik nosozliklarning mavjudligi, belgilangan maqsadga erishishni ta‘minlashga to‘sqinlik qilishi aniqlandi .

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A STUDY OF THE PRAGMATIC, CHARACTERISTICS OF THE PHRASES EXPRESSED BY FAUNA AND FLORA IN ENGLISH AND UZBEK LANGUAGES

***Abstract:** This work aims to identify the influence of the English language on the Uzbek linguistic world picture, in particular pragmatic and cognitive aspects. The main content of the study is the analysis of the Uzbek speech units that appeared under the influence of the English language. The article considers specific examples of English words in fiction and colloquial speech. Methods of observation, generalization and comparative analysis were applied during the study. Based on the study of the cognitive and pragmatic influence of the English language on the Uzbek language and the linguistic consciousness of the Uzbek people, it has been established that in the Uzbek language there are a number of lexemes mastered from the English language by the method of calquing or borrowing. The study results contribute to the theory of studying various problems of linguistic personality, and can also be used in university courses in cognitive linguistics, linguoculturology, the theory of speech communication, etc.*

***Key words:** linguistic picture of the world, interaction of languages, flora, fauna, idioms, phrases, linguistic interference, linguistic personality.*

Linguistic typology studies the language systems on the basis of comparison. Some linguists consider that linguistic typology is a branch of general linguistics, others consider that it is a self-dependent science about the language. But it has its own subject matter, its own methods, branches and history development.

There are different approaches defining the aim, the parts and types of linguistic typology. It is an independent science and has its own structure and methods of research.

There are two approaches to language description: 1) internal 2) external.

The first approach studies the system of any concrete national language. The second approach studies non- related systems, i. e. English-Uzbek, English-Russian and so on.

Phraseological units are an essential aspect of language, comprising idioms, proverbs, similes, metaphors, and other fixed expressions that are deeply rooted in a particular culture or language.

They often draw upon elements from the natural world, including flora and fauna, to convey complex meanings and experiences. Flora and fauna are two distinct categories representing plant life and animal life, respectively. Both have

significant cultural, ecological, and symbolic importance in various societies. Due to their close connection with human life, flora and fauna have been integrated into languages, giving rise to numerous phraseological units that are widely used in everyday communication [1]. The use of flora and fauna in phraseological units can be traced back to ancient times when people closely observed and interacted with the natural world for their survival and livelihood. As a result, these elements became deeply ingrained in language, reflecting the cultural beliefs, practices, and values of different communities. The semantic analysis of phraseological units related to flora and fauna involves exploring the metaphorical meanings and cultural associations they carry. Many of these expressions use the characteristics, behaviors, or symbolic representations of plants and animals to convey emotions, moral values, social norms, and various human experiences. In cross-cultural and contrastive studies, researchers examine how different languages express similar concepts related to flora and fauna through their phraseological units. Such investigations shed light on the similarities and differences in how various cultures perceive and interact with the natural world.

Phraseological units related to flora and fauna in English and Uzbek would involve examining the meanings and cultural connotations of these expressions in both languages. Here are some examples of such phraseological units in English and their potential Uzbek equivalents for analysis:

- ***“To kill two birds with one stone”***, Uzbek: “Bir o’q bilan ikki qushni o’ldirish”. This idiom means accomplishing two tasks or goals with a single action. It conveys the idea of efficiency and achieving multiple objectives at once.[5]
- ***“Sour grapes”***, Uzbek: “Ko’rolmaslik”. “Sour grapes” is used to describe a situation where someone disparages something they desire but cannot have, implying jealousy or envy. Uzbek: “Ko’rolmaslik” is similar in meaning, conveying a sense of envy or bitterness when someone is unable to achieve something and diminishes its value as if it wasn't worth having.
- ***“A snake in the grass”***, Uzbek: “ikki yuzlamachi, do’st niqobi ostidagi dushman”. This phrase refers to a treacherous or deceitful person who hides their true intentions or actions. Uzbek: The Uzbek phrase “ikki yuzlamachi, do’st - niqobi ostidagi dushman” carries the same meaning, describing a person who pretends to be harmless while actually being cunning or dangerous.

In both English and Uzbek, these phraseological units related to flora and fauna use metaphors and imagery drawn from the natural world to convey abstract ideas or experiences. The semantic analysis shows that while the literal translations may differ, the underlying meanings and cultural associations are often similar in both languages. More examples for this topic:

- ***“To have butterflies in one’s stomach.”*** This phrase means to feel nervous or anxious, often in anticipation of something important or exciting.

- **“A leopard can't change its spots.”** This proverbial phrase implies that a person's character or nature is unlikely to change over time.
- **“To be a lone wolf.”** This idiom refers to a person who prefers to be independent and does not like to be part of a group or community.
- **“To hold one's horses.”** This expression means to wait patiently and not rush into action.
- **“To have a whale of a time.”** This phrase means to have an incredibly enjoyable or exciting experience.
- **“To sow the seeds”:** Meaning: To initiate or start a process or action that will lead to future results. This phrase draws on the agricultural practice of sowing seeds in soil, which will eventually grow into plants. It metaphorically refers to initiating actions or plans that will yield positive outcomes in the future.
- **“To be a night owl”:** Meaning: To be someone who stays up late or prefers to be active during the night. This phrase uses the behavior of owls, which are nocturnal birds, to describe individuals who are most active and alert during nighttime hours.
- **“To bark up the wrong tree”:** Meaning: To direct one's efforts or accusations in the wrong direction. Semantic Analysis: This phrase uses the image of a barking dog mistakenly targeting the wrong tree to illustrate making incorrect assumptions or accusations about something or someone. [5]

In both English and Uzbek, phraseology is an essential aspect of language. Idiomatic expressions are fixed phrases or collocations that have figurative meanings beyond the literal interpretation of their individual words. These expressions are deeply ingrained in the language and reflect the culture, history, and way of life of the people who use them. English, being a language with a rich literary and cultural heritage, has a wide array of idiomatic expressions related to flora and fauna. These idioms draw upon the characteristics, behaviors, and symbolic significance of plants and animals to convey various messages, emotions, and concepts.

In conclusion, the exploration of phraseological units related to flora and fauna in English and Uzbek languages has revealed the profound connection between language, culture, and the natural world. Through a semantic analysis and comparative approach, we have witnessed the richness and diversity of idiomatic expressions that draw on the imagery of plants and animals to convey complex meanings and emotions.

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ERKIN IQTISODIY ZONALARNING EKSPORT SALOHIYATINI RIVOJLANTIRISHNING BOSHQARUV TAMOYILLARI

***Annotatsiya.** Ushbu maqolada erkin iqtisodiy zonalarning eksport salohiyati tushunchasi va uning dolzarbligi yoritilgan. Unda erkin iqtisodiy zonalarning eksport salohiyatini rivojlantirishning boshqaruv tamoyillari ishlab chiqilgan.*

***Kalit so'zlar.** Erkin iqtisodiy zona, eksport salohiyati, raqobatbardoshlik, boshqaruv, tamoyillar, vakolat.*

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MANAGEMENT PRINCIPLES FOR THE DEVELOPMENT OF EXPORT POTENTIAL OF FREE ECONOMIC ZONES

***Annotation.** This article examines the concept of the export potential of free economic zones and its relevance. It developed principles for managing the development of the export potential of free economic zones.*

***Key words.** Free economic zone, export potential, competitiveness, management, principles.*

Jahon standartlariga javob beradigan raqobatbardosh mahsulotlar ishlab chiqarish, mamlakatimizning eksport salohiyatini yanada oshirish masalasi bugungi kunda eng dolzarb vazifalardan biri hisoblanadi. Iqtisodchi olimlar T.Farole va F.Dobrogonov erkin iqtisodiy hududlarning amaliy jihatiga e'tibor qaratib, "Mazkur tuzilmalar rivojlanayotgan davlatlar uchun qo'shimcha iste'mol bozorlarini egallash imkoniyatini yaratib beradi hamda davlatlarning eksport salohiyatini yuksaltiradi. Ayni bir vaqtda ushbu iqtisodiy tuzilmalar mintaqaviy iqtisodiy integratsiya jarayonlarini kuchaytirish vositasi sifatida ham xizmat qiladi", deb ta'kidlaydilar⁷.

Erkin iqtisodiy zonalarning eksport salohiyatini oshirish bir qator ustuvor vazifalarning hal etilishiga zamin yaratadi:

- raqobatbardosh mahsulotlar ishlab chiqarish orqali korxonalarining eksport imkoniyatlarini kengaytirish;

⁷ Dobrogonov F., Farole T. An economic integration zone for the East African community: exploiting regional potential and addressing commitment challenges. World bank policy research working paper 5967. Washington, DC: World Bank

- hududning eksport salohiyatini oshirish orqali uning ijtimoiy-iqtisodiy rivojlanishiga hissa qo'shish;
- hududlarda banlik masalani hal qilish orqali aholi turmush darajasi sifatini yaxshilash;
- tashqi savdo aloqalarini rivojlantirish orqali hududning investitsiya muhitini yaxshilash va shu kabilar.

Ayrim tadqiqotchilar erkin iqtisodiy zonalar samarali faoliyat yuritishi uchun quyidagilarni ham muhim, deb hisoblaydilar⁸:

- tashlandiq yerlarning unumdorligini tiklash va ishlab chiqarish mahsuldorliga,

- hudud aholisi uchun juda ko'p miqdorda ish joylarini yaratish;
- ijtimoiy va xususiy sektorlar o'rtasida kooperatsiyani rivojlantirish.

Erkin iqtisodiy zonalarning eksport salohiyatini oshirishda unga ta'sir ko'rsatuvchi omillarning xususiyatlarini e'tiborga olish va ularning har biriga alohida tarkibiy element sifatida qarash asosida muammoga tizimli yondashish maqsadga muvofiq.

Erkin iqtisodiy zonalarning eksport salohiyati deganda, mamlakatning imtiyozli rejimga ega bo'lgan hududini samarali boshqarish orqali raqobatbardosh mahsulotlarni ishlab chiqarish va tashqi bozorga olib chiqish qobiliyatini tushuniladi. Erkin iqtisodiy zonalarda boshqaruv samaradorligini oshirishda direksiyasining vakolatini kengaytirish, erkin iqtisodiy zonalarni boshqaruv mexanizmini takomillashtirish muhim ahamiyatga ega. Zero, Xitoyda erkin iqtisodiy zonalarning jadal rivojlanishiga quyidagi omillar turtki bo'lmoqda:

1. Maxsus iqtisodiy zonalar direksiyasiga Markaziy hukumatning rozilgisiz infratuzilmani rivojlantirish bo'yicha mustaqil qarorlarni qabul qilishga ruxsat berilganligi;

2. Maxsus iqtisodiy zonalardagi korxonalar o'zlarining investitsiya, innovatsiya, ishlab chiqarish va marketing qarorlarining katta qismini mustaqil qabul qilishi;

3. Maxsus iqtisodiy zonalarga xorijiy investitsiyalar uchun maxsus soliq imtiyozlari berilganligi va ularning mahsulotlari asosan eksportga yo'naltirilganligi;

4. Maxsus iqtisodiy zonalarda iqtisodiy faoliyat asosan bozor tamoyillari asosida boshqarilishi va ularga xalqaro savdoda katta mustaqillik berilganligi;

5. 2019-2020 yillarda Xitoyda 24 ta yangi transchegaraviy elektron tijorat zonalar (New Cross-Border E-Commerce Zones) ochilganligi;

6. Xitoydagi maxsus iqtisodiy zonalar asosan yuqori texnologiyali sanoat mahsulotlarini ishlab chiqarishga yo'naltirilganligi⁹.

Xitoy tajribasidan kelib chiqqan holda aytish mumkinki, erkin iqtisodiy zonalar direksiyasiga hududlarda savdo, investitsiyalar, innovatsiyalar va infratuzilmani rivojlantirishda mustaqil qarorlarni qabul qilish, shuningdek, soliq va bojxona imtiyozlarini berish hamda hududlararo tizimli joylashtirish kabi

⁸ Xoliqulov A.R. Erkin iqtisodiy zonalar: nazariy asoslar va jahon tajribasi. T., 2002 y

⁹ <https://daryo.uz/2023/03/07/yim-osishining-asosiy-omili-xitoydagi-maxsus-iqtisodiy-zonalar-qanday-yaratilgan>

masalalarda vakolatini kengayirishga e'tibor qaratish erkin iqtisodiy zonalarning samaradorligini oshirishga xizmat qiladi. Bunda direksiya rahbarining erkin iqtisodiy zonalarni boshqaruv samaradorligini oshirish, xususan, eksport salohiyatini rivojlantirish maqsadiga erishishi uchun muayyan boshqaruv tamoyillarni ishlab chiqishi talab etiladi.

Ma'lumki, boshqaruv tamoyillari boshqaruv jarayonning mazmuni, tuzilishi va tashkil etilishiga qo'yiladigan talablarni belgilab beradi. Qat'iy boshqaruv tamoyillari asosida qabul qilingan har qanday qarorlar xolisligi bilan ajralib turadi.

Shu nuqtai nazardan, erkin iqtisodiy zonalarning eksport salohiyatini rivojlantirishda quyidagi tamoyillarga rioya qilish maqsadga muvofiq hisoblanadi:

1. Tizimlilik. Bu tamoyil erkin iqtisodiy zonaning eksport salohiyatiga ta'sir qiluvchi omillarning o'zaro bog'liqlik jihatlarini o'rganish asosida, ularning sinergetik xususiyatini inobatga olgan holda tizimli yondashish zarurligini nazarda tutadi.

2. Majmuaviylik tamoyili. Bu tamoyil eksport faoliyati jarayonlarini har tomonlama o'rganishni, eksport natijalarini belgilovchi barcha omillar ta'sirini majmuaviy hisobga olish zarurligini taqozo etadi.

3. Moslashuvchanlik tamoyili. Bu prinsipning mohiyati erkin iqtisodiy zonalarning eksport faoliyatiga ta'sir qiluvchi ichki va tashqi muhit omillarning o'zgarishini hisobga olgan holda, barqaror tura olishi kerakligini ifodalaydi.

4. Teskari aloqa tamoyili erkin iqtisodiy zonalarning eksport salohiyatiga ta'sir ko'rsatuvchi barcha natijalarini doimiy monitoring qilishga asoslanadi.

5. Aniqlik tamoyili erkin iqtisodiy zonalarning eksport faoliyatini boshqarishning o'ziga xos xususiyatlarini inobatga olgan holda, erishilgan har bir natijalarni chuqur tahlil qilish asosida uning iqtisodiy samaradorligini oshirish bo'yicha aniq choralar ko'rish zarurligini ifodalaydi.

6. O'zaro hamkorlik tamoyili. Bu tamoyil erkin iqtisodiy zonalar uchun yangi istiqbollarni ochadigan va strategik harakatlar rejalarini kengaytiradigan manfaatdor tomonlar o'rtasida o'zaro hamkorlikni yo'lga qo'yish zarurligini bildiradi.

7. Rag'batlantirish tamoyili boshqaruvning muhim tamoyili bo'lib, erkin iqtisodiy zona ishtirokchilari bilan bir qatorda, xorijiy va mahalliy ichkilarni qo'llab-quvvatlash, motivlashtirish zarurligini ifodalaydi.

8. Boshqaruvning strategik yo'naltirilganligi tamoyili. Bu tamoyil erkin iqtisodiy zonalarning strategik maqsadlarini amalga oshirishda, hudud tarkibidagi barcha korxonalarining rivojlanish strategiyalari bilan muvofiqlashtirish zarurligini bildiradi.

Xulosa qilib aytganda, mamlakatimiz eksport salohiyatini yanada oshirishda erkin iqtisodiy zonalarning o'rni beqiyos. Jahon bozori talablariga javob beruvchi eksportbob mahsulotlar ishlab chiqaruvchi korxonalarini rivojlantirish, xususan, erkin iqtisodiy zonalarning eksport salohiyatini yanada oshirish yo'li bilan mamlakat eksport tarkibini sifat va son jihatdan o'zgartirish, yuqori qo'shimcha qiymatga ega mahsulotlar ishlab chiqarish va xorijga sotishni rag'batlantirishga erishish mumkin.

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EIZLAR FAOLIYATINING EKSPORT SALOHIYATINI RIVOJLANTIRISHNING KONSEPTUAL ASOSLARI

Annotatsiya. Ushbu maqolada erkin iqtisodiy zonalarning eksport salohiyatiga ta'sir qiluvchi omillarni tizimlashtirish asosida eksport salohiyatini rivojlantirishning konseptual sxemasi taklif etilgan.

Kalit so'zlar. Erkin iqtisodiy zona, eksport salohiyati, raqobatbardoshlik, omil, tizim, boshqaruv.

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CONCEPTUAL FOUNDATIONS OF THE DEVELOPMENT OF EXPORT POTENTIAL OF EEZ ACTIVITIES

Annotation. This article proposes a conceptual scheme for the development of export potential, based on the systematization of factors influencing the export potential of free economic zones.

Key words. Free economic zone, export potential, competitiveness, factor, system, management.

Bugungi kunda eksport salohiyati tushunchasi xalqaro savdoda mamlakat raqobatbardoshligini ifodalovchi va ta'minlovchi eng muhim omil sifatida tavsiflanadi. Mamlakatlar o'zlarida mavjud bo'lmagan yoki taqchil resurslarni o'zlashtirish va ehtiyojlarni qondirish muammosini hal etishda, ko'pincha eksport salohiyatiga tayanadilar.

Mamlakatimizda olib orilayotgan iqtisodiy islohotlarda ochiqlik tamoyilining amaldagi natijasi korxonalarining eksport faoliyatini kengaytirishda qaratilayotgan chora tadbirlarda o'z aksini topmoqda. Milliy iqtisodiyotning raqobatbardoshligini oshirish bo'yicha belgilangan ustuvor vazifalarda ham hududlarning eksport salohiyatini oshirish alohida qayd etilib, "...Eksport salohiyatini oshirish orqali 2026 yilda respublika eksport hajmlarini 30 milliard AQSH dollariga yetkazish bo'yicha amalga oshiriladigan vazifalarda eksport tarkibida tayyor va yarim tayyor mahsulotlar hajmini 3,3 baravar ko'paytirish, eksport tarkibida tayyor va yarim

tayyor mahsulotlar ulushini 32 foizdan 42 foizga yoki 5,9 mlrd AQSH dollariga yetkazish”¹⁰ masalasini kun tartibiga qo'ymoqda.

Bugungi kunning ilmiy sohasida keng qo'llanilayotgan "eksport salohiyati" tushunchasini milliy iqtisodiyotimiz uchun bir qator afzalliklarga ega iqtisodiy kategoriya sifatida chuqurroq o'rganish davr talabiga aylanmoqda. Eksportga yo'naltirilgan iqtisodiy rivojlanish modelini tanlagan mamlakatlar, xususan Sharqiy Osiyo mamlakatlari yalpi ichki mahsulotida eksport ulushi 60% ga yaqin ko'rsatkichni ifoda etadi¹¹. Bunday holat eksport salohiyati tushunchasini ilmiy nazariy asoslarini chuqur o'rganish va uning mamlakatimiz iqtisodiy rivojlanishidagi o'rini tahlil qilish zaruratini yana bir bor tasdiqlaydi.

Mamlakatimiz yosh olimlaridan R.Raxmonov eksport salohiyati tushunchasini quyidagicha izohlaydi: «eksport salohiyati – bu milliy iqtisodiyot, mintaqalar, alohida olingan tarmoqlar yoki korxonalarining eksportga kerakli darajada raqobatbardosh mahsulotlar va xizmatlar ishlab chiqarish va yetarli hajmda yetkazib berish qobiliyatidir¹²»

Korxonalarining eksport salohiyatini oshirishda qanday omillar muhim rol o'ynaydi? Zamonaviy iqtisodiy adabiyotlarda eksport salohiyatiga ta'sir etuvchi omillarni tasniflashga turlicha yondashuvlar mavjud. Unga ko'ra, omillar bir necha guruhlarga ajratiladi: korxonaning xususiyatlari (hajmi, xalqaro kompetentsiyasi, xalqaro ish tajribasi va boshqalar), tarmoq va bozor, psixologik xususiyatlar, maqsadli segmentni tanlash va shu kabilar.

EIZlar tarkibida faoliyat ko'rsatayotgan korxonalarining eksport salohiyatini oshirish masalasi o'ziga xos xususiyatga ega. Ma'lumki, EIZlar bu mahalliy hamda xorijiy tadbirkorlar samarali faoliyat yuritishi uchun maxsus imtiyozlar amal qiladigan chegaralangan hududlardir. Zamonaviy tajribalar shuni ko'rsatadiki, EIZlar faoliyatining samaradorligiga quyidagi omillar bevosita ta'sir ko'rsatadi:

- EIZning xududiy joylashuvi;
- xududiy infratuzilmaning rivojlanganlik darajasi;
- mamlakatning fiskal, moliyaviy va ma'muriy rag'batlantirish tizimi;
- shaffof va soddalashtirilgan ma'muriy rasmiyatchiliklar («bir darcha» tamoyili, kompaniyani ro'yxatdan o'tkazish va chet el ishchi kuchini jalb qilish tartibini soddalashtirish) kabilar.

Shu nuqtai nazardan, “erkin iqtisodiy zonalarining eksport salohiyati» deganda, mamlakatning imtiyozli rejimga ega bo'lgan hududini samarali boshqarish orqali raqobatbardosh mahsulotlarni ishlab chiqarish va tashqi bozorga olib chiqish qobiliyatini tushunish o'rinli.

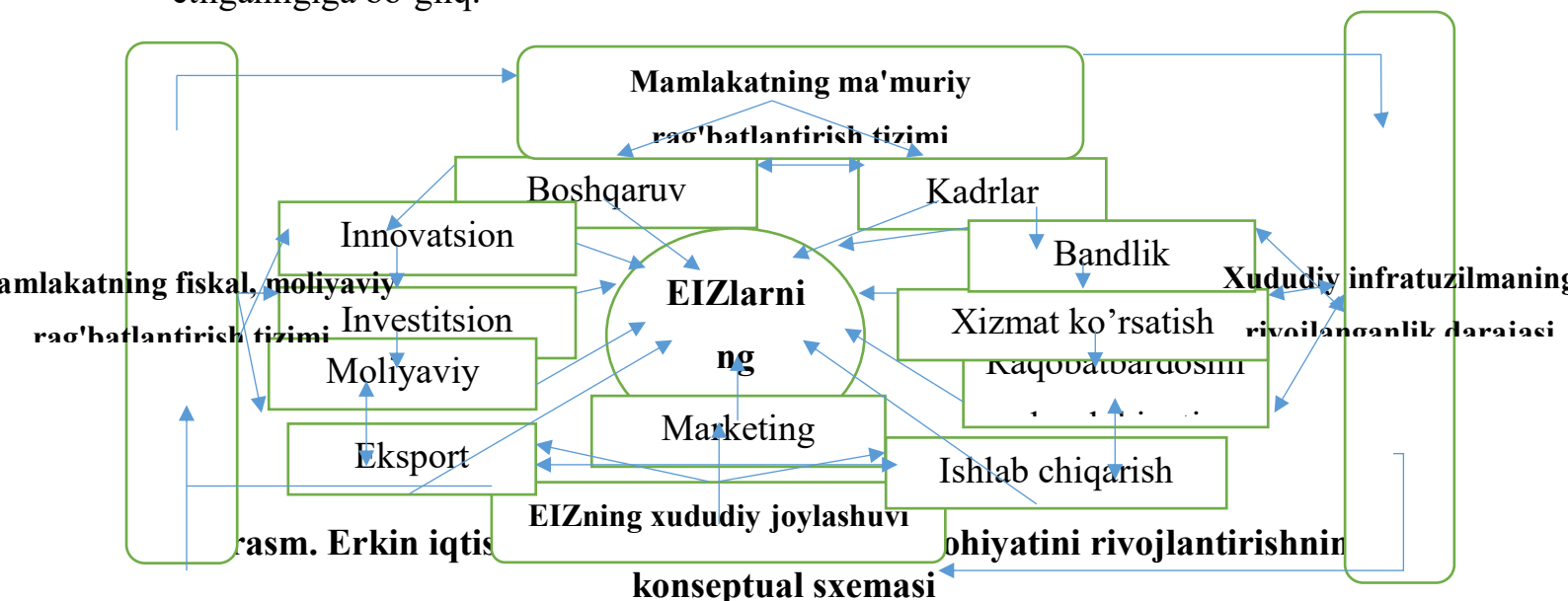
EIZlarning eksport faoliyatiga ta'sir etuvchi omillarini tizimlashtirish asosida eksport salohiyatini rivojlantirishning konseptual sxemasi taklif etiladi (1-rasm).

¹⁰ O'zbekiston Respublikasi Prezidentining 28.02.2023 yildagi “2022 — 2026-yillarga mo'ljallangan Yangi O'zbekistonning taraqqiyot strategiyasini “Insonga e'tibor va sifatli ta'lim yili”da amalga oshirishga oid davlat dasturi to'g'risida”gi PF-27-son Farmoni

¹¹ Hamedov I.A., Alimov A.M. O'zbekiston Respublikasida tashqi iqtisodiy faoliyat asoslari. T.: O'zbekiston Yozuvchilar uyushmasi “Adabiyot jamg'armasi” nashr., 2001. - 328b.

¹² Rahmonov R.N. “Farg'ona mintaqasi eksport salohiyatidan oqilona foydalanish va uni takomillashtirish yo'llari” mavzusidagi avtoreferati. Toshkent: TMI, 2012 yil. - 23 bet.

Sxemadan ko‘rinib turibdiki, EIZlarning eksport salohiyatini oshirishda bir-biri bilan o‘zaro bog‘langan bir qancha omillarning xususiyatlarini hamda bir-biriga bog‘liqlik darajasini aniqlagan holda, unga ta‘sir qiluvchi eng muhimlarini ajratib olish mumkin. Mamlakatda ma‘muriy boshqaruv rag‘batlantirish tizimini takomillashtirish boshqaruv va kadrlar salohiyatini oshirish imkoniyatini beradi. Bu o‘z navbatida EIZlarda innovatsion va marketing salohiyatini oshishiga va oxir oqibat eksport salohiyati hamda ishlab chiqarish salohiyatining oshishiga olib keladi. Bu holat EIZning xududiy joylashivining xususiyatidan kelib chiqqan holda, uning infratuzilmasining rivojlanishiga katta hissa qo‘shadi. Shuningdek, EIZlar uchun xos bo‘lgan mamlakatning moliyaviy, fiskal rag‘batlantirish tizimidan unumli foydalanish EIZlarning investitsion va moliyaviy salohiyatini oshirishga hamda hududning bandlik salohiyatini oshishiga ham ta‘sir ko‘rsatadi. Bu jarayonlarning samaradorligi ko‘p jihatdan boshqaruvning to‘g‘ri tashkil etilganligiga bo‘g‘liq.



Xulosa o‘rnida aytish joizki, erkin iqtisodiy zonalar direksiyasiga hududlarda savdo, investitsiyalar, innovatsiyalar va infratuzilmani rivojlantirishda mustaqil qarorlarni qabul qilish, shuningdek, soliq va bojxona imtiyozlarini berish hamda hududlararo tizimli joylashtirish kabi masalalarda vakolatini kengaytirishga e‘tibor qaratish O‘zbekistonda erkin iqtisodiy zonalarning samaradorligini oshirishga xizmat qiladi.

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DEVELOPMENT OF CREATIVE ABILITIES IN THE PREPARATION OF PRESCHOOL CHILDREN FOR SCHOOL EDUCATION

Annotation: In this article, we can learn about the system of work on the development of creative abilities in preparing preschoolers for schooling and how to carry out this work.

Key words: school, creativity, nature, thought, game, art, creativity, complex, leadership, imitation, green school.

Of particular importance is the good assimilation of school knowledge by preschool children in the future, the light transition of school adaptation, The Prevention of possible problems in the person of the child, the involvement of children in the preschool organization in the implementation of overcoming difficulties, the inclusion in education. In scientific observation and research, it is indicated that a person will receive 70% of all information that he receives during his lifetime at the age of 5 years. Indeed, during this period, a human child realizes the world, assimilates his own motherhood, awakens his love for parents, family, neighborhood, Homeland, sets the stage for the knowledge he receives throughout his life. The content and methods of preschool education are organized in an environment where the processes of formation of the child's personality, recognition of him as an independent person take place. The preschool period is a period when a child develops motivation, self-expression, building, self-realization, a desire to fulfill something, aspiration. During this period, the foundation is laid for the development of the child as a person. It is during the preschool period that universal qualities are formed that help the child to be successful in all future types of activities and in life as a whole. Despite the fact that most of the psychological processes are developing in the form of a child, at each stage the development of creative abilities, reaching a new level, is subject to various laws. And by 5-6 years, having reached the peak of their development, they begin to fall. If, according to the results of these diagnostic methods, preschool children read 90% of the initial answers, then by the age of 10 this number will decrease by 20%. Adults are usually no more than 2%. So, if you do not pay attention to creative development, their development may not stop even from the very beginning. It's good to leave children to create and play in their own way, but sometimes you may want to figure out how to change the game and use more emotions in different ways. Whatever your child does, there can be songs or dances, give a lot of complimentary praise. An integrated approach to education will help develop the unique gifts and talents of the child, while strengthening all areas of intelligence. Through daily training, there are favorable opportunities for children to grow emotionally, physically and intellectually. Classrooms engage in Child Care, Learning" live " approaches,

allowing children to be confident in solving problems. Evaluate daily rhythms, they provide a balanced sense of structure, allow children to feel their emotions, know and respond to the next situation. Organize everything to contribute to the development of the "will of the child" by setting the prospects of children and establishing guidelines that teach children to wait.

We contribute to the same qualities in the "heart" of each child, responsibility, respect and compassion. Social skills are developed based on awareness; children feel warmth in the atmosphere of the class, which stimulates kindness and compassion, Awakens themselves and others a sense of care and care; we understand that a small child, above all, is familiar with his example and imitation. The ability to solve problems and improve creativity through creative free play. Stories, music, poetry and fingers, music, listening and language knowledge through everyday circles. Music harmonizes and harmonizes school life through an educational plan designed to develop the natural musicality of each child - the song is added to everyday life. Strong and motor skills were enhanced by the use of creative play, yoga, outdoor play, Class Activities, embroidery, painting, handicrafts, artistic decoration, and writing tools in the oldest classroom. We admit that a small child first learned by imitation and example. Special attention is paid to the creation of an environment in the child's imagination and imagination that contributes to the development of leadership and cooperation in the world. This week is rhythmically structured to include storytelling and puppetry, creative work and play, singing and creative movements, finger games and games, handicrafts, fiction and fairy tales. The methods of developing children's creative abilities are quite simple. Even if the child does not even go to kindergarten or other preschool institutions, it is easy to organize them at home. This requires a minimum of funds and equipment. Activities carried out in this way are of interest not only to children, but also to adults.

Developing creativity and creative thinking in young preschool children is definitely not an easy task. However, when the issue is approached with a sincere desire to show one's ability as a child, parents succeed. From a psychological point of view, preschool childhood is considered a favorable period for the development of creative abilities, since at this age children are extremely inquisitive, they have a great desire to explore the world around them. Parents and teachers contribute to the expansion of the children's experience by stimulating curiosity, giving them knowledge, involving them in various activities. The accumulation of experience and knowledge is a prerequisite for future creative activity. In addition, the thinking of preschool children is much more free than that of older children.

He is not yet "crushed" by stereotypes. Preschool childhood is also considered a sensitive period for the development of creative imagination. Thus, preschool age provides excellent opportunities for the development of creativity. And the creative potential of adults will largely depend on how these opportunities were used in childhood. One of the most important factors in the creative development of children is the creation of the following conditions: early physical development of the child. It should be age-appropriate. Creating an environment ahead of children's

development. As much as possible, it is necessary to surround the child with such a system of environments and relationships that stimulate his most diverse creative activity and develop exactly what he was able to develop the most at that time. effective. Provide the child with the opportunity to complete the task himself, or help him by giving him advice, and not ready-made answers and solutions. When choosing an activity, give the child more freedom in alternative situations. Don't turn freedom into permissiveness.

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WAYS OF THE DEVELOPMENT OF THE COGNITIVE PROCESS OF PRESCHOOL CHILDREN AND THE IMPLEMENTATION OF INTELLECTUAL COGNITIVE SKILLS

Annotation: *In this article we can learn about the development of cognitive processes in preschoolers and what to pay more attention to in this development.*

Key words: *cognition, mental, cognitive, mental, intellectual, intuition, perception, attention, memory, imagination, thinking, speech, imagination, emotion, will, etc.*

Cognition – the process of psychic reflection, provides for the acquisition and assimilation of knowledge, interest in knowledge - the product of mental intellectual sensations, which is manifested as a person's need to know the tevarak-the surrounding world. In preschool children, the development of intuition, perception, attention, memory, imagination, thinking, speech, fantasy, emotion and will is accelerated. The child cannot yet distinguish colors well from each other. It is advisable to give him toys, colored clothes, colored folk, boxes and similar toys that will help him know the difference in colors. Although preschool children are based on their conspicuous signs (color and shape) in the perception of various things, but cannot analyze in depth. Children of preschool age will have the ability to analytically perceive pictures with the help of adults. When children perceive pictures, adults should be taught to analyze them with different questions. In this, basically, children's attention:

1. To correctly perceive the content (plot) of the photo;
2. To correctly perceive the place of each described thing in the general view of the photo;
3. It is necessary to focus on the correct perception of the relationship between the described things.

Attention is a constant companion of any of our activities. Therefore, the importance of attention in a person's life is greater than benihoya. The attention of preschool children will be largely involuntary. The game is of great importance for the growth of voluntary attention in preschool children. During the game, children gather their attention in one place and, on their own initiative, advance certain goals.

The memory of a child at this age will go to improvement on the basis of new activities and new requirements that the child sets for himself. The memory of preschool children is characterized by being visual, figurative. The child is more dominated by involuntary memorization and involuntary recall. The child will repeat the words without any meaning. But later, under the influence of adults, voluntary memorization also gradually begins to develop.

A three-year-old child is able to keep his impressions remembered for several months. Memory growth is facilitated by games, various activities, memorizing poetry, telling fairy tales and stories, and conducting observation work during walks. Children of this age can easily remember both new words and even words in foreign languages. But, although children easily remember the material, they do not understand the meaning of many well and find it difficult to use them in speech. The task of adults is not only to make children remember as many words and visions as possible, but to achieve the acquisition of various knowledge that is understandable, useful to them. Children use this kind of knowledge in their games, paintings, conversations with teachers or adults, knowledge that serves for their mental and moral growth.

The thinking of preschool children and its development has its own peculiarity. Thinking begins to develop very quickly during the preschool age of the child. The birth of questions about each area in preschool children testifies to the fact that their thinking is being activated. When a child cannot find an answer to his question or adults do not pay attention to his question, the curiosity in it begins to fade.

Usually, any thought process arises due to surprise, surprise from something and, as a result, the birth of various questions. Many parents and some caregivers, if the children ask more questions, "don't be too mahmudana" and "Where Did you learn such things", become rich. As a result, the child will kiss and try to understand as much as he knows. Some reluctant children do not ask any questions. Such children should also be asked questions by the adults themselves in various activities and trips, thereby activating them.

Any thinking usually begins with comparing, analyzing and synthesizing something. That is why we call this comparison, analysis and synthesis a contemplative process. Trips help to activate and develop the thought process in children. Children compare different things with each other on trips to nature, strive for analysis and synthesis.

Since adults are engaged in the cultivation of children's speech, they should not forget that children of preschool age in some cases cannot fully perceive their own speech qualities. In addition, the ability to distinguish complex speech sounds in children from each other is also a buladi, which has not yet been fully improved. One of the most important conditions for correcting language fluency is to speak fluent language, fully and correctly pronouncing it with a child. Therefore, it is advisable if the above mentioned recommendations are followed in the development of cognitive processes of preschool children.

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MATEMATIKA VA INFORMATIKA DARSLARIDA RAQAMLI TEKNOLOGIYALARDAN FOYDALANISH

***Annotatsiya:** Ushbu maqolada Matematika fanlarini o'qitishga yangi texnik vositalar, shu jumladan, kompyuter va boshqa axborot texnologiyalarining jadal kirib kelayotgan hozirgi davrida fanlararo uzviylikni taminlash maqsadida informatika fani yutuqlaridan foydalanish dolzarb masalalardan biri ekanligi va ularni yechishdagi masalalar keltirilgan.*

***Kalit so'zlar:** texnikalar, kompiyuter, optimallashtirish, dasturlar, modellashtirish, algoritim, elektron jadval.*

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THE USE OF DIGITAL TECHNOLOGY IN MATHEMATICS AND COMPUTER SCIENCE CLASSES

***Abstract:** This article discusses issues related to the application of computer science achievements in order to ensure interdisciplinary continuity in the current period of intensive introduction of new technical means of teaching mathematical sciences, including computer and other information technologies, and issues of their solution.*

***Keywords:** methods, computer, optimization, programs, modeling, algorithm, spreadsheet.*

Hozirgi kunda informatika va matematika darslarida kompyuterdan foydalanish yaxshi samara bermoqda. Maktab davridan kompyuterdan unumli faydalana olish, ko'p jihatdan hozirgi o'quvchilarning kelajakdagi kasbiy tayyorgarligi muvaffaqiyatini belgilaydi. Kompyuter, o'qituvchi va talaba o'rtasidagi elektron vositachiga aylanadi. Demak, matematika o'qituvchisi oldida yangi muammolar paydo bo'ladi, u yangi texnikalarni o'zlashtirishi va zamonaviy axborot o'quv muhitidan foydalanish asosida yangi o'qitish usullarini ishlab chiqqish kerak bo'ladi. Darsda axborot texnologiyalaridan foydalanish qiyin va mas'uliyatli masaladir, chunki u darsni o'tkazishning mavjud texnologiyasiga bogliq va darsda o'quv vaqtidan samarali foydalanishi kompyuter uskunalari va dasturiy ta'minoti bilan bog'liq. Raqamli ta'lim resurslari sifatida raqamli fotosuratlar, videokliplar, statik va dinamik modellar, virtual haqiqat va interaktiv

modellashtirish ob'ektlari, ovozli yozuvlar, ramziy ob'ektlar va biznes grafikalar, matnli hujjatlar va boshqa o'quv materiallari o'quv jarayonini tashkil etish uchun zarur bo'ladi. Informatika va Matematikani o'qitish jarayonida raqamli ta'lim resurslaridan turli shakllarda foydalanish mumkin: taqdimotlar; tayyor o'quv va ko'rgazmali dasturlar; loyiha faoliyati; tadqiqot faoliyati; darsdan tashqari mashg'ulotlar. Darsda kompyuterdan mohirona foydalanish orqali o'qituvchi katta hajmli ma'lumotlarni qiziqarli va ko'rgazmali tarzda taqdim eta oladi. Kompyuterdan foydalangan holda darslarda o'quvchilarning kayfiyati ko'tariladi, fanga qiziqishi ortadi, diqqati jamlanadi. Raqamli tarkibli darslarni o'qitishda o'qituvchi ko'plab qo'shimcha materiallarni qamrab olishi mumkin. Talabalarning o'zlari informatika darslarida taqdimotlarni ishlab chiqishda ishtirok etishadi va o'rganishadi hamda matematika darslariga tayorgarlikda undan foydalanish uchun o'qituvchisiga murojaat qilishlari mumkin. Shu bilan birga, ular o'zlarining dizayni uchun estetik didni rivojlantiradilar. Ushbu yondashuv o'qituvchi va talabalar o'rtasidagi muloqot uchun foydalidir, bu esa, talabalar o'rtasida juftlik, gruppaga bo'lib o'tishda, xususan, jamoada ishlash ko'nikmalarini rivojlantirish uchun foydalidir.

Shunday qilib, darsda raqamli ta'lim resurslaridan foydalanish ijobiy tomonlarini qayd etish imkonini beradi:

- talabalarning individual xususiyatlarini hisobga olish;
- o'quvchilarning ijodiy qobiliyatlarini rivojlantirish;
- fanga qiziqishni kuchaytirish
- dastur materialining yuqori sifatli o'zlashtirilishini ta'minlash.

Zamonaviy raqamli texnologiyalar dunyodagi universitetlar va boshqa o'quv muassasalarini rivojlantirish uchun yangi vositalarni taqdim etadi.

Raqamlashtirish odamlarga ko'proq ma'lumot olishga va kundalik hayotlarida ko'proq qaror qabul qilishga imkon beradigan to'plangan tajriba va bilimlarni almashish uchun imkoniyat yaratadi. Qiziqarli raqamli yangiliklar orasida, onlayn ta'limning tez moslashishini ta'kidlash kerak, bu aralashgan ta'limni rivojlantirish va MOOC (Massive on-line ochiq kursi) onlayn kurslarining faol rivojlanishi shaklida namoyon bo'ladi.

Onlayn ta'limning rivojlanish dinamikasi, xususan, mavjud onlayn kurslarning o'sishi bilan yaqqol namoyon bo'lmoqda, ularning soni har yili ikki baravar ortdi. Endi 500 dan ortiq universitetlardan 4200 dan ortiq kurslar taklif etiladi. Ta'lim xizmatlarining o'sib borayotgan onlayn segmentining paydo bo'lishi ushbu sohaning manzarasini tubdan o'zgartirishi mumkin: taklif etilayotgan kurslar soni va talabalar sonining har yili ikki baravar ko'payishiga qo'shimcha ravishda, ba'zi taxminlarga ko'ra, MOOC bozorining taxmin qilingan jamlanma daromadi 2020 yilga kelib besh baravarga oshdi. Ta'limda raqamli texnologiyalarni qo'llashning qo'shimcha yo'nalishlari Amerika, Evropa va Rossiyadagi ko'plab universitetlar tomonidan amalga oshirilayotgan raqamli kutubxonalar va raqamli universitetlar shaharchalarini rivojlantirishdir. Raqamlashtirish tufayli, bugungi kunda har bir kishi ilgari faqat mutaxassislar va olimlar tomonidan mavjud bo'lgan ma'lumotlarga kirishlari mumkin. Ta'lim

va fan dunyosi global bo'lib qoldi, endi akademik harakatchanlik dasturlari doirasida chet el universitetlariga bormagan talaba, o'qituvchi yoki olimni topish deyarli imkonsiz. Misli ko'rilmagan o'zgarishlar jarayonida ko'plab universitetlar o'zlarining noyob fazilatlari va raqobatdosh ustunliklarini saqlab, global ilmiy va ta'lim xaritasida o'z o'rnini topishga harakat qilmoqdalar.

Kompyuter texnikalarini ta'lim muassasalariga tatbiq etish, o'qitish jarayonini optimallashtirishga keng yo'l ochib beradi. Keyingi o'n yillikda matematika fanini o'qitishda kompyuterlardan foydalanish bir necha asosiy yo'nalishlarda olib borildi. Bularga kompyuter yordamida bilimni baholash, turli tipdagi o'rgatuvchi dasturlarni ishlab chiqish va rivojlantirish, bilishga oid matematikaviy o'yinlarni ishlab chiqish va boshqalar kiradi. Quyidagi metodik tavsiyada shu xususida fikr-mulohazalar bildirildi. Matematika o'qitishda kompyuterlarni qulayligini yana bir yo'nalishi ayrim o'quv holatlarini modellashtirishdir. Modellashtirilgan dasturlardan foydalanishning maqsadi, o'qitishning boshqa usullari qo'llanganda tasavvur qilish, ko'z oldiga keltirilishi qiyin bo'lgan materiallarni tushunarlibo'lishini taminlashdan iborat. Modellashtirish yordamida o'quvchilarga ma'lumotlarni grafik rejimda kompyuter multimediasi ko'rinishida taqdim qilish mumkin. Shu boisdan ular matematikani chuqur o'rganish va o'quv jarayonida sezilarli darajada mustaqillik namoyon etishga moyil bo'ladilar.

Ko'p holatlarda vujudga keladigan matematik muammoni tez va berilgan aniqlikda hal etish uchun professional matematikdan o'z kasbi bilan bir vaqtda ma'lum bir algoritmik til va dasturlashni bilishi talab qilinadi. Shu maqsadda XX asrning 90-yillarida matematiklar uchun ancha qulayliklarga ega bo'lgan matematik sistemalar yaratilgan. Bu maxsus sistemalar yordamida turli sonli va analitik matematik hisoblarni, oddiy arifmetik hisoblashlardan boshlab, to xususiy hosilali differensial tenglamalarni yechishdan tashqari grafiklarni yasashni ham amalga oshirish mumkin.

Matematika fanlarini o'qitishda zamonaviy axborot texnologiyalaridan foydalanish metodikasi. Matematika fanlarini o'qitishga yangi texnik vositalar, shu jumladan, kompyuter va boshqa axborot texnologiyalarining jadal kirib kelayotgan hozirgi davrida fanlararo uzviylikni taminlash maqsadida informatika fani yutuqlaridan foydalanish dolzarb masalalardan biridir. Kompyuter texnikalarini ta'lim muassasalariga tatbiq etish, o'qitish jarayonini optimallashtirishga keng yo'l ochib beradi. Keyingi o'n yillikda matematika fanini o'qitishda kompyuterlardan foydalanish bir necha asosiy yo'nalishlarda olib borildi. Bularga kompyuter yordamida bilimni baholash, turli tipdagi o'rgatuvchi dasturlarni ishlab chiqish va rivojlantirish, bilishga oid matematikaviy o'yinlarni ishlab chiqish va boshqalar kiradi. Matematika o'qitishda kompyuterlarni qulayligini yana bir yo'nalishi ayrim o'quv holatlarini modellashtirishdir. Modellashtirilgan dasturlardan foydalanishning maqsadi, o'qitishning boshqa usullari qo'llanganda tasavvur qilish, ko'z oldiga keltirilishi qiyin bo'lgan materiallarni tushunarli bo'lishini taminlashdan iborat. Modellashtirish yordamida o'quvchilarga malumotlarni grafik rejimda kompyuter

multimediasi ko'rinishida taqdim qilish mumkin.

Hozirgi kunda ta'lim jarayonida innovatsion texnologiyalar, pedagogik va axborot kommunikatsiya texnologiyalarini o'quv jarayonida keng qo'llashga bo'lgan qiziqish, e'tibor kundan - kunga kuchayib bormoqda. Buning asosiy sabablaridan biri an'anavi ta'limda o'quvchilarni faqat tayyor bilimlarni egallashga o'rgatilgan bo'lsa, boshlang'ich ta'limda zamonaviy texnologiyalar ularni egallayotgan bilimlarini o'zlari qidirib topishlariga, mustaqil o'rganib, tahlil qilishlariga, hatto xulosalarni ham o'zlari keltirib chiqarishlariga o'rgatadi. O'qituvchi bu jarayonda shaxsning rivojlanishi, shakllanishi, bilim olishi va tarbiyalanishiga sharoit yaratadi. Matematika fani o'qituvchisining kasbiy salohiyati va ma'lumot darajasi, bolalar psixologiyasi, hozirgi zamon boshlang'ich ta'lim metodikasini bilishi hamda o'qituvchi tinmay o'z ustida mustaqil ishlashi fanidagi barcha yangiliklardan xabardor bo'lishi ilg'or metodikalarga ega bo'lgan tajribali metodist-o'qituvchilar bilan o'z tajribalari to'g'risida o'rtoqlasha olishi, samarali o'qitish metodikalarini namoyish eta olishi lozim.

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COURAGE OF GREAT ANCESTORS IS A FACTOR OF HIGH NATIONAL SPIRIT

Abstract: *The article presents thoughts and opinions on the issues of raising the national spirit and patriotism of military personnel based on the study of the historical roots of our national heritage, wide propaganda of the exemplary life of our great ancestors who showed heroism on the path to freedom of the Motherland.*

Keywords: *national spirit, courage and bravery, righteous man, ancestral courage, national pride, will, emotion, character, spiritual world, great leader, courage and bravery, virtues, bravery, honor of the nation.*

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BUYUK AJDODLAR JASORATI – YUKSAK MILLIY RUH OMILI

*“G‘alaba taqdirini avvalo qo‘shinning
jangovar ruhi va tayyorgarligi, ma‘naviy
qudrati va mustahkam irodasi hal qiladi”.*

Sohibqiron Amir Temur

Annotatsiya: *Maqolada milliy merosimizning tarixiy ildizlarini o‘rganish, Vatan ozodligi yo‘lida qahramonlik ko‘rsatgan buyuk ajdodlarimizning ibratli hayotini keng targ‘ib etish asosida harbiy xizmatchilarda milliy ruh va vatanparvarlikni yuksaltirishga doir masalalar to‘g‘risida fikr va mulohazalar yuritilgan.*

Kalit so‘zlar: *milliy ruh, mardlik va jasorat, adolatparvar, ajdoddar jasorati, milliy iftixor, iroda, his-tuyg‘u, fe‘l-atvor, ma‘naviy olam, buyuk sarkarda, mardlik va jasorat, ezgu fazilatlar, jonbozlik, millat sha‘ni.*

Dunyo miqyosidagi hozirgi o‘ta murakkab vaziyatda mamlakatimiz xavfsizligi va manfaatlarini ishonchli ta‘minlash, harbiy xizmatchilarning milliy va jangovar ruhini yuksaltirish yanada dolzarb vazifamizga aylanmoqda.

O‘zbekiston Respublikasi Prezidenti, Qurolli Kuchlar Oliy Bosh Qo‘mondoni Shavkat Mirziyoyev rahnamolgida so‘nggi yillarda Qurolli Kuchlarimizda ulkan islohotlar o‘tkazilmoqda. Davlatimiz rahbari, 2024-yil 14-yanvar “Vatan himoyachilari kuni” munosabati bilan yo‘llagan bayram tabrigida “...milliy

armiyamizning chinakam kuch-qudratini belgilab beradigan qo‘rqmas va dovyurak harbiylarimiz qalbida jangovar ruhni oshirish, ularni har qanday qiyinchilik va sinovga chidamli va matonatli etib tarbiyalash bundan buyon ham e‘tiborimiz markazida bo‘ladi” [1], deb aytib o‘tgan.

Hozirgi kunda yer yuzida bo‘layotgan harbiy-siyosiy vaziyatda, harbiy xizmatchilardan umumiy xavfsizlikni ta‘minlash va muvozanatga erishish manfaatlari nuqtai nazaridan, yangi mustaqil davlatlarning xavfsizligi va barqaror rivojlanish muammolari ulkan ahamiyat kasb etmoqda. Yer yuzida vaziyat va kuchlar nisbati shiddatli o‘zgarib bormoqda. [2].

Harbiy xizmatchilarni o‘z Vatani uchun jonini fido qilishga tayyor bo‘lish mard bo‘lishga, undaydigan kuch, eng avvalo ulardagi ma‘naviy-ma‘rifiy tarbiyadir. Ular ongida bunday tarbiya asosida o‘ziga xos milliy ruh shakllanadi. Milliy ruhni jarayon deb olsak, milliy ruhiyat uni shakllantirishdagi tizimdir. Darhaqiqat, milliy ruhni shakllantirishga turli omillar ta‘sir etadi. Bu omillardan eng birinchisi va muhimi mamlakat boshqaruvi darajasida xalq himoyasiga yo‘naltirilgan davlat siyosatidir.

Prezidentimiz ta‘biri aytganda, “Har qanday tahdid va xatarlarga munosib zarba berishga tayyor milliy armiyamiz - xalqimiz, mamlakatimizning ishonchli va mustahkam qalqonidir. Shuning uchun biz hozirgi kunda harbiy kadrlarning jangovar qobiliyati va tayyorgarligi bilan birga vatanparvarlik tarbiyasiga jiddiy ahamiyat qaratyapmiz. Ya‘ni, har bir askar va serjantda, ofitser va generalda, butun shaxsiy tarkibda milliy ruh va gurur kuchli bo‘lishi kerak. Milliy ruh - bu yengilmas kuch. Milliy ruh kuchli bo‘lsa, iroda, jangovar salohiyat ham yuqori bo‘ladi. Kelajakda harbiy bo‘lishni orzu qiladigan botir farzandlarimiz milliy ruhni, muqaddas Vatan takdiri uchun mas‘uliyat tuygusini qaerdan oladi? Vatanimiz boy tarixidan, Amir Temur kabi buyuk ajdodlarimiz jasoratidan oladi. O‘z oilasi, mehribon ota-onasi hamda el-yurtimizning ishonchi, g‘amxo‘rligi va e‘tiboridan oladi” [3].

Hamisha hamma davrlarda lashkarning kudrati, avvalo, milliy ruh va vatnparvarlik tuyg‘usiga bog‘liq bo‘lgan. Vatanimiz tarixida ayni shu ulug‘ tuyg‘u sabab o‘zidan son jihatdan bir necha o‘n barobar ko‘p bo‘lgan qudratli yov lashkarlarini yenggan qanchadan-qancha jasur ajdodlarimiz o‘tgan. To‘maris, Spitamen, Mahmud Torobiy, Jaloliddin Manguberdi, Amir Temur, Bobur, bular ma‘naviy ruh, mardlik va shijoat, millatparvarlik, vatanparvarlik tuyg‘usi bilan askarlarini yengilmas kuchga aylantira olgan yurt qalqonlaridir. Butun boshli yov qo‘shinini sahroda adashtirib halok etgan, oqibatda o‘zi ham qurbon bo‘lgan cho‘pon Shiroq qalbidagi o‘lmas ruh vatanparvarlikning eng yorqin namunasi [6].

Najmiddin Kubro ulug‘ yoshida bo‘lishiga qaramasdan Chingiz lashkarlariga qarshi mardonavor jangga kirgani, Vatan bayrog‘ini uning qo‘lidan tortib ololmagan yovuz bosqinchilar u zot halok bo‘lganidan keyin qo‘lini kesib, bayroqni olishgani tillarda doston bo‘lib keladi.

Nizomiddin Shomiy Zafarnoma asarida ma‘lum qilishicha, Amir Sohibqiron ikki yuz kishi bilan qolgan vaqtda, Qamariddin payt poylab, to‘satdan muntazam

lashkari bilan yetib keldi. Shunday bir holatda Amir Sohibqiron dilga quvvat berib, mardonalik ko'rsatish va Tangri hazratiga tavakkal qilishdan o'zga biror chora yo'qligini ko'rdi. U o'sha kichik to'dani yosmishiy etib, ularning ko'nglini ko'tarib aytdi: "Zafar topish va g'alaba qozonish lashkarning ko'pligida emas, balki Tangri hazratning qo'llab-quvvatlashidadir. Mardona bo'linglar, agar ozgina sustlik qilsak, ish qo'ldan ketadi". Lashkarning barisi jonbozlik ko'rsatib olga kadam tashladilar va hamla kilib zo'r jangga kirishdilar. Ular haqiqatda mardligu mardonalik ko'rsatib, yovuz niyatli dushmandan o'chlarini oldilar va nusratu zafar yorligida uning lashkarini qochirdilar. Tangri taolo aytgan: "Qanchadan-qancha guruhlar Allohning izni bilan katta guruhlar ustidan galaba qilgan. Alloh sabr qiluvchilar bilan birgadir" [4].

Sohibqiron Amir Temurning dushmaning ko'p ming sonli qo'shinini, kam sonli askarlari bilan maglub etib, yakson qilishida u askarlarining birinchi navbatda ruhiy holatini, ularning vatanparvarligini yuksaltirgan va buning natijasida doimiy ravishda dushman ustidan galaba qozonishga erishgan.

Ulug' ajdodimiz Zahiriddin Muhammad Boburni olaylik. Bu buyuk zot o'n ikki yoshdan boshlab Temuriylar davlatini saklab kolish uchun o'zini o'tga ham, cho'qqa ham urdi, hech kandy dushmandan ham, sinovdan ham qo'rqmadi. Qirq olti yillik umri davomida bir zum ham halovat bilmasdan o'tdi. O'z avlodlariga Vataniga bo'lgan buyuk muhabbati, ezgu fazilatlarini meros kilib qoldirdi [5].

Amir Temurning harbiy jasoratini tahlil qilish asosida, biz u tashkil qilgan qudratli va intizomli qo'shin jahonning o'sha vaqtdagi eng ilg'or qo'shini sifatida keyinchalik buyuk sarkardalar, harbiy mutaxassislar, tarixchi olimlar tomonidan e'tirof etilganligi va bir necha asrlardan buyon andoza vazifasini bajarayotganligiga amin bo'lamiz[6].

Bu borada Prezidentimiz "Buyuk alloma va adiblarimiz, aziz-avliyolarimizning bebaho merosi, yengilmas sarkarda va arboblarning jasoratini yoshlar ongiga singdirish, ularda milliy gurur va iftixor tuygularini kuchaytirishga alohida e'tibor qaratishimiz kerak" [4]- deb ta'kidlab o'tgani bejiz emas.

Mamlakatni boshqarishda voqealarning ahamiyati cheksizdir. Voqealar yordamida mamlakatni boshqarish masalalari va davlatdagi mavjud guruh-qatlamlar o'rtasidagi munosabatlar muvofiqlashtiriladi va boshqariladi. Sohibqiron Amir Temur qurultoy, tadbir va kengashlar bilan ishlashga katta ahamiyat bergan. Voqea va nasihatlar bilan ishlagan Amir Temur o'z saltanatini shon-shuhratning yuksak cho'qqilariga ko'tardi[4].

Bugun nafaqat Qurolli Kuchlar tizimidagi askar va ofitserlar, balki har bir O'zbekiston fuqarosi qalbida milliy ruh, millat sha'nini asrash tuygusi, vatanparvarlik bayrokday muhim o'rin tutishi lozim. Millatning g'ururi, ori, hamiyati, birligini yo'qotishga, yoshlarimiz yuragidan vatanpavarlik tuyg'usini sindirib tashlashga urinayotgan kuchlarga nisbatan fakat yuksak ma'naviyat, mukaddas Vatanimizga bo'lgan muhabbat tuyg'usi bilan qarshi turish va uni yengish lozim.

Darhaqiqat, ma'naviy barkamol insonning ulug'ligi uning o'zini va atrofidagilarni yuksaklikka ko'taradigan fazilatlarini o'zida mujassamlashtirib, nurlantira olishidadir[8].

Xulosa qilib aytganda, milliy merosimizning tarixiy ildizlarini o'rganish, Vatan ozodligi yo'lida qahramonlik ko'rsatgan buyuk ajdodlarimiz va jasur zamondoshlarimizning ibratli hayotini keng targ'ib etish asosida harbiy xizmatchilarda milliy ruh va vatanparvrlilik юксалади. Milliy ruh kuchli bo'lsa, iroda va jangovar salohiyat ham yuqori bo'ladi.

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PAXTAOBOD TUMANI IQTISODIYOTIDA YETAKCHI TARMOQLAR

Annotatsiya: Ushbu maqolada Andijon viloyatining Paxtaobod tumani iqtisodiyotida yetakchi tarmoqlari, sanoat mahsulotlari ishlab chiqarishda biznesning hissasi, iqtisodiyotda yengil sanoatning ahamiyati haqida so`z yuritiladi

Kalit so`zlar: Paxtaobod, xususiy tadbirkorlik, KONTEKS, sanoat korxonalari, Paxtaobod ip-mato kombinati

LEADING SECTORS OF THE ECONOMY OF PAXTAOBOD DISTRICT

Abstract: This article talks about the leading industries in the economy of Pakhtabad district of Andijan region, the contribution of business in the production of industrial products, the importance of light industry in the economy.

Key words: Pakhtabad, private entrepreneurship, KONTEKS, Industrial enterprises, Pakhtabad yarn-fabric combine.

Kirish: Paxtaobod tumani Andijon viloyatining shimoliy-sharqida joylashgan. Shimoliy va shimoliy-sharqdan Qirg'iziston respublikasining Jalolobod viloyati, g'arbdan Izboskan tumani, janubdan Andijon tumani, sharqda (58 km masofada) Qirg'iziston Respublikasi va Jalaquduq tumanlari bilan chegaradosh. Paxtaobod tumani viloyat markazi Andijon shahridan 24 km shimoliy-sharqda bo`lib, dengiz sathidan 300 metr balandlikda joylashgan. Iqlimi mo`tadil Paxtaobod tumanini Qoradaryo, Tentaksoy, Chirtaksoy daryolari kesib o`tadi. Paxtaobod tumani 1926-yil 24-dekabrda tashkil qilingan. 1962-yil 24-dekabrda Izboskan tumani bilan birlashtirilgan. 1970-yil 7-dekabrda yana yangidan tashkil qilingan. Umumiy yer maydoni -259.9 kv.km. Aholisi-211,7 ming kishi.

Iqtisodiyoti: Asosan paxta, bug'doy meva, sabzavotlar ishlab chiqarish, shuningdek, chorvachilik va dehqonchilik bilan shug'ullanadi. Bu sohada ayniqsa paxta yetishtirish alohida ahamiyat kasb etadi. Dehqonchilik faoliyati nafaqat iqtisodiyotni rivojlantiradi, balki aholini oziq-ovaqat bilan ta'minlashda muhim ro'l o'ynaydi. Bu yerda ekinlardan olingan hosilning katta qismi mahalliy bozorga yetkazib beriladi. Sanoat va xizmatlar sektori esa nisbatan kichikroq bo'lib, tuman iqtisodiyotining diversifikatsiyasi uchun yanada ko'proq imkoniyatlar mavjud. Paxtaobod tumanida transport infratuzilmasi yaxshi rivojlangan bo'lib, tuman orqali viloyat markaziga va boshqa hududlarga avtomobil yo'llari o'tadi.

1-rasm. Paxtaobod tumani hududi sxematik xaritasi.

Dastlabki ma'lumotlarga asosan 2024-yilning yanvar - sentabr oylarida Paxtaobod tumanida faoliyat ko'rsatayotgan sanoat korxonalari tomonidan 897.8 mlrd. so'mlik sanoat mahsulotlari ishlab chiqarildi va o'tgan yilning mos davriga



nisbatan fizik hajm indeksi 105.3 foizni tashkil etdi.

	Andijon viloyati		Paxtaobod tumani		1-jadval. Paxtaobod tumanining Viloyatdagi ulushi, % hisobida	
	mlrd so'm	2023-yil yanvar-sentabrga nisbatan % da	mlrd so'm	2023-yil yanvar-sentabrga nisbatan % da	2023-yil yanvar-sentabr	2024-yil yanvar-sentabr
<i>Sanoat mahsuloti</i>	61985.1	108.2	897.	105.3	1.7	1.5
<i>Qishloq, o'rmon va baliqchilik xo'jaligi</i>	31888.1	102.7	2806.9	102.9	8.8	8.8
<i>Asosiy kapitalga kiritilgan investitsiyalar</i>	19161.4	129.4	693.1	149.8	3.1	3.6
<i>Qurilish ishlari</i>	8439.5	106.1	295.4	113.4	3.3	4.9
<i>Chakana savdo tovar aylanmasi</i>	18107.5	109	668.1	107.9	3.7	3.9
<i>Xizmatlar, jami</i>	28536.1	112.9	716.9	113	2.6	3.8
<i>Eksport (mln AQSH. doll)</i>	830.4	95.5	24.5	179.1	1.6	2.9
<i>Import (mln AQSH. doll)</i>	2184.2	79.5	5.9	105.2	0.2	0.3

Sanoat mahsulotlari ishlab chiqarishda kichik biznesning hissasi tumanda xususiyl tadbirkorlikni rivojlantirishni qo'llab-quvvatlash va uni rag'bantlashtirishga qaratilgan chora-tadbirlarni amalga oshirib borilishi, o'z navbatida kichik biznes subyektlari tomonidan sanoat mahsulotlari ishlab chiqarish hajmining doimiy o'sib borishiga sabab bo'lmoqda .

2024-yilning yanvar- sentabr oylarida kichik biznes subyektlari tomonidan ishlab chiqarilgan sanoat mahsulotlari hajmi 328.1 mlrd. so'm bo'lib, uning jami sanoat ishlab chiqarishidagi ulushi 36.5 % ni tashkil etgan.

2-jadval.

Sanoat mahsuloti ishlab chiqarilishi

	Sanoat mahsuloti hajmi		Tarmoq korxonalari		Hududiy korxonalar	
	Hajm, mlrd. so'm	o'sish sur'ati % da	Hajm, mlrd. so'm	ulushi, % da	Hajm, mlrd. so'm	ulushi %da
Andijon viloyati	61985.1	108.2	44475.4	71.8	17509.7	28.2
Paxtaobod tumani	897.8	105.3	58.4	6.5	839.4	93.5

Korxonalar va tashkilotlar yagona davlat registri ma'lumotlariga ko'ra Paxtaobod tumanida 2024- yilning 1-oktabr holatiga ro'yhatga olingan yuridik shaxslar soni (fermer va dehqon xo'jaliklarisiz) 2224 tani tashkil qilib , shundan faoliyat ko'rsatayotganlari soni 1248 tani yoki jami ro'yhatga olingan yuridik shaxslarning 56.1 foizini tashkil qildi. Iqtisodiy faoliyat turlari bo'yicha ro'yxatga olingan korxonalar va tashkilotlarning asosiy qismi sanoatda 369 ta (16.6 foizi), savdo 837 ta (37.6 foizi) qishloq, o'rmon va baliqchilik xo'jaligi 273 ta (12.3 foizi) va qurilish 109 ta (4.9 foizi) sohalariga to'g'ri keladi.

2024-yil 1-oktabr holatiga ko'ra ro'yxatga olingan kichik biznes subyektlari soni 1938 tani tashkil etib, shundan 975 tasi faoliyat yuritmoqda. Shuningdek , 2024-yil yanvar- sentabr oylarida yangi tashkil etilgan kichik biznes subyektlari soni 135 tanitashkil etadi. O'z navbatida faoliyatini tugatgan kichik biznes subyektlari soni 38 tani tashkil etmoqda. Iqtisodiy faoliyat turlari bo'yicha ro'yxatga olingan kichik tadbirkorlik subyektlarining asosiy qismi sanoat 366 ta ni tashkil etadi. Andijon viloyati Paxtaobod tumanining chekka Uyg'ur qishlog'ida "KONTEKS" korxonasi ochilishi aholi uchun katta ahamiyatga ega bo'ldi. Boisi, ishlab chiqarish korxonasida 400 nafar ishchi o'rni yaratildi. Korxonalar faoliyati trikotaj mahsulotlari ishlab chiqarishga mo'jjallangan bo'lib , bugungi kunda jamiyatda 150 xildan ortiq kiyimlar sifatli tayyorlanib, iste'molchilarga yetkazib berilmoqda. Ishlab chiqarilgan trikotaj mahsulotlarining 80 foizini Fransiya , Polsha, Rossiya, Litva va Belarusiya kabi Yevropa davlatlariga eksport qilayotgan „KONTEKS“ ichki bozorimizni sifatli kiyimlar bilan to'ldirishga ham salmoqli hissa qo'shib kelmoqda. Korxonaning 2015- yilda eksport hajmi 9,5 mln . AQSH dollarini tashkil qilgan bo'lsa bu raqam 2016-yilda 12,3 mln AQSH dollarga teng bo'ldi. Hozirda bu ko'rsatkichlar anchagina dollarga oshdi.

Paxtaobod tumanidagi ip yigiruv kombinati O'zbekistonning paxta sanoatining muhim tarmog'idan biri hisoblanadi. Bu kombinat paxta tolasidan ip, mat ova boshqa ip mahsulotlari ishlab chiqarishga ixtisoslashgan. Kombinatar ishlab chiqarish quvvatlari va texnologik jarayonlari yuqori bo'lib, u nafaqat ichki bozor uchun , balki eksportga ham mahsulotlar yetkazib beradi.

Xulosa va takliflar: Andijon viloyati Paxtaobod tumani iqtisodiy, ijtimoiy va madaniy jihatdan O'zbekistondagi muhim hududlardan biridir. Paxta sanoati va ip yigiruv kombinati, shuningdek boshqa sanoat tarmoqlari tuman rivojlanishining

asosiy poydevori hisoblanadi. Birinchidan, tumanda Qoradaryo, Tentaksoy va Maylisoy daryolari oqib o'tganligi tufayli 1616,7 ming kub maydonda shag'al va qumlar yuzaga kelgan. Albatta bu mahsulotlarni qayta ishlab chiqaruvchi mexanizmlarni keltirib qurilish xom-ashyolari ishlab chiqarish jarayonini yo'lga qo'yish maqsadga muvofiq bo'ladi. Bo'sh turgan yerlarga issiqxona va bog'lar tashkil qilish, intensiv usulida dehqonchilik va chorvachilik xo'jaligini tashkil etish, hududda yangi ish o'rinlari yaratilishiga zamin bo'ladi. Amalda foydalanilmayotgan yerlarda oromgohlar, jamoat bog'lari yoki boshqa yashil hududlar yaratish, aholining turmush sifatini yaxshilash va ekologik muvozanatni saqlashda yordam beradi. Albatta tumanda mehnat resurslarini ko'pligini hisobga olgan holda, yengil sanoat tarmoqlarinigina emas, balki og'ir sanoat tarmoqlarini ham rivojlantirish dolzarb hisoblanadi. Tehnikalar va mashinalarga ehtiyot qismlar ishlab chiqarish va xizmat ko'rsatishni yo'lga qo'yish va chetga eksport hajmini kuchaytirish lozim.

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RIZOBAKTERIYALAR ASSOTSIATSIYASI ASOSIDAGI EKOLOGIK TOZA MAHSULOT “ELISITOR”NI OLIH TEXNOLOGIYASI

Annotatsiya. Bugungi kunda o‘simliklarni himoya qilishda qo‘llaniladigan bir qancha istiqbolli ekologik toza va zararsiz vositalar mavjud. Ana shunday biolik mahsulotlardan, kasalliklarga chidamlilik induktorlari, ya‘ni abiotik va biotik tabiatli moddalar - elisitorlar bo‘lib, ular o‘simlik tomonidan tanib olinadi va ularga nisbatan javob sifatida o‘simlik himoya mexanizmlarini ishga soladi, natijada abiotik va biotik stress ta‘sirini nisbatan kamaytiradi. O‘simlik elisitorlarni tanib olganidan so‘ng, mudofaa mexanizmiga javob beradigan genlar tizimini ishga soladi va shunga mos ravishda o‘simlikning qarshiligi oshadi. Bu moddalar atrof - muhitga va inson organizmiga zararli ta‘sir ko‘rsatmaydi

Kalit so‘zlar. biopreparat, Elisitor, mikroflora, patogen, ekstrakt, induktiv, ekuv mataeriali.

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TECHNOLOGY FOR OBTAINING AN ENVIRONMENTALLY FRIENDLY PRODUCT “ELISITOR”BASED ON THE ASSOCIATION OF RHIZOBACTERIA

Abstract. Today, there are a number of promising environmentally friendly and harmless means used to protect plants. Such biopreparations include disease resistance inducers, i.e. substances of abiotic and biotic nature - elicitors, which are recognized by the plant and in response to them the plant activates defense mechanisms, as a result of which abiotic and biotic stresses are reduced. the mystery is relative. After the plant recognizes elicitors, it activates the system of genes that respond to the defense mechanism, and, accordingly, the plant's resistance increases. These substances do not have a harmful effect on the environment and the human body.

Key words. *biopreparation, elicitor, microflora, pathogen, extract, inductive, planting material.*

Kirish. O‘simliklarga patogen mikroorganizmlar kirishi va ichki tuzilmalarini kolonizasiya qilishini oldini olish uchun murakkab tug‘ma immunitet tizimiga ega. Induksion javobning birinchi signali o‘simlik tomonidan boshqariladi, unda mikroob yoki o‘simlikdan olingan modifikasiyalangan molekulalarni qabul qilinadi [1.2]. O‘simliklarni himoya qilishning dastlabki reaksiyasiga qarshi turish uchun muvaffaqiyatli mikroblar ta‘siriga sezuvchanlikni (ETS- effector-triggered susceptibility) rag‘batlantirish uchun himoya vositalarini yoki o‘simliklarni himoya qilish mexanizmlarini tan olishni buzadigan maxsus effektorlar ishlab chiqaradi. Ammo, agar bu patogen effektorlar o‘z navbatida o‘simliklarning qarshilik ko‘rsatuvchi oqsillari tomonidan tan olinsa, induktiv javobning ikkinchi qatlami, ya‘ni yuqori sezgirlikka qarshi reaksiyani keltirib chiqaradigan ta‘sirga (ETI- effector-triggered immunity) nisbatan immunitet boshlanadi [3-5].

Tadqiqot usullari. “Elisitor” ekstraktini olish uchun termostatda 3 sutka davomida o‘stirilgan rizobakteriyalar assotsiasiyasini 120⁰C haroratda 1atm.da 20 daqiqa davomida mikroorganizmlar avtoklaviga (D-35440 Linden, Germaniya) qo‘yildi va sovutilgan avtolizatni fil‘trdan o‘tkazib ajratib olindi.

“Elisitor” ekstraktini olish bosqichlari

Ekuv materialini tayyorlash produsentning turi va uning fiziologik, biokimyoviy xususiyatlariga bog‘liq holda, bir qancha asosiy bosqichlardan iborat bo‘ladi: dastlabki kultura (probirkada) → agarli ozuqada o‘stirish (probirkada) → kolbalarda suyuq ozuqa muhitida mikrobiologik tebratgichlarda o‘stirish (bir yoki ikki bosqichli) → maxsus uskunalarda o‘stirish (bir yoki bir necha inokulyatorlarda) → kichik fermentatorlarda mikroorganizm kulturalarini to‘planishi → ekuv material.

Ekuv materialini olish uchun laboratoriyalarda saqlanayotgan dastlabki kulturalardan foydalaniladi. Ishlab chiqarishning har birida foydalaniladigan kulturaning nomi (tur, turkum va avlodlari), kolleksion seriyasi, nomeri, saqlanish muddati, faolliklarining o‘rtacha darajalari, o‘rganilgan sanasi kabi ko‘rsatkichlari haqida hujjati bo‘lishi zarur. Ushbu hujjatda kulturani o‘stirish uchun mo‘tadil ozuqa muhiti va uning tavsifi hamda kulturani saqlash usullari keltirilgan bo‘ladi. Odatda, mikroorganizmlarning foydali xususiyatlari o‘zgarib ketmasligi uchun optimal saqlash usullaridan foydalanish zarur. Ma‘lumki, uzoq vaqt davomida saqlangan va bir necha marotaba qayta ekilgan kulturalarning fiziologik xususiyatlari oson va tez o‘zgaradi .

Tadqiqot natijalari va ularning muhokamasi. Ilmiy izlanishlar davomida mikroorganizmlarni yetishtirishda foydalaniladigan ozuqa muhiti tarkibini ishlab chiqimda Pepton -10 g/l; MgSO₄x 7H₂O -0.3 g/l; glyukoza – 20 g/l; K₂NRO₄ -0,4 g/l; NaCl -3,0 g/l; CaCO₃-3,0 g/l; rN-6,8; 1000 ml. distillangan suvdan foydalanish lozim deb topildi.

Biologik mahsulotlarni ishlab chiqarish korxonalarini ozuqa muhitini tayyorlash uchun suyuq va qattiq moddalarni saqlashda foydalaniladigan maxsus

idishlar, eritmalar va ularni tashish vositalari, emulsiya yoki suspenziyalarni aralashirish uchun moslamalar bilan jihozlangan bo‘lishi zarur. Dastlabki davriy fermentatsiya jarayoni barcha qo‘shimchalarni o‘z ichiga olgan tayyor ozuqa muhitiga mikroorganizmlarni kiritish bilan boshlanadi. Olib borilgan tadqiqotlarimiz davomida mikroorganizmlar $28 \pm 2^{\circ}\text{C}$ gacha sovutilgan steril ozuqaga kiritildi. Ozuqa muhitini tayyorlashdagi eng muhim jarayon bu antiseptika talablariga rioya qilish bo‘lib, bu bosqich begona mikroorganizmlarning yo‘qotilishini ta‘minlaydi. Mikrobiologik sintez jarayonlarida barcha ozuqa moddalari, bioreaktorning to‘liq sterilizatsiya hamda belgilangan pH qiymatini yaratish muhim bosqich bo‘lib, tadqiqotlar davomida pH 6,8-7,0 gacha qiymatda qilib olindi.

Ekuv materialini o‘stirish quyidagi bosqichlarda amalga oshiriladi:

1. Zarur mikroorganizm kulturalarini mikrobiologik laboratoriyadan olish;
2. Ekuv materiallarini kichik hajmli ekuv uskunasi o‘stirish (5 l. sig‘imli);
3. Rizobakteriyalarni katta hajmli ekuv uskunalarida o‘stirish (50 l. sig‘imli);
4. Kichik fermentatorlarda rizobakteriya kulturalarini to‘plash (5 m³ sig‘imli).
5. Kultural suyuqlikni saqlash idishiga solish
6. Ekstraktor
7. Biomassani saqlash idishiga solish
8. Dozatorda o‘lchash
9. Qadoqlash.
10. Qoldiq suyuqlikni neytrallash yoki sharbat qilib oqizish

Xulosa. Natijalardan olingan xulosalarga ko‘ra “Elisitor”ning minimal kontsentratsiyasi bilan inokulyatsiyalash boshqa variantlarga ko‘ra, yuqori samaradorlikka erishish mumkinligini ko‘rsatadi.

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BEGONA O‘TLARGA QARSHI KURASHISHDA BASHORATLASHTIRISH

Annotatsiya. Maqolada begona o‘tlar bilan kurashishda bashoratlashtirishning ahamiyati, ularni oldindan aniqlash va zararni kamaytirish usullari haqida batafsil ma’lumot berilgan. Foydali bashorat usullari va metodlar tahlil qilingan

Kalit so‘zlar: Begona o‘tlar, bashoratlashtirish, ekinzorlar, zarar, kurash, agrotexnika, gerbitsidlar.

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FORECASTING IN WEED CONTROL

Annotation: The article discusses the importance of forecasting in weed control, methods for early identification, and reducing damage. Useful forecasting methods and approaches are analyzed.

Keywords: weeds, forecasting, agricultural fields, damage, control, agronomy, herbicides.

Ekin maydonlarining begona o‘tlar bilan ifloslanganlik darajasini, qachon, qaysi ekin maydonlarida, qanday miqdorda bo‘lishini oldindan aniqlanishi, ya’ni, bashoratlashtirish muhim amaliy ahamiyatga ega bo‘lib, bu sohada bir qancha ilmiy-tadqiqot ishlari o‘tkazilib, begona o‘tlarning o‘sishi va rivojlanishini bashoratlashtirishning begona o‘tlarga qarshi kurashishda ahamiyati juda katta ekanligi ilmiy va amaliy jihatdan to‘la asoslangan.

Y.P.Manko va V.V.Isayevlar begona o‘tlarni rivojlanishini oldindan bashoratlashtirish bo‘yicha maxsus uslubiy qo‘llanma yaratib, begona o‘tlarga qarshi qo‘llaniladigan uslublarning muvaffaqiyati ularni bashoratlashtirilishi bilan bog‘liqligini ilmiy va amaliy jihatdan asoslashgan. Ayniqsa, qaysi begona o‘t, qaysi ekinlar dalasida, qachon unib chiqishi, qay darajada ekinzorlarni ifloslantirishining aniq bashoratlashtirilishining uslubiy asoslari begona o‘tlarga muvaffaqiyatli qarshi kurashishning poydevori hisoblanadi.

Begona o‘tlarning ekinzorlarda rivojlanishini oldindan bashoratlashtirish bilan birga unib chiqadigan begona o‘tlarning soni, hayotchanligi biologik xususiyati, unib chiqish koeffitsiyenti ham aniqlansa, agrotexnologik usullar bilan birga kimyoviy usullarni qo‘llash texnologiyasi bo‘yicha gerbitsidlarning turlari, meyorlari, qo‘llanilish muddatlari hamda qaysi turdagi begona o‘tlarga qarshi qaysi gerbitsidlarni qo‘llashni oldindan rejalashtirilishi osonlashadi.

Begona oʻtlarning rivojlanishini oldindan bashoratlashtirish boʻyicha xorij davlatlarining olimlari tomonidan ham muhim ishlar amalga oshirilgan. Avstraliyalik olimlarning begona oʻtlarni koʻpayishining potensial holatlarini oldini olishda oldindan bashoratlashtirishga boʻlgan eʼtibori juda kuchli boʻlgan. Tuproqdagi begona oʻtlarning zahirasini nazorat qilish uchun oldindan bashoratlashtirish yuqori samara beradi. Tuproqdagi begona oʻtlar urugʻlarini oldindan bashoratlashtirishdagi asosiy koʻrsatkich begona oʻtlarning urugʻlarining soni emas, balki hayotchan begona oʻtlar urugʻlari hisoblanadi. Bunday hayotchan begona oʻtlarning urugʻlari zahirasi 3-6 foizni tashkil etadi .

A.V.Fisyunov maxsus uslubiy tavsiyanoma tuzib, unda nafaqat tuproqdagi begona oʻtlar, balki ekinzorlardagi begona oʻtlarni bashoratlashtirish boʻyicha maxsus tizimni taklif etgan.

G.A.Bereznikov tomonidan tuzilgan uslubiy koʻrsatmada dalalarning begona oʻtlar bilan ifloslanganlik darajasini hisobga olish, xaritalashtirish yoʻli bilan bashoratlashtirishni taklif etgan.

YE.M.Lebed, N.I.Pridvovlar almashlab ekish ekinlarining ifloslanishini hisobga olishda maxsus kuzatuv ishlari olib borib, 1m² maydonda 7 dona begona oʻt boʻlib, silos uchun yetishtirilayotgan makkajoʻxori dalalarida 11,4 dona, gorox yetishtirilayotgan dalalarda 15 ta; kuzgi bugʻdoy dalasida esa 16,4 donadan begona oʻtlar uchrashini aniqlagan.

N.F.Mixaylova, E.M.Shmat, N.V. Laninalar begona oʻtlarning 83 turi boʻyicha maxsus tajriba maydoni tashkil etib, begona oʻtlarni unib chiqishini oʻrganganlar. Kuzatuvlari natijalari boʻyicha begona oʻtlarning har yili oʻrta hisobda 10% unib chiqib tuproqda qolganlarining unib chiqishi uzoq yillargacha davom etishini taʼkidlashadi.

Y.P.Manko tomonidan begona oʻtlarni unib chiqishi boʻyicha bashoratlashtirish uslubida begona oʻtlarning unib chiqishi ekologik sharoitga bogʻliq boʻlib, ularning unib chiqish darajasi mintaqaviy xususiyatga ega boʻlishi sababli har bir mintaqaning oʻziga xos va mos boʻlgan uslubiyati boʻlishi taʼkidlanadi.

V.P.Matveyev, V.I.Morozov, YE.A.Petuxov, R.E.Djalilovlar ekin maydonlarini begona oʻtlar bilan ifloslanganlik darajasini xaritalashtirish yoʻli bilan bashoratlashtirishni almashlab ekish tizimiga mos holda tuzilishini asoslaganlar.

Y.A.Zlobin [3.29] begona oʻtlarning urugʻlarini bir tekisda birinchi yiliyoq unib chiqmasligi sababli ularni bartaraf etishning uzoq muddatli maxsus tizimini ishlab chiqilishini taʼkidlaydi.

A.M.Tulikov, Y.M.Korotkov, V.YE.Kapitanov, R.S.Kireyevlar tuproqning va ekinzorlarning begona oʻtlar bilan ifloslanganlik darajasini aniqlab, uni bartaraf etishni maxsus reja asosida olib borilsa, samaradorligi yuqori boʻlishini yozadi.

N.X.Rivkin, L.K.Borisov, V.I.Bodnya, A.P.Kovalenko begona oʻtlarga qarshi gerbitsidlar qoʻllanilganda ularning soni va turiga moslashtirib gerbitsidlar va ularning meyorlari tanlanishini taklif qilishgan.

R.S.Kireyev tuproqda mavjud boʻlgan begona oʻtlarning turlari boʻyicha sonini aniqlash bilan birga ekin maydonlaridagi begona oʻtlarni ham turlari boʻyicha

sonlarini aniqlab, tuproqda mavjud bo'lgan begona o'tlarning sonlari bilan ekinzorlar orasida mavjud bo'lgan begona o'tlar orasida korrelyativ aloqa bo'lishini aniqlagan.

V.P.Konovalov, V.G.Chaykalar begona o'tlarni har tomonlama o'rganib, begona o'tlarga qarshi kurashishning eng muhim jihatini ekish mo'ljallangan donning begona o'tlar urug'laridan tozalash darajasiga katta ahamiyat berilishini ta'kidlashadi.

Mamlakatimizda boshhoqli don ekinlari orasidagi begona o'tlar va ularga qarshi kurashishning maxsus tavsiyanomasi 1996 yilda ishlab chiqilgan. Ushbu tavsiyanoma bo'yicha boshhoqli don ekinlari orasida keng tarqalgan begona o'tlar va ularga qarshi kurashish usullari bo'yicha tavsiyalar berilgan.

Begona o'tlarga qarshi kurashishni bashoratlashtirishga oid ilmiy manbalar tahlili shuni ko'rsatadiki, bu sohada juda ko'p tadqiqot ishlari olib borilishiga qaramasdan fikrlarning begona o'tlarga qarshi kurashish bo'yicha to'g'ri va aniq yo'nalishga qaratilishiga qaramasdan barcha masalalarning bir joyga to'planib, begona o'tlarga qarshi kurashishning kompleks usuli kuzatilmaydi. Shu sababli ham ekinzorlardagi begona o'tlarni urug'lamasdan bartaraf etish bilan birga har bir dehqonchilik mintaqasi sharoiti uchun begona o'tlarni bashoratlashtirish bilan birga ularga qarshi kurashishning bir necha 10 yillarga mo'ljallangan rejaları almashlab ekish dalalari bo'yicha alohida-alohida tuzilgan bo'lishi kerak

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BEGONA O‘TLARNING ZARARLI XUSUSIYATLARI

***Annotatsiya:** O‘zbek tilida: Maqolada qishloq xo‘jalik ekinlarida begona o‘tlarning tarqalishi, ularning zarari va ularga qarshi kurash usullari yoritilgan. Tuproqdagi resurslardan foydalanish va hosildorlikka salbiy ta‘siri tahlil qilingan.*

***Kalit so‘zlar:** Begona o‘tlar, qishloq xo‘jalik, hosildorlik, zararkunanda, sug‘oriladigan yer, agrotexnika, tuproq.*

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HARMFUL PROPERTIES OF WEEDS

***Annotation:** The article discusses the distribution of weeds in agricultural fields, their harm, and control methods. The impact on soil resource usage and crop productivity is analyzed.*

***Keywords:** weeds, agriculture, productivity, pests, irrigated lands, agronomy, soil.*

Begona o‘tlarning qishloq xo‘jalik ekinlari orasida 200 tadan 400 tagacha turi uchrab, suv va oziq moddalarni madaniy ekinlarga nisbatan ko‘proq o‘zlashtirishi, soya qilishi, hosilni yig‘ishtirib olishga xalaqit berishi bilan birga serurug‘ligi, noqulay sharoitlarga chidamliligi, tez ko‘payishi va boshqa xususiyatlari bilan xarakterlanadi.

V.A.Zaxarenko ma‘lumotlari bo‘yicha begona o‘tlar boshqoqli don ekinlari orasida rivojlanib, don hosildorligini 30-40% gacha pasayib ketishiga sababchi bo‘ladi.

S.A.Kott tekshirishlaridan ma‘lum bo‘lishicha, ekinzorlar orasida 400 dan ortiq zararli va zaharli begona o‘tlar uchrab nafaqat madaniy ekinlarga, balki odam va hayvonlarga ham katta zarar yetkazadi.

R.Danilov, P.P.Xolmanov, V.P.Shashkov, V.S.Zuza boshqoqli don ekinlari dalasida begona o‘tlarning erkin rivojlanishi uchun qulay sharoit bo‘lishining sababi, bunday ekinlarning o‘sishi va rivojlanishi jarayonida ishlov berilmasligi bo‘lib, katta zarar yetkazishini aniqlagan. Mualliflarning ma‘lumotlari bo‘yicha boshqoqli don ekinlari orasida rivojlangan paxtatikon begona o‘ti har gektar yerdan 140 kg azot, 120 kg fosfor va 30 kg kaliy o‘zlashtirsa, kuzgi bug‘doyning don hosildorligi 16 s/ga, somoni 24 s/ga bo‘lganda 45 kg azot, 21 kg fosfor va 30 kg kaliyni o‘zlashtirishini yozadi, ya‘ni, paxtatikon bug‘doyga nisbatan azotni 3 hissa, fosforni esa 5 hissa ko‘p o‘zlashtirishini aniqlagan.

A.N.Kiselyov ma'lumotlari bo'yicha boshqoli don ekinlari orasida begona o'tlar keng tarqalgan bo'lsa, unga mutanosib holda kasalliklar va hashoratlar bilan zararlanish ortadi. Masalan, yovvoyi sulida sariq dog' kasalligi, ko'paysa raygrasda sariq virus kasalligi ko'payadi.

Latviya sharoitida ham kuzgi bug'doy dalalarida begona o'tlar juda ko'p bo'lib, ularga qarshi kurashilmasa, har xildagi kasalliklar va hashoratlar ko'payib ketib, don hosili barbod bo'ladi.

Mamlakatimiz sharoitida ekinzorlar orasida rivojlanadigan begona o'tlar va ularga qarshi kurashish ishlari 1960-1970 yillarda boshlangan.

Boshqoli don ekinlari dalalaridagi begona o'tlarga qarshi kurashish ishlari dastlab lalmikor yerlarda ko'proq o'rganilgan.

Mamlakatimizning sug'oriladigan yerlarida keng tarqalgan begona o'tlar bo'yicha dastlabki ma'lumotlarni S.N.Rijov va I.F.Sukachlar tomonidan yaratilgan darslikdan olish mumkin. Ushbu olimlarning yozishicha, tuproqda suv va oziqa elementlar qancha ko'p bo'lsa, begona o'tlar shuncha tez rivojlanadi.

N.V.Pokrovskiy va T.N.Solyankolar lalmikor yerlar uchun yaratgan spravochnigida begona o'tlar va ularga qarshi kurashish ishlariga katta ahamiyat berib, lalmikor yerlarda keng tarqalgan begona o'tlarning biologik xususiyatlarini o'rganib, ularga qarshi kurashishning agrotexnologik va kimyoviy usullarini keltirgan.

U.Allanazarova lalmikor yerda yetishtirilayotgan bug'doy dalalaridagi begona o'tlar bo'yicha fenologik kuzatuv ishlarini olib borib, begona o'tlarning qachon pishib yetilib urug' berishi va zararini aniqlashga erishgan.

I.T.Vasilchenko va O.A.Pidottilar sug'oriladigan yerlarda keng tarqalgan begona o'tlarni aniqlagichni yaratgan. Ushbu aniqlagichda sug'oriladigan yerlarda yetishtiriladigan ekinzorlarda 400 dan ko'proq begona o'tlar bo'lishi qayd etilgan.

T.S.Zokirov va A.Ermatov ishlarida ham sug'oriladigan yerlarda begona o'tlar juda ko'p tarqalib, ekinlarga katta zarar yetkazishligi ta'kidlanadi. Bir tup olabutada 100 ming donadan 700 ming donagacha urug' bo'ladi. Itqo'noq urug'i 25-30 yilgacha, qo'yechak urug'i 50 yilgacha, sho'ra urug'i 60 yilgacha tuproqda saqlanib, hayvonlar organizmi orqali go'ng bilan yerga qaytib tushganda unuvchanligi tezlashadi. Boshqoli don ekinlari orasida 200 dan ortiq begona o'tlar uchrab, yorug'likni to'sib soya qilish, tuproqdagi suv va oziqa elementlarini o'zlashtirib, boshqoli don ekinlarini o'sishi, rivojlanishi va hosildorligiga katta zarar yetkazadi. Qashqadaryo viloyati sharoitida R.Toshtemirov ishlarida paxta dalalaridagi begona o'tlar o'rganilgan va ularga qarshi kurashish tadbirlari ishlab chiqilgan. Qarshi dashti sharoitida sho'ra 690 kg/ga quruq modda hosil qilishi uchun 19,8 kg/ga azot, 3,6 kg/ga fosfor o'zlashtirsa, g'o'za 170 kg/ga quruq modda hosil qilishi uchun 3,8 kg/ga azot, 1,2 kg/ga fosfor o'zlashtiradi.

Yuqorida qayd qilingan holatlar boshqoli don va boshqa ekinlarga juda ham katta zarar yetkazadigan begona o'tlarga qarshi kurashish dehqonchilikning asosiy tadbirlaridan biri hisoblanadi.

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BEGONA O‘TLARNING KLASSIFIKATSIYASI

Annotatsiya. Maqolada begona o‘tlarning biologik va zararli xususiyatlariga asoslangan klassifikatsiyasi yoritilgan. A.V.Fisyunovning zamonaviy tasnifi ularga qarshi samarali kurash usullarini ishlab chiqishda qulaylik yaratadi.

Kalit so‘zlar: Begona o‘tlar, klassifikatsiya, biologiya, vegetatsiya, parazitlar, yarim parazitlar, kurash usullari.

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CLASSIFICATION OF WEEDS

Annotation: The article discusses the classification of weeds based on their biological and harmful properties. A.V. Fisyunov's modern classification facilitates the development of effective weed control methods.

Keywords: weeds, classification, biology, vegetation, parasites, semi-parasites, control methods.

Begona o‘tlarning klassifikatsiyasi

Begona o‘tlar naqadar ko‘p bo‘lishi bilan birga har xil biologik xususiyatlarga ega bo‘lishi sababli ularga qarshi kurashish usullari ham turlicha bo‘ladi. Shu sababli ham, begona o‘tlar bir yillik, ikki yillik, ko‘p yillik bo‘lishi bilan birga erta bahorgi, bahorgi, kech bahorgi, yozgi, kuzgi, qishgi va boshqa davrlarda yashovchilarga bo‘linadi. Shu bilan birga parazit bo‘lmagan, yarim parazit, parazit va boshqalarga bo‘linadi. Shu sababli ham begona o‘tlarni maxsus klassifikatsiyasi bo‘yicha o‘rganib, ularga qarshi kurashish rejasini oldindan tuzilishi kerak.

Ishimizning asosiy maqsadi kuzgi bug‘doy dalasida bahorning birinchi yarmida rivojlanib, bug‘doyga zarar keltiruvchi ikki pallali va boshqoli begona o‘tlarga qarshi kurashishdan iborat bo‘lganligi sababli begona o‘tlar klassifikatsiyasi bo‘yicha to‘liq ma‘lumot bermasakda begona o‘tlar klassifikatsiyasi bo‘yicha umumiy holda qisqacha ma‘lumotlar keltiramiz. Begona o‘tlarning klassifikatsiyasi bo‘yicha dastlabki ma‘lumotlar M.G.Chijevskiy, A.N.Kiselyov, S. A. Vorobyev, V.YE.Yegorov, P.M.Baleyev va A.N.Yamshikovlar [1.1.ye.1] tomonidan darsliklarga kiritilib, tizimlashtirilgan bo‘lib, unda kam yillik va ko‘p yillik guruhlariga bo‘lingan.

S.N.Rijov va I.F.Sukachlar [1.1.a.7] begona o‘tlarni bir yillik, ikki yillik va ko‘p yillik hamda shu guruhlarini ham mayda guruhlariga bo‘lgan.

A.M.Likov va boshqalar [1.1.d.1] begona o‘tlarni zarar keltiruvchilik xususiyatlari bo‘yicha parazit bo‘lmagan begona o‘tlar, parazit va yarim parazit guruhlarga bo‘lgan. Ushbu olimlar begona o‘tlarning vegetatsiya davri bo‘yicha kam yillik va ko‘p yillik ikkita katta guruhlarga bo‘lib, xususiyatlari bo‘yicha ham kichik guruhlarga bo‘lgan. Kam yillik begona o‘tlar ikki yillikdan ko‘p bo‘lmagan guruhlardan iborat bo‘lib, ularga efemerlar, erta bahorgi, kech bahorgi, qishlovchi, kuzgi va ikki yilliklar kiradi. Ko‘p yillik begona o‘tlar esa vegetativ usulda ko‘paymaydigan, lekin kuchsiz ko‘payadigan va kuchli ko‘payadigan guruhlarga bo‘linadi. Begona o‘tlarning ushbu klassifikatsiyasi amaliy ishlarda muhim ahamiyat kasb etib, ularga qarshi kurashishning samarali usullarini ishlab chiqishda yordam beradi.

Begona o‘tlarning eng zamonaviy va qulay klassifikatsiyasi A.V.Fisyunov [1.1.a.26] tomonidan ishlab chiqilgan. A.V.Fisyunov begona o‘tlarni parazit bo‘lmagan, parazit va yarim parazit kabi ikkita katta guruhga hamda 5 ta podtiplarga (bir yillik, ikki yillik, ko‘p yillik, parazitlar va yarim parazitlar) bo‘ladi. A.V.Fisyunov klassifikatsiyasi asosan begona o‘tlarning biologik xususiyatlari bo‘yicha tuzilgan. Ushbu klassifikatsiya bo‘yicha birinchi biologik guruhlarga bir pallali va ikki pallali, bahorgi, kuzgi, qishlovchi begona o‘tlar kiradi. Ikkinchi biologik guruhlarga ikki pallalilardan fakultativ va haqiqiy begona o‘tlar kiradi. Begona o‘tlarning eng katta biologik guruhlari bir pallali va ikki pallali begona o‘tlar kirib, ularga tukanakli, ildiz poyali, ildizidan ko‘payuvchi, ildizi sochiqli, piyozli va o‘rmalovchi begona o‘tlar kiradi. To‘rtinchi biologik guruh begona o‘tlariga faqat ikki pallali begona o‘tlar kirib, ular ildizli va poyali begona o‘tlardan iborat. Beshinchi biologik guruh begona o‘tlar ikki pallali begona o‘tlar bo‘lib, ildizli va poyali begona o‘tlardan iborat.

Demak, begona o‘tlarning klassifikatsiyalari orasida A.V.Fisyunov tomonidan taklif etilgan klassifikatsiya amaliyotda begona o‘tlarga qarshi kurashishda ko‘proq aniqlikka ega bo‘lib, undan foydalanish juda qulay.

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RAQAMLI GEODEZIK TEXNOLOGIYALARDAN FOYDALANIB GIDROTEXNIK INSHOOTLARNI O'LGHASH USULLARI

***Annotatsiya:** Ushbu maqolada gidrotexnik inshootlarni o'lchashda raqamli geodezik texnologiyalarning qo'llanilishi, ularning afzalliklari va samaradorligi ko'rib chiqiladi. Gidrotexnik inshootlar xavfsizligi va funksional holatini nazorat qilishda yuqori aniqlikdagi o'lchov tizimlarining ahamiyati yoritilgan. Raqamli texnologiyalardan foydalanish natijasida inshootlarni monitoring qilish va tahlil qilishda sezilarli soddalik va aniqlik ta'minlanadi.*

***Kalit so'zlar:** raqamli geodezik texnologiyalar, gidrotexnik inshootlar, monitoring, o'lchash usullari, dronlar, 3D skanerlash, sun'iy yo'ldosh tasvirlari.*

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METHODS OF MEASURING HYDROTECHNICAL STRUCTURES USING DIGITAL GEODESIC TECHNOLOGIES

***Abstract:** This article considers the application of digital geodetic technologies in measuring hydraulic structures, their advantages and effectiveness. The importance of high-precision measurement systems in monitoring the safety and functional condition of hydraulic structures is highlighted. As a result of the use of digital technologies, significant simplicity and accuracy are provided in monitoring and analyzing structures.*

***Keywords:** digital geodetic technologies, hydraulic structures, monitoring, measurement methods, drones, 3D scanning, satellite images.*

Kirish. Gidrotexnik inshootlar (to'g'onlar, suv omborlari, kanallar va boshqa obyektlar) jamiyatning suv resurslarini boshqarish va xavfsizlikni ta'minlashda muhim o'rin tutadi. Ushbu inshootlarning mustahkamligini va ishlash holatini nazorat qilishda aniq o'lchov ma'lumotlari talab etiladi. Raqamli geodezik texnologiyalar zamonaviy usullar bo'lib, ular yordamida o'lchash va monitoring jarayonlarini avtomatlashtirish va optimallashtirish mumkin.

Geodezik qurilishni ta'minlash - inshootlar va boshqa infratuzilmalarni qurishda injenerlik ishlari va topografik izlanishlarning kombinatsiyasi. Hamkorlik ish boshlangandan to' yakunlangunga qadar ushbu soha mutaxassislaridan iborat maxsus geodeziya xizmati orqali amalga oshiriladi. Bugungi kundagi yerlardan elektron axborot tizimi orqali ma'lumotlar olish talabga javob bermaydi. Zamonaviy va tezkor yer monitoringini yuritish usuli bu GAT dasturlari yordamida

joylarning tahlilini olib borish hisoblanadi. Yangi tuzilgan elektron va raqamli xaritalarning afzalligi shundaki, xaritani tuzish jarayonida qo'yilgan ayrim xatoliklarni tuzatish xech qanday muammoni vujudga keltirmaydi va ko'p vaqt talab qilinmaydi¹³.

Asosiy qism. Gidrotexnika inshootlari — suv resurslaridan foydalanish yoki suvning yemirish ta'siriga qarshi kurash uchun quriladigan inshootlar¹⁴. Raqamli geodezik texnologiyalar — bu an'anaviy geodezik usullarni zamonaviy raqamli vositalar bilan integratsiya qiluvchi tizimlar. Ular quyidagi texnologiyalarni o'z ichiga oladi:

- **GPS/GNSS tizimlari:** ob'ektlarning koordinatalarini yuqori aniqlikda aniqlash.
- **3D lazer skanerlash:** inshootlarning uch o'lchamli modellarini yaratish.
- **Dronlardan foydalanish:** murakkab va katta hududlarda tezkor o'lchovlarni amalga oshirish.
- **Sun'iy yo'ldosh tasvirlari:** keng ko'lamli hududlarni kuzatish va tahlil qilish.

Gidrotexnik inshootlarni o'lchash usullari quyidagilar:

1. GPS/GNSS yordamida o'lchash

- **Qo'llanilishi:** To'g'onlar, suv omborlari va kanallar kabi ob'ektlarning koordinatalarini aniqlash.
- **Afzalliklari:** Yuqori aniqlik, real vaqt rejimida o'lchash imkoniyati, keng hududlarni qamrab olish.
- **Misol:** GPS tizimidan foydalanib, suv omborining perimetri bo'ylab deformatsiyalarni aniqlash.

2. 3D lazer skanerlash texnologiyasi

- **Qo'llanilishi:** Inshootlarning geometriyasini aniqlash, deformatsiyalarni tahlil qilish va 3D modellar yaratish.
- **Afzalliklari:** Aniqlik va batafsil natijalar, ob'ektlarning real ko'rinishini yaratish.
- **Misol:** To'g'onning yoriqlari va notekisliklarini aniqlash uchun 3D model yaratish.

3. Dronlardan foydalanish

- **Qo'llanilishi:** Yirik hududlar va murakkab obyektlarning yuqori aniqlikdagi tasvirlarini olish.
- **Afzalliklari:** Qiyin yetib boriladigan joylarni kuzatish, tezkor va iqtisodiy samaradorlik.
- **Misol:** Kanal bo'ylab sath balandliklarini o'lchash va tuproq eroziyasini aniqlash.

4. Sun'iy yo'ldosh tasvirlari

¹³ Karabekov U.A. INSHOOTLARNI GEODEZIK TA'MINLASH UCHUN GEOFAZOVIY TEXNOLOGIYALARNI QO'LLASH // Экономика и социум. 2024. №5-2 (120). URL: <https://cyberleninka.ru/article/n/inshootlarni-geodezik-ta-minlash-uchun-geofazoviy-texnologiyalarni-qo-llash> (дата обращения: 27.11.2024).

¹⁴https://uz.wikipedia.org/wiki/Gidrotexnika_inshootlari

- **Qo'llanilishi:** Katta hududlarni monitoring qilish, suv resurslarining harakati va o'zgarishlarini kuzatish.
- **Afzalliklari:** Hududni uzluksiz kuzatish, uzoq muddatli tahlillarni amalga oshirish.
- **Misol:** Suv omborlaridagi suv darajasining o'zgarishini tahlil qilish.

5. Tarmoqli monitoring tizimlari

- **Qo'llanilishi:** Sensorlar yordamida inshootning strukturaviy holatini real vaqtda nazorat qilish.
- **Afzalliklari:** O'z vaqtida ogohlantirish tizimi va xavfsizlikni oshirish.
- **Misol:** Sensorlar yordamida to'g'onning deformatsiyasini o'lchash.

Amaliy natijalar va samaradorlik esa:

- Yuqori aniqlikdagi raqamli texnologiyalar gidrotexnik inshootlarning holatini muntazam kuzatish imkonini beradi.
- Raqamli geodezik texnologiyalarning qo'llanilishi inshootlarning xizmat muddatini uzaytirish va xavfsizlikni ta'minlashga yordam beradi.
- Tezkor va iqtisodiy samaradorlik hisobiga monitoring jarayonlarining xarajatlari kamayadi.

Xulosa. Raqamli geodezik texnologiyalardan foydalanish gidrotexnik inshootlarni o'lchash va monitoring qilishda yangi imkoniyatlar yaratadi. Ushbu texnologiyalar yuqori aniqlik va tezlikni ta'minlash bilan birga, inshootlarning xavfsizligini oshiradi. Kelgusida raqamli texnologiyalarni yanada kengroq joriy etish va ularning imkoniyatlarini kengaytirish maqsadga muvofiqdir. bu barcha qurilish turlari – turar-joy va jamoat binolari, yo'l va transport tarmoqlari, gidrotexnik inshootlar, shahar infratuzilmasi uchun amal qiladi. Aksariyat masalalar axborot modellashtirish texnologiyasi yordamida hal etiladi. BIM vaqtini nazorat qilish, qurilish xarajatlarini, xavflarni kamaytirishga yordam beradi. BIM texnologiyasi dasturiy mahsulot emas, balki jarayondir. [5] Gidrotexnik inshootlar-geografik, iqtisodiy, infratuzilma, ekologik va texnologik jihatlarni hisobga olgan holda qurilishda suv infratuzilmasining eng murakkab ob'ektlaridir. Jahon texnologiyalari va boshqaruv standartlari nafaqat ushbu omillarni hisobga olish, balki to'g'ridan-to'g'ri dizayn jarayonida va inshootni keyingi bosqichlarida gidrotexnik ob'ektlar haqida katta hajmdagi ma'lumotlarni boshqarish imkonini beradi. Bu nafaqat ishni soddalashtiradi, balki mijozning vaqtini va pulini tejaydi¹⁵.

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THE ESSENCE OF OPERATION MANAGEMENT AND THE MANAGEMENT OF PROCESSES

ABSTRACT: *Operation management is essential for ensuring the smooth and efficient functioning of organizational processes. It involves the planning, organization, and supervision of production, manufacturing, and service delivery to achieve business objectives. The essence of operation management lies in its focus on maximizing resource efficiency, maintaining product quality, and meeting customer expectations through well-coordinated processes. Effective process management is at the heart of operation management, where continuous improvement, strategic planning, and technological integration play crucial roles. This abstract outlines the key aspects of operation management and process control, highlighting their significance in driving operational excellence and competitive advantage in today's dynamic business environment.*

конкурентных преимуществ в современном динамичном бизнес-среде.

KEYWORDS: *Operation Management, Process Management, Production Planning, Service Delivery, Business, Organizational Processes*

INTRODUCTION Operation management is a crucial discipline in the business world, focusing on the efficient and effective design, operation, and improvement of the processes involved in producing goods and delivering services. The essence of operation management lies in its ability to coordinate and optimize resources, time, and technologies to achieve organizational goals. It involves a series of interconnected activities such as production planning, quality control, inventory management, and supply chain coordination, all aimed at maximizing efficiency and delivering high-quality products or services to customers. In parallel, process management plays an integral role in ensuring that these activities are carried out seamlessly. By emphasizing process improvement, innovation, and the integration of technology, organizations can streamline operations, reduce waste, and enhance overall productivity. This article explores the fundamental principles of operation management and process management, highlighting their importance in driving business success. We will examine how businesses can leverage these practices to stay competitive in an ever-changing marketplace, adapt to new challenges, and ensure sustainable growth.

METHODS

Effective operation management and process management rely on various methods and tools that help organizations streamline their activities, improve efficiency, and achieve business objectives. Some of the key methods used in these fields include:

1. Lean Management

Lean management focuses on reducing waste while improving productivity. This method emphasizes streamlining operations by eliminating non-value-added activities, improving process flow, and enhancing efficiency. The goal is to maximize value for customers with minimal resource consumption.

2. Six Sigma

Six Sigma is a data-driven approach that focuses on improving quality by identifying and removing causes of defects and variability in processes. By using statistical analysis and a structured methodology (DMAIC: Define, Measure, Analyze, Improve, Control), organizations can significantly reduce errors and improve process performance.

3. Total Quality Management (TQM)

TQM is a comprehensive approach to improving organizational processes, products, and services. It involves continuous improvement, customer focus, and the participation of all members of an organization in enhancing quality at every level of operation.

4. Just-in-Time (JIT) Production

JIT is a method that aims to reduce inventory costs by producing goods only when they are needed, in the exact quantity required. This reduces the risk of overproduction, minimizes storage needs, and ensures that products are fresh and aligned with customer demand.

5. Kaizen

Kaizen is a Japanese term meaning "continuous improvement." It is a philosophy that encourages small, incremental changes in processes that lead to significant improvements over time. In operations management, Kaizen fosters a culture of ongoing improvement through employee involvement and feedback.

6. Process Mapping and Flowcharting

Process mapping and flowcharting involve creating visual representations of processes to identify inefficiencies, bottlenecks, and areas for improvement. These tools help in understanding the flow of activities and in analyzing potential improvements in operational workflows.

7. Supply Chain Management (SCM)

SCM is the management of the flow of goods, information, and resources from suppliers to customers. By optimizing supply chain processes, businesses can reduce costs, improve product availability, and enhance customer satisfaction.

8. Capacity Planning

Capacity planning involves determining the optimal production capacity needed to meet customer demand. This method ensures that resources are effectively utilized and production processes are not overburdened or underutilized, allowing organizations to achieve balanced efficiency.

9. Automation and Technology Integration

Automation and the integration of advanced technologies, such as artificial intelligence (AI), machine learning, and Internet of Things (IoT), are becoming increasingly important in modern operation management. These technologies help

in monitoring and improving processes, forecasting demand, and enhancing decision-making.

10. Balanced Scorecard

The balanced scorecard is a strategic management tool that tracks organizational performance through multiple perspectives: financial, customer, internal processes, and learning and growth. This method allows organizations to align their operational goals with their overall strategy and monitor progress over time.

These methods are widely used by organizations to enhance operational efficiency, reduce costs, and ensure high-quality production and service delivery. By applying the right mix of these strategies, businesses can effectively manage their processes and stay competitive in a dynamic market.

DISCUSSION

The essence of operation management lies in its ability to effectively manage resources, processes, and technologies to ensure that organizations can meet customer demands and achieve business objectives. In today's fast-paced and highly competitive business environment, the importance of robust operation management practices cannot be overstated. As organizations continue to evolve, they face increasing pressure to streamline their operations, improve quality, and reduce costs while maintaining a high level of customer satisfaction. This discussion explores the key challenges and opportunities that arise in operation management and process management, based on the results highlighted earlier.

Challenges in Operation Management: One of the key challenges in operation management is maintaining the delicate balance between cost reduction and quality assurance. While practices such as Lean Management and Just-in-Time (JIT) production emphasize minimizing waste and lowering costs, organizations must ensure that these efforts do not compromise the quality of their products or services. In industries where quality is paramount, such as healthcare or aerospace, the integration of efficiency strategies must be carefully managed to avoid potential risks.

Another challenge is the integration of new technologies into existing systems. The rapid development of automation, artificial intelligence (AI), and Internet of Things (IoT) technologies presents both opportunities and challenges. While these technologies can vastly improve efficiency, data analytics, and decision-making, they also require significant investment and the upskilling of employees to effectively implement and maintain them. Many organizations face difficulties in overcoming resistance to change or adapting to these new technologies without disrupting their existing operations.

Opportunities for Process Improvement: The integration of process management methodologies like Six Sigma and Total Quality Management (TQM) has created a culture of continuous improvement in many organizations. This culture not only drives operational excellence but also helps businesses adapt to changing market conditions and customer preferences. Organizations that prioritize continuous improvement are better positioned to respond to emerging challenges and seize new opportunities, such as expanding into new markets or innovating product offerings.

Additionally, process mapping and process optimization techniques present significant opportunities for organizations to identify inefficiencies and bottlenecks. By leveraging data-driven tools to visualize workflows and identify areas for improvement, businesses can reduce cycle times, improve resource allocation, and eliminate waste, ultimately leading to greater profitability.

The Role of Human Resources in Operational Success: While technology and systems play a crucial role in operational efficiency, the human element remains a key driver of success. Employee engagement and involvement in process improvements are critical for ensuring the long-term effectiveness of operation management strategies. The Kaizen philosophy, which emphasizes small, continuous improvements by all employees, has been shown to foster greater innovation, motivation, and job satisfaction. Organizations that empower their employees to actively contribute to process improvements see higher levels of ownership and commitment, which in turn enhances organizational performance.

Sustainability and the Future of Operation Management: As businesses increasingly prioritize sustainability and environmental responsibility, operation management practices must evolve to reflect these values. Lean and Six Sigma methodologies, which focus on reducing waste and improving efficiency, align well with sustainability goals. By minimizing resource consumption, reducing emissions, and optimizing processes, organizations can not only lower their environmental impact but also improve their profitability in the long term.

Moreover, as the global business landscape becomes more interconnected, organizations are recognizing the importance of global supply chains. Efficient supply chain management is now integral to operation management, requiring businesses to navigate challenges such as geopolitical instability, trade barriers, and supply chain disruptions. The ability to adapt to these changes while maintaining efficient and sustainable operations will define the competitive advantage of future businesses.

The Evolving Role of Technology in Process Management: The role of technology in operation management is expanding, with tools like artificial intelligence, machine learning, and big data analytics reshaping the landscape. AI-powered decision-making tools, for example, allow businesses to optimize scheduling, predictive maintenance, and demand forecasting with unprecedented accuracy. The integration of IoT devices into production processes enables real-time monitoring, reducing downtime and improving overall equipment effectiveness. While the implementation of these technologies can lead to significant improvements in operational efficiency, businesses must also address issues related to data security, privacy, and the ethical implications of automation.

CONCLUSION

In conclusion, operation management and the management of processes are integral to the success of any organization. The adoption of best practices and process management methodologies provides organizations with the tools to increase efficiency, reduce costs, improve quality, and ultimately enhance customer satisfaction. However, the successful implementation of these methods requires

careful consideration of industry-specific needs, technological advancements, and employee involvement. As businesses continue to face challenges such as rising costs, increased competition, and sustainability pressures, the future of operation management will depend on their ability to innovate, adapt, and embrace new technologies and approaches to managing processes.

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BO‘LAJAK HARBIY TA‘LIM O‘QITUVCHILARINI KASBIY TAYYORGARLIGINI RIVOJLANTIRISHDA INNOVATSION TA‘LIM TEKNOLOGIYALARINI QO‘LLASH

Annotatsiya

Mazkur maqolada innovatsion ta‘lim texnologiyalari asosida bo‘lajak harbiy ta‘lim fani o‘qituvchilarining kasbiy tayyorgarligini rivojlantirish, shahsiy sifatlari, mohiyati, ularning bilim darajasi hamda talaba yoshlarga muntazam ravishda ta‘lim va tarbiya berish, ularni doimo harbiy vatanparvarlik ruhini oshirib borishlari ko‘rsatib o‘tilgan. Shuningdek harbiy ta‘lim fani o‘qituvchilarining asosiy maqsadi talaba yoshlarga bilim va tarbiya berishni muvaffaqiyatli olib borishlari hamda o‘z kasbiy tayyorgarliklarini muntazam ravishda rivojlantirib borishlari belgilab o‘tilgan.

Kalit so‘zlar: Harbiy ta‘lim, taxlil, texnologik yondashuv, kasbiy tayyorgarlik, talaba yoshlar, kompyuter texnologiyasi, axborotlashtirish, modul, ta‘lim, tarbiya.

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APPLICATION OF INNOVATIVE EDUCATIONAL TECHNOLOGIES IN DEVELOPING THE PROFESSIONAL TRAINING OF FUTURE MILITARY TEACHERS

Abstract

This article describes the development of professional training of future military education teachers based on innovative educational technologies, their personal qualities, their level of knowledge, and the need to systematically educate and educate young students, constantly instill in them a spirit of military patriotism. It also states that the main goal of military education teachers is to successfully educate and educate young students and to systematically develop their professional training.

Key words: Military education, analysis, technological approach, vocational training, student youth, computer technology, informatization, module, education, training.

Harbiy ta‘lim jarayoni murakkab ijtimoiy hodisalardan biridiri bo‘lib uning mohiyati bo‘lajak harbiy ta‘lim o‘qituvchilarining kasbiy tayyorgarligini rivojlantirish hamda ularni yoshlarga ta‘lim berish va o‘qitishda innovatsion ta‘lim texnologiyalaridan foydalanishni hamda o‘qitish jarayoni yaxshi tashkil etishni taqazo etadi. Bu esa yoshlarda harbiy vatanparvarlik ruhini oshirib borish,

Vatanimiz sarhadlarini munosib himoya qilish, chaqiriluvchi yoshlarni hozirgi zamon ziddiyatli sharoitida jangovar harakatlarni muvaffaqiyatli olib borishga maqsadli tashkiliy va ta'lim-tarbiyaviy faoliyati bilan belgilanadi.

Ta'lim tarbiya jarayoni bo'lajak harbiy ta'lim o'qituvchilarining ta'lim tarbiyaga qaratilgan faoliyati bo'lib, uning doirasida nafaqat ularning harbiy mahorati shakllantiriladi, balki o'zida ma'naviy-axloqiy xislatlarni mujassam etgan, aqlan va jismonan yetuk, ijtimoiy faol komil inson shaxsi tarbiyalanadi.

Vatanimizning istiqlol va taraqqiyoti harbiylarning har tomonlama yetuk, ongli, yuksak axloqli bo'lishiga bog'liqdir. Vatanparvarlik, milliy g'ururi, fidoiylik, o'z xalqi tarixi, uni madaniyati bilan faxrlanish, insonga hurmat, ehtirom shularning hammasi ofitser ma'naviyatiga borib taqaladi. Ma'naviyat esa bugungi kunda erishgan mustaqilligimizning poydevori hisoblanadi. Buyuk ajdodlarimiz Amir Temur, Muhammad Tarag'ay, Jaloliddin Manguberdilar ham ana shu tuyg'u bilan yashaganlar.

Uzoq yillarda milliy tarbiyamizning yillik urf-odatlar, qadriyatlarimiz kamsitilib, donishimiz, tilimiz oyoqosti qilinishi oqibatida harbiylar orasida mehr-oqibat, diyonat, sharm-hayo, andisha, or-nomus, halollik, kattalarga hurmat, kichiklarga izzat-e'tibor susayib ketdi. Yoshlar o'rtasida jinoyatchilik, bezorilik, xiyonatchilik, qalloblik, kashandalik va buzuqliklar bir muncha ko'paydi. Milliy urf-odatlarimiz o'rniga ovro'pacha urf-odatlar singdirilganiga, tarbiya milliylikdan chekinganiga urg'u beradi.

O'zbekiston Respublikasida Mustaqillikka erishgandan so'ng umumiyinsoniy qadriyatlarga sodiqlik, birinchidan adolat va tenglikda ko'zga tashlanadi. Inson qadr-qimmatini baholashda ana shu adolat va tinchlik muhim rol ni bajaradi. Harbiy ta'lim tizimida o'qitish tarbiyalanuvchilarni axloqiy mukammallashtirish bilan bog'lab olib boriladi.

Axloqiy fazilatlarga baho berish mezonlari ham aniq tarixiy jarayonlar, sharoitlar bilan bog'liq ravishda o'zgarib turadi. O'zbek xalqining axloqidagi oriyat, diyonat, kattalarga hurmat, mehnatdo'stlik kabi sifatlarga ularning ruhiyatidagi samimiylilik, insof, bag'rikenglik, sharm-hayolik xususiyatlari jihatlari milliy adabiyot va san'ati qo'shib o'zbek ma'naviyatining o'ziga xos xususiyatlarini shakllantiradi. Texnologik yondashuv asosida bo'lajak chaqiriqqacha harbiy ta'lim o'qituvchilarini kasbiy tayyorgarligini rivojlantirish bevosita innovatsion ta'lim texnologiyalariga bog'liqdir.

Hozirda jahon ta'limi amaliyotida qo'llanilayotgan asosiy o'qitish texnologiyalari quyidagilardan iborat;

- O'yinli texnologiyalar.
- Muammoli o'qitish texnologiyasi.
- Tabaqalashtirilgan o'qitish texnologiyasi.
- Individuallashtirilgan o'qitish texnologiyasi.
- Dasturlashtirilgan o'qitish texnologiyasi.
- Kompyuterli o'qitish texnologiyasi.
- Modulli o'qitish texnologiyasi.
- Keys stadi o'qitish texnologiyasi.

- Kreativ o‘qitish texnologiyasi.
- Rivojlantiruvchi ta’lim texnologiyasi.
- To‘liq o‘zlashtirish texnologiyasi.
- Tizimli faoliyat yondashuvi asosida o‘qitish texnologiyalari.
- Fan bo‘yicha faoliyat yondashuvi asosida o‘qitish texnologiyalari.
- Bilimlarni to‘la o‘zlashtirish texnologiyasi va boshqalar.

Bugungi kunda kompyuterli o‘qitish texnologiyasi asosan elektron ta’lim resurslari orqali amalga oshiriladi. Kompyuterli o‘qitish texnologiyasining xususiyati shundaki:

- ta’lim oluvchining mustaqil fikrlash va ijodiy qobiliyatlarini rivojlantirishga yo‘naltirilgan;

- o‘qituvchi ta’lim jarayonida maslahatchi sifatida qatnashadi;

- o‘qitish jarayonidagi axborot vositalari va resurslari faol integratsiyasi ta’minlanadi;

- o‘qitish motivatsiyasi oshiriladi;

- ta’limning intensivligi va natijaviyligini oshiradi;

- ta’lim oluvchining mustaqil ishlash va izlash malakalarini shakllantiradi.

Kompyuterli o‘qitish jarayonini samarali tashkil etilishi o‘quv maqsadlariga kafolatli erishishni ta’minlaydi. Agar o‘qitish jarayoni yaxshi tashkil etilmasa, ilg‘or o‘qitish texnologiyalari ham samara bermaydi. Bu texnologiya o‘quv axborotlarining verbal va tasavvurli shakllarini birgalikda namoyon etish, o‘qitish jarayonini maqsadlarga moslashtirish imkonini beradi. Kuzatishlarning ko‘rsatishicha, o‘qituvchi, bilimlarni o‘zlashtirish jarayonini tashkil etuvchi va boshqaruvchi sifatida qatnashadi va talabalarning kompyuter bilan ishlagandagi rasmiy ko‘nikmalariga faqat tuzatishlar kiritish va nazorat qilish bilan cheklanadi.

Ta’limda axborot texnologiyalari multimediya, prezentatsiya, audio-video materiallar, internet, masofaviy ta’lim, ommaviy ochiq onlayn kurslar, video konferensiya va o‘rgatuvchi mobil ilovalardan iboratdir.

Modulli o‘qitish texnologiyasi modul fanning fundamental tushunchalarini - ma’lum hodisa yoki qonun, yoki bo‘lim, yoki ma’lum bir yirik mavzu yoki o‘zaro bog‘liq tushunchalar guruhini o‘z ichiga oladi. Modulli o‘qitish - o‘qitishning istiqbolli tizimlaridan biri hisoblanadi, chunki u talabalarning bilim imkoniyatlarini va ijodiy qobiliyatlarini rivojlantirish tizimiga eng yaxshi moslashgandir.

Modulli o‘qitish, kasbiy ta’limning quyidagi zamonaviy masalalarini har tomonlama yechish imkoniyatini yaratadi;

- modul - faoliyatlik asosida o‘qitish mazmunini optimallashtirish va tizimlash, dasturlarni o‘zgaruvchanligi, moslashuvchanligini ta’minlaydi;

- o‘qitishni individuallashtirish;

- amaliy faoliyatga o‘rgatish va kuzatiladigan xarakterlarni baholash darajasida o‘qitish samaradorligini nazorat qilish;

- kasbga qiziqtirish asosida, faollashtirish, mustaqillik va o‘qitish imkoniyatlarini to‘la ro‘yobga chiqarish.

Modulli o‘qitish samaradorligi quyidagi omillarga bog‘liq:

- ta’lim muassasasining moddiy-texnik bazasi;

- malakali professor-o‘qituvchilar tarkibi darajasi;
- talabalar tayyorgarligi darajasiga;
- kutiladigan natijalar bahosiga;
- didaktik materiallarning ishlab chiqilishiga;
- modullar natijasi va tahliliga.

Modulli o‘qitish texnologiyasini afzalligi shundaki, modulni o‘rganish o‘zlashtirish jarayonining asosini mustaqil bajariladigan ish-harakatlar tashkil qiladi, modulni o‘rganish mobaynidagi ish-harakatlar talabalar tomonidan mustaqil ravishda rejalashtiriladi, amalga oshiriladi, tekshiriladi va baholanadi, ish harakatlar o‘zida texnikaviy, mehnat xavfsizligi, huquqiy, ekologik kabi masalalarni qamrab olishi kerak. Kasbiy tayyorgarlikning muayyan darajasiga erishish uchun mustaqil o‘quv-bilish faoliyatini kengaytirishga imkon beruvchi egiluvchan modulli texnologiyaga asoslangan o‘qitish usuli katta ahamiyatga ega.

Modulli o‘qitish texnologiya asosida ta’lim jarayonini tashkil etish shundan iboratki, unda ta’lim mazmuni avtonom tashkiliy metodik bloklar (modullar) da tuzilmalashtiriladi. Modullar mazmuni va hajmi ta’lim oluvchilarning ixtisosligi va darajali tabaqalanishiga hamda didaktik maqsadlarga bog‘liq ravishda variatsiyalanadi. Modulli texnologiyaning markaziy tushunchasi “modul” bo‘lib, uning mohiyatini nazariyachi va amaliyotchilar bir xil tarzda talqin etmaydilar. Modul-bu bir fan doirasidagi tashkiliy-metodik tuzilmaviy birlikdir [1].

Olimlardan R.S.Bekirova va M.A.Choshanovlar modulni didaktik maqsadlar, o‘quv materialining tugallangan mantiqiy birligi (fanlararo bog‘lanishlarni hisobga olgan holda), metodik yo‘riqnoma (didaktik materiallarni qo‘shib hisoblaganda) va nazorat tizimini o‘z ichiga olgan “o‘quv fanining avtonom tashkiliy-metodik tuzilmasi” sifatida tasniflaydi.[2]

Ta’lim jarayonini tashkil etishning modulli texnologiyasi ta’lim maqsadlarini, mazmuniy-protsessual jihatini, modul elementlari bo‘yicha taqsimlangan o‘quv materialini taqdim etadi, reyting bo‘yicha amalga oshirilgan yakuniy nazoratni aks ettiradi.

Modulda mazmun, o‘qitish metodlari, mustaqillik darajasi hamda o‘zlashtirish jadalligi bo‘yicha individuallashtirilgan o‘qitish dasturi aks ettiriladi. Har bir o‘quv moduli aniq o‘qitish maqsadi, o‘z mazmuni, didaktik ta’minotiga ega. O‘qitish maqsadlaridan kelib chiqqan holda, modulda o‘qitishning tashkiliy shakllari (ma’ruza-maslahat, laboratoriya ishi, hisob-grafik topshiriq, mustaqil ish, yakuniy nazorat va boshqalar) rejalashtiriladi, bo‘lajak o‘qituvchilarning o‘quv-biluv faoliyatiga zaruriy tuzatish kiritish ko‘zda tutiladi. Modulni qurishning muhim mezoni bilimlarni o‘zlashtirish darajalari mantig‘ini ta’minlovchi faoliyatni (idrok qilish, tushunish, anglash, qo‘llash, umumlashtirish, tizimlashtirish) tuzilmalashtirish hisoblanadi.

“Chaqiriqqa qadar boshlang‘ich tayyorgarlikni tashkil etish va uni o‘qitish metodikasi” fanini o‘quv materialini talabalar tomonidan o‘zlashtirish moduldan-modulga ketma-ket amalga oshiriladi va har bir talabaga belgilangan o‘quv-bilish faoliyati maqsadlariga erishish imkonini beradi. Ma’ruzalar umumlashgan shaklda ilmiy bilimlar asosi bo‘lib hisoblanadi va kasbiy faoliyatning yo‘naltiruvchi asosi

sifatida uning nazariy bazasini yaratadi. Amaliy mashg'ulotlar amaliy masalalarni yechishning hisoblash ko'nikmalarini o'zlashtirish bilan bog'liq bir necha muhim funktsiyalarni bajaradi. Amaliy mashg'ulotlarda qayta ishlanadigan o'quv materiallari mazmunini namunaviy masalalarning umumlashgan tizimi orqali taqdim etish mumkin.

Modulli o'qitish texnologiyasining mohiyati shundan iboratki, o'quv fanining mazmuni dastur ko'rinishida rasmiylashtiriladi, uni loyihalash umumqabul qilingan quyidagi tamoyillar asosida olib boriladi:

o'quv predmeti mazmunini asosiy tushunchalar va metodlar atrofida shakllashtirish;

o'quv materialini bayoni qilish ketma-ketligining tizimlilik va mantiqiylik; mazmunning bir butunligi va amaliy ahamiyati;

o'quv materialini taqdim etishning ko'rgazmaliligi.

O'quv jarayonini moduli-reyting texnologiyasi asosida loyihalash quyidagilarga imkon beradi:

o'quv materialining muammoli modulini guruhlash orqali o'qitish mazmunini integratsiyalash va tabaqalashtirish-ning didaktik birligi amalga oshiriladi;

o'quv modullarini variativ konstruksiyalash (qisqartirilgan va chuqurlashtirilgan ko'rinishda);

bo'lajak chaqiriqqacha harbiy ta'lim o'qituvchilarning modul dasturi variantini mustaqil tanlashini va dasturni o'zlashtirishlarining individual sur'atini ta'minlash;

bo'lajak o'qituvchining bilish faoliyatini boshqarishda o'qituvchi edvayzer (maslahatchi) va moderator (yo'naltiruvchi) bo'lishi kerak.

Muammoli o'qitish texnologiyasi - bu rivojlantiruvchi o'qitish texnologiyasi bo'lib, faol bilim ortirish jarayonini rag'batlantiradi va fikrlashning mantiqiy ketmaketlik stilini shakllantiradi. Muammoli o'qitish mohiyati o'qituvchi tomonidan talabalarning o'qishida muammoli vaziyatlarni tashkil etish va o'quv (yaxshisi, hayotiy) masalalar, muammolarni savollar va topshiriqlarni yechish yo'li bilan yangi bilimlarni o'zlashtirish faoliyatini boshqarishdan iboratdir.

Muammoli o'qitish, o'qitishning shaxsga yo'naltirilgan texnologiyalariga taalluqli, chunki bu yerda shaxsga sub'yekt sifatida qaraladi, muammoli vaziyatlarning maqsadi – pedagogik jarayonda o'ziga xos qiziqish uyg'otishdir. Muammoli o'qitish, o'qitishning eng tabiiy samarali usulidir, chunki ilmiy bilimlar mantiqi o'zida muammoli vaziyatlar mantiqini namoyish etadi. Pedagogikaga oid adabiyotlarda muammoli o'qitishning turli ta'rif va tavsiflari bor. Bizningcha, nisbatan to'liq va aniq ta'rif M.I.Maxmutov[3] tomonidan berilgan bo'lib, unda muammoli o'qitish mantiqiy fikrlar tadbirlari, tahlil, umumlashtirish hisobga olingan o'rgatish va dars berish usullarini qo'llash qoidalari va talabalarning tadqiqot faoliyatlari qonuniyatlarining tizimi sifatida izohlanadi.

Muammoli o'qitishning mohiyatini o'qituvchi tomonidan talabalarning o'quv ishlarida muammoli vaziyatni vujudga keltirish va o'quv vazifalarini,

muammolarini va savollarini hal qilish orqali yangi bilimlarni o'zlashtirish bo'yicha ularning bilish faoliyatini boshqarishni tashkil etadi.

Bu esa bilimlarni o'zlashtirishning ilmiy tadqiqot usulini yuzaga keltiradi. Ma'lumki, o'qitishning har qanday asosida inson faoliyatining muayyan qonuniyatlari, shaxs rivoji va ular negizida shakllangan pedagogik fanning tamoyillari va qoidalari yotadi. Insonning bilish faoliyati jarayoni mantiqiy bilish ziddiyatlarini hal qilishda ob'yektiv qonuniyatlari didaktik tamoyil – muammolilikka tayanadi. Fanda muammoli o'qitish bilan aloqador ikkita tushuncha ishlatiladi: «muammo» va «muammoli vaziyat» tushunchalari. Ayrim hollarda ular sinonimdek tushunilsada, lekin bu atamalar bilan belgilangan ob'ektlar o'z hajmi bilan farqlanadi.

Muammo muammoli masalalar ketma-ketligiga ajraladi. Demak, muammoli masalani muammoning oddiy, xususiy bir masaladan iborat holati sifatida ko'rish mumkin. Muammoli o'qitish ijodiy faoliyatni hamda unga ehtiyojni shakllantirish va rivojlantirishga qaratilgan bo'lib, bu jarayonda ta'lim oluvchilar ijodiy fikrlashining rivojlanishi an'anaviy o'qitishdagiga nisbatan jadalroq bo'ladi.

Muammoli o'qitishning yakuniy maqsadi–ta'lim oluvchilarni muammolarini ko'rish va yechishga o'rgatishdan iborat bo'lib, bu faqat fikrlash faoliyati jarayonida amalga oshiriladi. S.L.Rubinshteyn[4] “tafakkur – inson oldida turgan masala va muammolarni yechishga olib keladigan idrok bo'lib, tafakkur muammoli vaziyatdan kelib chiqadi va muammoni yechishga qaratilgan bo'ladi” - deb ta'kidlaydi. Bundan quyidagi mantiq hosil bo'ladi. Shaxsning ijodiy, mustaqil, fikrlovchi bo'lishi jamiyat uchun zarur bo'lib, fikrlash jarayoni muammoli vaziyatdan boshlanadi.

Muammoli vaziyat–psixik qiyinchilik, ziddiyatli vaziyati bo'lib, talabalarni muammoli vaziyat holatiga tushirish orqali ularda fikrlash qobiliyati rivojlanadi. Muammoli vaziyat har qanday fikrlash mashaqqatlaridan farq qilib, unda talaba mashaqqat talab qilgan ob'yekt (tushuncha, fakt)ning unga avval va ayni vaqtda ma'lum bo'lgan vazifa, masala bo'yicha ichki, yashirin aloqalarini anglab yetadi. Muammoli vaziyatning mohiyati shuki, u talabaga tanish bo'lgan ma'lumotlar va yangi faktlar, hodisalar o'rtasidagi ziddiyatdir, bunda, ularni tushunish va tushuntirish uchun avvalgi bilimlar kamlik qiladi. Bu ziddiyat bilimlarni ijodiy o'zlashtirishni harakatlantiruvchi kuchdir.

Muammoli o'qitish, ijodiy jarayondan nostandart ilmiy o'quv masalalarni yangicha usullar bilan yechishni taqozo etadi. Talabalarga mashq uchun beriladigan masalalar olingan bilimlarni mustahkamlash va malakalar hosil qilish uchun xizmat qilsa, muammoli masalalar esa faqat yangi yechimlar izlashga qaratiladi.

Muammoli ta'lim texnologiyalarining qo'llanilishi o'qitish jarayonini samarali kechishini ta'minlash bilan birga ta'lim oluvchilarda mustaqil, tanqidiy va ijodiy fikrlash qobiliyatini rivojlantiradi. Ta'lim sifatini yaxshilash va samaradorligini oshirishga nisbatan qo'yilayotgan ijtimoiy ta'lim oluvchilar o'qituvchilardan loyiha va muammoli ta'lim texnologiyalarini o'qitish jarayonida maqsadli, samarali qo'llashni talab etadi.

Bilimlarni to'la o'zlashtirish texnologiyasi-o'quv materiallari bir necha bo'laklarga bo'linadi: o'zlashtirilishi tegishli bo'lgan o'quv unsurlari, undan so'ng bo'limlar bo'yicha tekshirish uchun materiallar ishlab chiqiladi, undan so'ng o'qitish, tekshirish – joriy nazorat, tuzatish va qayta, o'zgartirilgan tarzda ishlab chiqish - o'qitish.

Kasbiy tayyorgarlik kasbiy faoliyat doirasida amalga oshiriladi. Kontekstli yondashuv o'qitish shakli va metodlari tizimi yordamida kelgusidagi kasbiy faoliyat kontekstini yaratishga imkon beradi. Faol o'qitish texnologiyasi sifatida kontekstli o'qitish texnologiyasini qo'llashda bo'lajak mutaxassisda ijodkorlikni rivojlantirish hamda kasbiy bilim va ko'nikmalarni o'rgatuvchi algoritmlar va kasbiy faoliyatning yaxlit tuzilmasi vositasida shakllantrishni nazarda tutiladi.

Hozirda pedagogik texnologiyalarning yana boshqa yo'nalishlari ham mavjud bo'lib, ulardan asosiylari empirik (yunon. “empiria” - tajriba), kognitiv (lot. cognitio” - bilish), evristik (yunon. “evrika” – topaman, aniqlayman), kreativ (ingl. “creative” – yaratuvchan, ijodiy), inversion (lot. “inversio” – o'zgartirish, o'girish), integrativ (lot. “integration” – o'rnatish, qo'yish), adaptiv (lot. “adapto” - moslashtiraman), inklyuziv (lot. “includo” - kiritaman) pedagogik texnologiyalardir. Bu yo'nalishlarning asosiy xususiyatlari quyidagidan iborat.

Empirik - sezgi a'zolari orqali bilim olish. Bu texnologiyada asosiy e'tibor sezgi a'zolarining tabiiy rivojlanganlik imkoniyatlariga tayangan holda bilim berish va ularni yanada takomillashtirib borishga qaratiladi.

Kognitiv – atrofdagi olam to'g'risidagi bilimlar doirasini kengaytirish texnologiyasi. U tabaqalash (tarkibiy qismlarga ajratib o'rganish) tafakkurini shakllantiradi, bilish ehtiyojlarini rivojlantiradi.

Evristik – yo'naltiruvchi savollar berish yo'li bilan ta'lim berish tizimi.

Topqirlik- faollikni rivojlantirishga xizmat qiluvchi, o'quv- izlanish ta'lim metodi bo'lib, optimallashtirgan (bir necha variantlardan eng ma'qulini, mosini, muvofiqini tanlash) tafakkurini rivojlantiradi.

Kreativ–tadqiqot xarakteriga ega bo'lib, o'quvchilarda maqsadga yo'naltirilgan ijodiy tafakkurni jadal rivojlantiradi. Inversion – axborotlarni turli tomondan o'rganish, o'rnini almashtirish xususiyatiga ega bo'lib, tafakur (fikrlash) tizimini shakllantiradi.

Integrativ – axborotlarni tashkil qiluvchi cheksiz ko'p kichik qismlarning o'zaro ajralmas bog'liqligi, ularning yaxlitligi, bir butunligi asosida to'g'ri xulosani aniqlash.

Adaptiv–axborotlarni va ulardan foydalanish jarayonini o'rganish hamda o'rgatish uchun qulaylashtirish, moslashtirish asosida kutilgan natijaga erishish.

Inklyuziv – ta'lim oluvchilarni (ko'p hollarda imkoniyatlari cheklangan) umumiy guruhga kiritish, o'qituvchiva ularning o'zaro munosabatlarida tenglik asosida ta'lim-tarbiya jarayonini tashkil qilish, barchaning imkoniyatlarni birlashtirish.

Hozirda ta'lim texnologiyalarining yuqorida aytilganlardan tashqari mutaxassislar tomonidan tajriba-sinovlar olib borilayotgan boshqa yo'nalishlari ham mavjud.

Интерактив o‘qitish texnologiyalari. Bugungi kun pedagoglarining asosiy vazifasi talabada erkin fikrlash, mustaqil faoliyat, tashabbuskorlik, faollik, mustaqil o‘qish va rivojlanish malakasini hosil qilishdir. Ma’lumki, materialni yaxshi o‘zlashtirish uchun shunchaki tinglab, yozib o‘tirish yetarli emas, balki ushbu material ustida faol ishlash, o‘ylash, muhokama qilish, takrorlash, yordamchi vazifalarni bajarish kerak.

Интерактив (ingl. “interaction”, “inter” – o‘zaro, “action” – harakat, faollik bo‘lib, o‘zaro faoliyat, o‘zaro harakat) o‘qitishda o‘qituvchidan mashg‘ulot davomida talaba va o‘qituvchi o‘rtasidagi o‘zaro ta’sir darajasining bir ko‘rinishidan ikkinchisiga mavzu maqsadiga bog‘liq holda ustamonlik bilan ravon o‘tishi talab etiladi. Ta’lim oluvchi mashg‘ulotda “passiv” tinglovchi sifatida emas, balki “aktiv” ishtirokchi sifatida qatnashadi. Bu metodlarning o‘ziga xosligi shundaki, ular faqat pedagog va talabalarning birgalikda faoliyat ko‘rsatishi, jamoa bo‘lib fikrlashi va ishlashi orqali amalga oshiriladi.

Интерактив faoliyat turlari quyidagi ko‘rinishda amalga oshiriladi:

- pedagog – talaba
- talaba–talaba
- pedagog–talabalar guruhi
- talaba – guruh
- guruh – guruh
- talaba – kompyuter

Bunday pedagogik hamkorlik jarayoni o‘ziga xos xususiyatlarga ega bo‘lib, bo‘lajak chaqiriqqacha harbiy ta’lim o‘qituvchisini mustaqil fikrlash, ijodiy yondashish va izlaishga undaydi, shuningdek, talabalarni o‘qishga bo‘lgan qiziqishini va motivatsiyasini ta’minlaydi.

Интерактив usullardan foydalanilganda shaxsning barcha psixik bilish jarayonlari (sezgi, diqqat, idrok, tasavvur, xotira, aql, tafakkur, nutq, xayol), psixik holatlar (his-tuyg‘u, emotsiya, qiziqish, iroda, ruhlanish) faol ishga tushib, talaba vazifani bajarish, muammoni yechish uchun mustaqil ravishda izlanishga, qidirishga, fikrlash doirasini kengaytirishga va rivojlantirishga yo‘naltiriladi.

Педагогик adabiyotlarda 100 dan ortiq interaktiv metod, texnologiya va strategiyalar bayon qilingan. Xususan:

- “Miya hujumi” (“Aqliy hujum”, “Fikrlar hujumi”)
- “Kim ko‘proq, kim tezroq?” “Blits-so‘rov”
- “Muammoli vaziyat”
- “Akademik munozara”
- “Bahs-munozara” “Debat”
- “Buni bilasizmi?” “Differensial diagnostika”
- “Rolli o‘yin”
- “Bumerang” “Charxpalak”
- “Qor bo‘ron”
- “Akvarium”
- “Uch bosqichli intervyu va boshqalar.

Yuqoridagilardan ko‘rinib turibdiki, “Chaqiriqqa qadar boshlang‘ich tayyorgarlikni tashkil etish va uni o‘qitish metodikasi” fanini o‘qitishda texnologik yondashuv asosida innovatsion ta‘lim texnologiyalardan samarali foydalanish orqali talabalarning kasbiy tayyorgarligini rivollantirish alohida ahamiyat kasb etadi. Shu sabali interfaol o‘qitish jarayonining muayyan mazmuni, vositalari, pedagogik shart-sharoitlari, xususiyatlari va usullarini aniqlash zaruriyati yuzaga keladi.

Amaliy mashg‘ulotlarda talabalar mashqni bajarishlari, me‘yorlar va harakat usullarini bajarish texnikasini o‘rganishlari va mustahkamlashlari, shuningdek, qurilmalar, jihozlangan maydonchalar, mashg‘ulot joyi va qurol-aslahalar, muhandislik vositalari, shaxsiy himoya vositalari, sport snaryadlari va anjomlaridan foydalangan holda o‘tkazishlari lozim. Amaliy mashg‘ulotlarni to‘g‘ri tashkil qilish va o‘tkazishda mashg‘ulot rahbarining darsga munosabati, talabalarga ta‘sir o‘tkaza olishi hamda shaxsiy namunasi muhim ahamiyatga egadir.

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SITUATIONAL TEACHING METHODS IN THE FORMATION OF FOREIGN LANGUAGE WRITTEN COMPETENCE

***Abstract:** The article considers situational teaching methods as an effective tool for the development of written competence among students studying foreign languages. The methodology is based on the creation of educational situations as close as possible to real life, which contributes to the development of writing skills of various types and genres necessary in professional and everyday activities.*

***Keywords:** situational methodology, written competence, foreign language, teaching, communicative approach.*

Introduction

The modern system of teaching foreign languages requires the creation of conditions close to the real language environment. One of the urgent tasks is the formation of a foreign language written competence, which includes the ability to adequately and effectively express one's thoughts in writing. In this regard, the situational teaching methodology is of particular importance, as it allows you to develop practical skills through modeling real communication situations.

The essence of situational methodology

The situational methodology is based on the principles of a communicative approach and involves the creation of situations that require the use of written skills to solve them. The main components of the methodology:

- 1. Contextualization:** tasks are developed within a certain context (writing to a colleague, creating a report, writing an essay, etc.).
- 2. Goal setting:** students understand why they are doing the task, and how it is related to their future professional or daily activities.

- 3. Activity-based approach:** focus on performing practical tasks such as filling out forms, writing business letters or social media posts.

Examples of situational tasks

1. Writing a business letter: Students are assigned to write a letter to the company asking for information.
2. Blogging: Students blog in the language they are learning, commenting on current events.
3. Case solving: Students analyze the situation (for example, a conflict at work) and present a written solution to the problem.
4. Collective letter: A group of students draws up a collective appeal, for example, in support of a public event.

Advantages of the method

1. Getting closer to real practice: students acquire skills that can be directly applied in life.
2. Increased motivation: interesting and practical tasks stimulate engagement.
3. Development of intercultural competence: completing tasks taking into account the cultural characteristics of the countries of the studied language.
4. Integrated development: integration of grammar, vocabulary and stylistics within a single task.

Recommendations for use

1. Gradual complication: start with simple situations, such as writing a note, and move on to complex ones — writing reports or essays.
2. Individualization of training: assignments are selected in accordance with the level of training and interests of students.
3. Feedback: After completing the task, it is important to analyze errors and provide recommendations for improvement.

The essence of situational methodology

The situational methodology for students of economics is aimed at developing the skills necessary in professional activities: drafting business documentation, conducting correspondence, preparing analytical reports and presentations.

The main components of the methodology for economic specialties:

1. Realistic context: Assignments simulate situations that students may encounter in their future work (for example, writing a business plan or responding to a client's request).
2. Practical focus: focus on professional writing genres such as business correspondence, reports, and instructions.
3. Integration of the intercultural component: special attention is paid to understanding cultural differences in business communication (for example, differences in business writing styles between countries).

Examples of situational tasks

1. Business letter to the partner:

Task: Write a letter to the partner in English with an offer of cooperation, observing the rules of formal style.

Purpose: To teach students to build logical and grammatically correct texts using business vocabulary.

2. Creating an analytical report:

Task: To make a short report based on statistical data (for example, data on the securities market).

Purpose: To develop the skills of text structuring, the use of professional vocabulary and graphic information.

3. Response to the client's request:

Task: To simulate a situation where a company receives a request for services. Write a response specifying the details.

The goal: To develop the ability to politely and clearly formulate your thoughts.

4. Preparation of a letter of recommendation:

Task: Write a letter recommending an employee to participate in an international project.

Purpose: To develop skills in using politeness formulas, as well as the ability to focus on key achievements.

5. Case study: Communication with investors:

Task: To write a presentation letter to attract investors to the project.

Purpose: To teach students to argue their proposals and structure information for persuasiveness.

Recommendations for use in an economic university

1. Integration of professional terminology:

The tasks use vocabulary related to economics, finance, and marketing, which makes them useful for a future profession.

2. Using authentic materials:

Assignments are based on real examples of business documentation: letters, reports, contracts.

3. Stages of implementation:

4. Analysis of educational needs: Determining the level of training of students and their professional interests.

5. Modeling situations: Creating cases that may be relevant in the work of an economist.

6. Practical tasks: Work on texts, discussion of their content and structure.

7. Reflection: Analysis of completed tasks, focus on successful solutions and elimination of errors.

4. Working in groups:

Completing tasks together allows you to develop business communication skills and learn how to assign roles in a team.

Conclusion. Situational methodology is a powerful tool for the formation of foreign language written competence, providing the development of practical skills necessary for real life. Its introduction into the educational process contributes not only to improving the level of written literacy, but also to the general communicative competence of students.

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SPEECH FEATURES OF THE RUSSIAN LANGUAGE. DIFFICULTIES OF LEARNING RUSSIAN AS A FOREIGN LANGUAGE

Annotation

This article discusses some of the features of learning Russian as a foreign language, described from the perspective of comparing two languages by a foreign student: their native language and Russian. The research uses the observation method, carried out during an internship in the master's program "Russian as a Foreign Language."

Keywords: Russian language, foreign languages, learning, difficulties, grammar, pronunciation, cultural characteristics, strategies, practice.

Introduction

In today's globalized world, learning a foreign language is key to fostering communication and mutual understanding. Mastering a foreign language now goes beyond grammatical competence—it requires understanding the cultural and social dimensions of language use. When studying Russian, students often encounter specific speech patterns, idiomatic expressions, and cultural contexts that differ greatly from their own, making learning challenging but rewarding.

The Russian language, with its rich history, complex grammar, and vast expressive potential, holds a unique place among world languages. Its intricate structure, characterized by a complex system of cases, verb aspects, and extensive vocabulary, presents both opportunities and challenges for learners. For those studying Russian as a foreign language, the task of mastering these features often becomes a journey through cultural and linguistic nuances that require significant effort and dedication.

Understanding the speech features of the Russian language is crucial for effective language acquisition. These features include the use of stress and intonation to convey meaning, the interplay of formal and informal styles, and the nuanced role of context in shaping word choice and sentence structure. For learners, such features often represent significant hurdles, especially when paired with cultural differences and limited exposure to authentic spoken Russian.

The difficulties in learning Russian as a foreign language stem not only from its grammatical complexity but also from the linguistic distance between Russian and other languages. For example, learners whose native languages lack cases or Cyrillic script face additional challenges. Furthermore, the variability of regional

dialects, colloquialisms, and idiomatic expressions adds another layer of difficulty, emphasizing the need for tailored teaching approaches.

This article aims to explore the speech features of the Russian language and the specific challenges they pose for non-native speakers. It also seeks to examine effective strategies for overcoming these difficulties, providing insights into how educators and learners can navigate the complexities of Russian language instruction. By addressing these issues, the article contributes to a deeper understanding of how the unique characteristics of Russian influence its acquisition as a foreign language.

Key Speech Features of the Russian Language

1. "Давай" ("Come on!")

This small but versatile word has multiple meanings depending on the context:

- **"Give it back."**
- **"Go ahead."**
- **"Goodbye"** – used when ending phone calls or saying farewell.

2. "Да, нет, наверное" (Yes, no, maybe)

A seemingly paradoxical phrase that often confuses learners. Though it literally translates as "Yes, no, probably," it means "I think not" or "most likely not."

3. Untranslatable Words and Idioms

Russian is rich with expressions that have no direct translation:

- **"Беспредел" (Lawlessness)** – often used to express disbelief or describe something outrageous.
- **"Не води меня за нос" (Don't lead me by the nose)** – used when someone is being deceived.

4. Cultural and Artistic Language

Russian literature, particularly poetry, often contains artistic expressions that are hard to grasp without cultural context. For example:

- **"Унылая пора, очей очарованье"** ("Sad time, eyes of enchantment") from Pushkin's poem is difficult for learners to comprehend due to its figurative language. It can be simplified as "A melancholy time, yet charming to the eyes."

Main Difficulties in Learning Russian as a Foreign Language

1. Grammar

Russian grammar, particularly its case system, can be a significant challenge for foreign students. The six-case system, verb conjugations, and declensions are complex and require extensive practice.

2. Pronunciation and Phonetics

The Russian sound system is unique, featuring soft and hard sounds, and vowels that change in stressed and unstressed positions. Learners must practice these sounds using audio materials and feedback from native speakers to develop proper pronunciation.

3. **Idiomatic Expressions**

Russian idioms and sayings present another difficulty. Understanding their meaning requires both linguistic and cultural knowledge. Practical communication and extensive exposure to idiomatic phrases are essential for mastering them.

4. **Cultural Aspects**

Language learning is intertwined with understanding the culture. Foreign students may struggle with Russian communication styles, which can be more direct and involve different levels of politeness. They must familiarize themselves with Russian traditions, customs, and societal norms.

Strategies for Overcoming Difficulties

1. **Grammar Mastery**

Using grammar tables and consistent practice can help students navigate Russian's complex grammatical system.

2. **Improving Pronunciation**

Audio resources, phonetic exercises, and interaction with native speakers are crucial for refining pronunciation skills.

3. **Understanding Idioms and Phrases**

Learners should actively study idiomatic expressions, using dictionaries and online resources, and apply them in real-life communication.

4. **Cultural Immersion**

Students should immerse themselves in Russian culture through literature, films, and conversations with native speakers. This will deepen their understanding of cultural norms and communication styles.

Conclusion

Learning Russian as a foreign language is a rewarding journey filled with challenges. Students face difficulties with grammar, pronunciation, idiomatic expressions, and cultural differences. However, by adopting effective strategies—such as consistent practice, cultural immersion, and the use of diverse learning materials—learners can successfully overcome these challenges and achieve fluency in Russian.

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WAYS TO REDUCE THE EFFECTS OF HARMFUL SUBSTANCES IN THE ATMOSPHERE THAT THREATEN THE WHOLE WORLD

***Abstract:** This article analyzes the researches and their results on the prevention of toxic gases, heavy metal residues and their harm in the air, which pose the greatest threat to humanity and the azan layer. Decreasing its amount causes the human body to malfunction, and may even lead to death. For example, a person can live without water and food for several days or even months, but without atmospheric air, he can live only for a few minutes. The air layer considered necessary for human and other living organisms to adapt to the existing air is located in the lower part of the atmosphere, that is, the troposphere.*

***Keywords:** troposphere, condensation core, anthropogenic pollution, greenhouse effect, photochemical processes, ionosphere, chlorofluorocarbon.*

Introduction. The atmosphere is at the surface of the earth provides living organisms with oxygen and other necessary gases, protects against various ultraviolet rays, meteorite particles in the sky and sudden temperature changes. The atmosphere also acts as a kind of thermoregulator on the Earth, that is, if there were no atmospheric air, the surface of the Earth would cool down to -170°C at night and warm up to $+150^{\circ}\text{C}$ during the day, that is, the Earth, like the moon, would become a lifeless planet [1]. Oxygen is produced by the photosynthesis of plants. In life, all living things breathe oxygen. Decreasing its amount causes the human body to malfunction, and may even lead to death. For example, a person can live without water and food for several days or even months, but without atmospheric air, he can live only for a few minutes. The air layer considered necessary for human and other living organisms to adapt to the existing air is located in the lower part of the atmosphere, that is, the troposphere.

The thickness of the troposphere at the north and south poles is 8-10 km, and at the equator 16-18 km goes up to Air temperature decreases by 0.6°C for every 100 meters of altitude. 10 km at altitude, the temperature reaches -45°C in summer and -60°C in winter. The outer layer of the troposphere shields life on Earth from the sun's ultraviolet rays [2].

The cleanest air is over ocean waters. The amount of dust particles in the air over villages is 10 times higher than the ocean surface, over cities 35 times higher, and over industrial enterprises up to 150 times higher. Air pollution with dust 1.5-2 km is the height; intercepts 20% of sunlight in summer and 50% in winter. The continuation of life on earth depends mainly on the cleanliness of the air. For example, a person can live for several days without food and water, but only 5 minutes without air. One person per day 1 kg food and 2 l drinking water 25 kg uses air for breathing. Therefore, air pollution should not be allowed [1,2].

Clean air is necessary not only for humans, but also for animal and plant life, antibiotics, semiconductors, and industries that produce precision measuring instruments.

Atmospheric air consists of a mechanical mixture of various gases, consisting of gaseous nitrogen (78.9%), oxygen (20.1%), argon (0.94%), carbon dioxide (0.06%), the sum of hydrogen, neon, helium, krypton, methane, etc. is 0.01%. In addition, there are water vapors, dust particles, wastes of industrial enterprises in the atmosphere, which are formed by premature combustion of fuel products[2,3].

Rapid industrial development, burning of various fuels, depletion of forests, ocean waters as a result of pollution with oil products, detonation of nuclear weapons, the amount of oxygen in the atmosphere has decreased sharply, and the amount of carbon dioxide and nitrogen oxides has increased. If the amount of carbon dioxide increases, the temperature of the earth's surface may increase by 1.5-4.5°C after another 50 years if atmospheric pollution is not prevented. For this reason, scientists make different assumptions about the change of the geographical environment due to the melting of glaciers, the rise of the ocean water level, and the flooding of a part of the land.

Atmospheric currents (wind), climatic regions, moisture zones are formed as a result of the sun not heating the globe evenly. The air flow carries with it heat, humidity, dust and powders created by natural and human activity.

Earth's atmosphere as reported by satellites, rockets, and astronauts 100 km in the upper part, its composition (excluding the increase of water vapor and nitrogen) consists of the gases mentioned above. 1000-1200 km At altitude, the atmosphere is mainly oxygen and nitrogen, above it-2500 km helium gas in the part up to 2500 km and above consists of the lightest gas - hydrogen [3].

In addition to gaseous substances, the atmosphere contains small particles - aerosols (smoke, dust, dust, etc.) that differ from each other according to their shape, size, chemical composition and physical properties.

By atmospheric pollution, we understand the disturbance of the balance of naturally occurring gases in its composition due to the influence of various gases, solid particles, dust, radioactive dust, water vapor, etc., as a result of natural and artificial factors, as well as a change in its quality. Below we will consider two different ways of polluting nature:

Natural pollution of the atmosphere various natural disasters - earthquakes, typhoons, cosmic dust, volcanic eruptions, rock and soil erosion, remains of plants and animals, forest and steppe fires, sea waves with salt particles released into the air, aeroplankton plays an important role. Natural pollution of the atmosphere does not cause significant damage to living organisms on Earth, on the contrary, dust particles in the air absorb solar radiation and protect living organisms from its harmful effects.

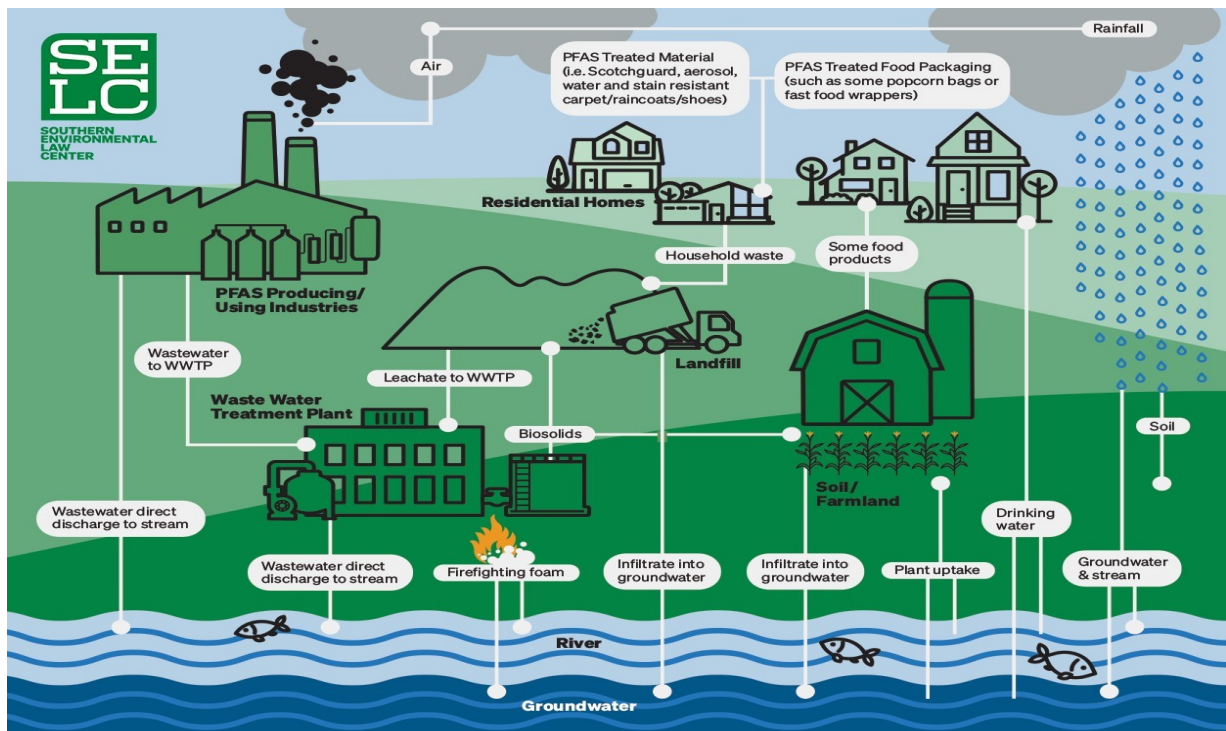


Figure 1. Situations of atmospheric pollution.

Every year 106 tons of dust fall into the atmosphere from space. When a powerful volcano erupts, 75 mln, m3 of dust. Also, when the sea water is agitated, many salt particles are released into the air. In addition, dust, sand and other solid particles, plant dust are added to the air as a result of wind and fire. This causes the mass of the Earth to increase [4].

Natural dust in the atmosphere is of great importance for processes occurring on the surface of the earth. Because dust is a condensation nucleus for water vapor and causes fires. It can be seen from this that the natural dust in the atmosphere is a necessary element of the atmospheric composition and regulates the course of events and processes in it. But in some cases, due to the eruption of volcanoes and the rise of strong dust, the air becomes more polluted than normal and can cause accidents.

Artificial (anthropogenic pollution) of the atmosphere. Since the second half of the 19th century, the intensive development of production in the world, especially in capitalist countries, accelerated the artificial pollution of the atmosphere.

Artificial pollution of the atmosphere in the niche, automobile transport takes the first place (40%), energy industry (20%) takes the second place, enterprise and organization production takes the third place (14%). 26% of the artificial pollution of the atmosphere is due to agricultural production, household utilities, etc. [5].

Economic activities of people on Earth now 500 mln. Sulfur gas, (SO), sulfide oxide, nitrogen oxide, carbon dioxide and pesticides are released around t. In addition to these, ash, zinc, lead, copper, dust and other solid substances are released into the atmosphere from cement, coal, metallurgical and other industries. Also, soil erosion and deflation increased due to the cutting of forests and plowing of large

areas, the number of fires in forest meadows increased, and the extensive use of pesticides in agriculture resulted in the atmospheric composition of dust, smoke, soot, toxic substances. substances diffuse. Clean air is also essential for plants, animals and agricultural crops. Even industries that produce antibiotics, semiconductors, and precision measuring instruments need clean air.

Atmospheric pollution does not only negatively affect the health of living beings on our planet, especially humans, but also causes great damage to the national economy.

Therefore, one of the most important issues today is keeping the atmosphere clean.

As a result of the launch of aviation and rockets, 300 tons of aluminum oxide are released into the upper atmosphere in the form of white powder. This substance doubles the amount of ice crystals in the clouds, as a result of which the return of the Sun's rays increases, the rockets do not pollute the atmosphere, but also affect its composition and movement. Because rockets consume a lot of oxygen and even affect the state of the ozone layer. 1800 km The "window" (in some sources) created a "hole", which was filled after 1.5 hours. According to scientists' calculations, if 125 rockets similar to "Saturn-5" are launched in a short period of time, the Earth's ozone layer will be destroyed, and as a result, living organisms on our planet may be destroyed. The ozone layer absorbs solar radiation and serves as a screen protecting living organisms from its harmful effects. Ozone molecules are naturally formed as a result of photochemical processes in the atmosphere - lightning, thunder, lightning, etc. Artificially, it is formed in various ozonators, in the process of simple welding and in the short circuit of an electric charge [6].

Today, an ozone hole has formed in the atmosphere of the Antarctic continent and the lower regions of Australia, and this hole is expanding day by day. The main chemical compounds that destroy the ozone molecule are various chlorofluorocarbons, freons used in refrigerators, and aerosols. It is known that one molecule of chlorofluorocarbon destroys more than 3 thousand ozone molecules, and this process is based on the chain reaction mechanism. The convention banning the production, use and distribution of compounds that deplete the ozone layer was adopted in 1986 at an international conference held in Monreal, Canada.

Further analysis The issue of the restoration of the ozone layer The COVID-19 virus, which has spread throughout the world, has not only caused great damage, but the level of air pollution has decreased significantly. Scientists have given different analyzes that the depletion of the Ozone layer, which has become a global problem in the whole world, has significantly recovered during this period. It follows that this shell has the property of regeneration.

The weight of the world's industrial facilities is also significant in atmospheric air pollution. Because fuel and fuel used in industrial enterprises, especially in thermal power plants, do not burn completely, as a result, many gases, dust, soot, solid particles and radioactive substances are released into the environment. Currently, thermal power plants supply most of the energy around the world. Therefore, thermal power plants account for 20% of industrial emissions.

More than 30% of the fuel produced in the world is used by thermal power plants.

Some of these fuels pollute the atmosphere in the form of toxic gases, soot, and smoke. 51,000 tons of coal are burned in one month at the "Elektrisitede France" thermal power plant in France; as a result, 33 t of sulphite anhydride gas, 250 t of ash and soot are emitted from the chimneys of the station every day. It is known that power plants, especially thermal power plants, heavily pollute the atmosphere with toxic gases and solid particles. In addition, some industrial enterprises, in particular, cement factories, chemical, ferrous metallurgical enterprises, etc. emit a lot of dust, various gases into the atmosphere and consume a lot of oxygen, besides polluting the air. For example, to extract 1t of iron ore 150 m³, 35 to get 1t of steel 70 m³, to get 1t acetylene 3600 m³ oxygen is consumed.

Mining in air pollution, household -communal economy (houses) also participates. This caused an increase in the amount of chemicals in the atmosphere due to the burning of various fuels. According to data, the amount of dust in the atmosphere has increased by 20% compared to the end of the 19 th century [4].

Depending on the amount of dust in the atmosphere, the regions are divided into 4 indicator levels:

1. 0.3 mg/m³ – this indicator is considered clean. This indicator mainly includes the atmospheric air of rural areas and small non-industrial urban territories.
2. 0.6 mg/m³ - this indicator is considered low pollution. This indicator mainly includes atmospheric air in populated areas of developed cities.
3. 1.0 mg/m³ - this indicator is considered heavily polluted. This indicator mainly includes atmospheric air of industrial areas of industrialized cities.
4. 3.0 mg/m³ - this indicator is considered polluted beyond the norm. This indicator mainly includes the atmospheric air of industrial enterprises producing a large amount of dust emissions [6].

In recent years, the weight of vehicles in atmospheric pollution is increasing. Because automobiles, airplanes, diesel locomotives, agricultural machines, etc. consume a large amount of oxygen and emit various gases (carbon dioxide, nitrogen oxides, hydrocarbons, toxic compounds of lead) into the atmosphere (which contains about 200 toxic substances). dust, soot, etc.) and contaminates it.

Now there are 400 million people on Earth, more than 300 million cars per year into the atmosphere. It is polluting by releasing various toxic gases, dust, soot and other solid particles, 200 mln. t of carbon dioxide, 50 mln. t of hydrocarbons, 30 mln. t corresponds to nitrogen oxide, and the rest to other gases, dust, soot and solid particles. In addition to polluting the atmosphere with various toxic gases, cars consume 3-4 times more oxygen than the world's population breathes. One car engine consumes as much oxygen as 20-30 people breathe in a year. Also, airplanes play a big role in atmospheric pollution and consumption of a lot of oxygen. A Concorde super jet airliner flying only between the USA and Europe consumes 50-75 tons of oxygen in 8 hours. A forest of 25-30 thousand ha area supplies this amount of oxygen within 8 hours. The weight of rockets in atmospheric pollution is increasing [5].

In the second half of the 19 th century, the growth of industrial production and the appearance of highly toxic gases in the chemical industry forced the governments of a number of countries to take legal measures to limit them.

The first large-scale disaster occurred in 1930 near the Maas River (Germany). The layer of fog thickened the smoke coming from the enterprises so that thousands of people had difficulty breathing for several days, 60 people lost their lives.

In 1948, 17 deaths were recorded in the city of Donora (USA) under similar conditions. The fog also produced dire consequences in London. Here in 1952, 4000 people died due to acute suffocation for 14 days. When such a tragedy occurred in 1956, approximately 1,000 people died[4].

In Los Angeles, famous for its temperate climate, thick smoke caused serious consequences and caused great damage to property and plants. In this case, the reason for this is the exhaust gases released from cars, while in Europe it is the smoky gases of industrial enterprises.

In other parts of the globe, atmospheric pollution with exhaust gases has harmful effects on forests, fields, livestock, buildings, metals, etc. To date, the damage caused by waste gases in the USA is 10 billion per year. was estimated to be higher than the dollar, which did not take into account their impact on the health and property of the population.

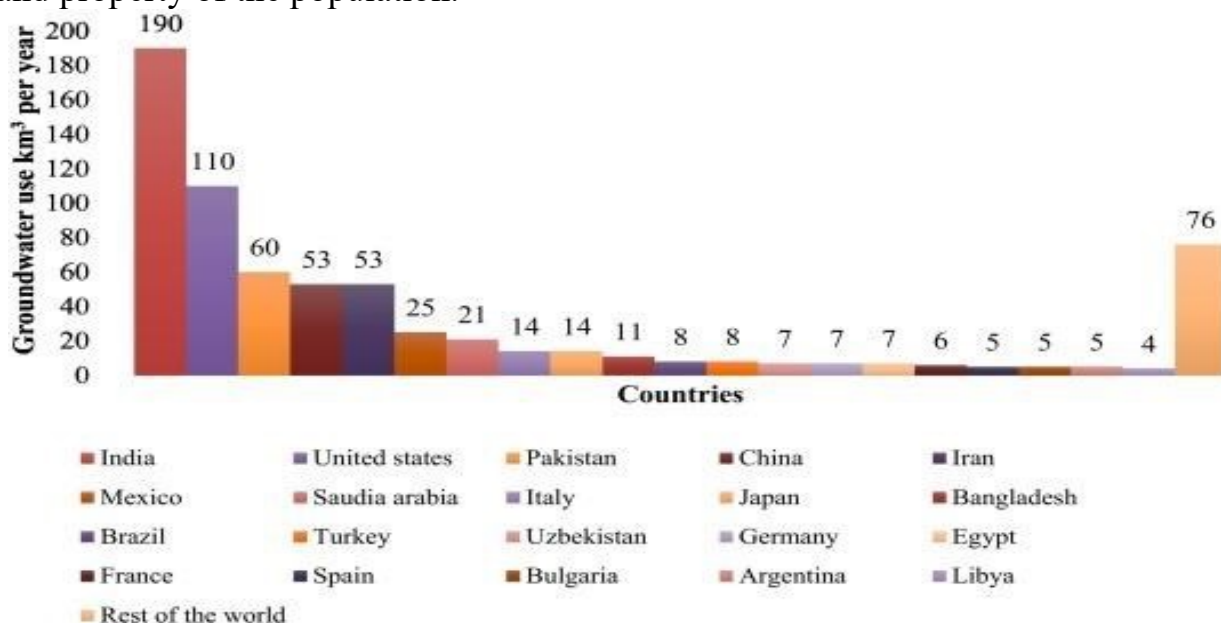


Figure 2. Pollution level of countries around the world.

Summary

Such catastrophic consequences have prompted the governments of developed countries to seriously study this problem and take protective measures. At the moment, the issue of the expediency of joining the Republic of Uzbekistan to the UN EC Convention "on long-range transboundary air pollution" (KTSVBR) is being actively worked on. An analytical note was drawn up on the results of the study of the feasibility of adding the Republic of Uzbekistan to this Convention, which will be sent to the relevant ministries and agencies for their opinion in the

prescribed manner. At the same time, negotiations are underway on the need to assess the possible financial-economic or other consequences of the accession of the Republic of Uzbekistan to this Convention.

First of all, research was started in the field of hygiene, especially chemical analysis. The task of the researchers was to develop methods of analysis that would allow determining the concentration of waste in the air and how well they correspond to the requirements of occupational hygiene specialists.

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IQLIM O'ZGARISHI OQIBATLARIGA MOSLASHISH VA ULARNI YUMSHATISH, TABIIY EKOTIZMLARNI ASRASH

***Annotatsiya:** Iqlim o'zgarishi hozirgi kunda insoniyatning eng dolzarb muammolaridan biri hisoblanadi. Havo haroratining o'sishi, suv manbalarining kamayishi, ekotizmlarning buzilishi va boshqa tabiiy o'zgarishlar butun dunyo miqyosida yashash sharoitlarini o'zgartirmoqda. Iqlim o'zgarishining oqibatlariga moslashish va ularni yumshatish, shuningdek, tabiiy ekotizmlarni asrash masalalari bu jarayonda katta ahamiyatga ega. Ushbu maqolada iqlim o'zgarishi oqibatlarini yumshatish, moslashish va tabiiy ekotizmlarni asrashning ahamiyati haqida so'z yuritamiz.*

***Kalit so'zlari:** Iqlim o'zgarishi, ekotizimlar, Biodiversitetni saqlash, iqlim o'zgarishiga moslashish, yashil energiya, is gazi, issiqxona samarasi, biotsenoz.*

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ADAPTING TO THE CONSEQUENCES OF CLIMATE CHANGE AND MITIGATING THEM, PRESERVING NATURAL ECOSYSTEMS

***Abstract:** Climate change is one of the most pressing problems of humanity right now. Rising air temperatures, decreasing water sources, disturbance of ecotisms and other natural changes are changing living conditions around the world. Issues of adaptation and mitigation of the effects of climate change, as well as the conservation of natural ecosystems, are of great importance in this process. In this article, we will talk about the importance of mitigating the effects of climate change, adapting and preserving natural ecotisms.*

***Key words:** Climate change, ecosystems, Biodiversity conservation, adaptation to climate change, green energy, greenhouse effect, biocenosis.*

***Asosiy qism:** Iqlim o'zgarishining oqibatlari. Iqlim o'zgarishi natijasida yer yuzida yuz berayotgan o'zgarishlar o'ta keng miqyosda ko'rinmoqda. O'zgargan havo harorati, qurg'oqchil, suvsizlik, dengiz sathining ko'tarilishi,*

meteorologik hodisalarning kuchayishi (masalan, bo'ronlar, yong'inlar, toshqinlar) kabi omillar ijtimoiy va iqtisodiy tizmlarga salbiy ta'sir ko'rsatmoqda.

Tabiiy ekotizmlar - o'simliklar va hayvonlar jamoasi, ularning yashash muhirlari va o'zaro aloqalarari - iqlim o'zgarishi natijasida juda ko'p zarar ko'rmoqda. O'simlik va hayvon turlari migratsiya qilmoqda, ba'zilar esa butunlay yo'qolmoqda. Bu ekosistemalarning barqarorligini ta'minlashga putur yetkazmoqda va ularning inson hayoti uchun taqdim etgan tabiiy resurslari, masalan, toza havoni, suvni, oziq ovqatni kamaytiradi.

Iqlim o'zgarishiga moslashish: Iqlim o'zgarishiga moslashish, ya'ni iqlim o'zgarishiga nisbatan insonlar va tabiatning tayyorlik darajasini oshirish, jamiyatlar va ekotizmlarning yangi bsharoitlarga moslashuvchanligini ta'minlashni anglatadi. Bunga bir qancha stratyegiyalarni kiritish mumkin:

- *Qishloq xo'jaligi va suv boshqaruvi:* Suv resurslaridan samarali foydalanish, qurg'oqchilikka chidamli ekinlarni nyetishtirish, suvni tejash va sug'orish tizmalarini modernizatsiya qilish.

- *Shaxar infratuzilmasini qayta qurish:* Shahar iqlim o'zgarishiga mos ravishda qurilish lozim. Bunga yuqori issiqlikni kamaytirish, toshqinlarni ildini olish va energiya samaradorligini oshirish kiradi.

- *Sog'liqni saqlash tizimini mustahkamlash:* Iqlim o'zgarishining salbiy ta'siridan, xususan, kasalliklar va infeksiyalardan himoya qilish uchun sog'liqni saqlash tizimini yaxshilash.

Iqlim o'zgarishiga qarshi yumshatish: Iqlim o'zgarishigini yumshatish, ya'ni unung salbiy ta'sirlarini kamaytirishga qaratilgan harakatlar bir qator chora-tadbirlarni o'z ichiga oladi:

- *Yashil energiyaga o'tish:* Fosil yoqilg'ilardan (neft, gaz) foydalanishni kamaytirish, qayta tiklanuvchi energiya manbalariga (shamol, quyosh) investitsiya kiritish.

- *Uglerod chiqindilartini kamaytirish:* Korxonalarining ishlab chiqarish jarayonlarida uglerod izlarini qisqartirish va ekalogik jihatdan toza texnologiyalarni joriy etish.

- *O'rmonlarni himoya qilish va ko'paytirish:* O'rmonlar glabal iqlimni tartibga solishda muhim ro'l o'ynaydi. O'rmonlarni kesishni oldini olish va yangi o'rmonlarni ekish kabi chora tadbirlarlar iqlim o'zgarishiga qarshi samarali kurashishda yordam beradi.

Qishloq xo'jaligida iqlimga moslashish biron bir ekinni ilgari o'smagan yangi hududlarga ko'chirish bilan bog'liq. Masalan, dehqonchilik amaliyotida g'alla ekinlarini iqlimlashtirish ming yillardan beridavom etib keladi. Iqlimga moslashish tufayli gilos, o'rik, tok, choy, sitrus mevalar, evkalipt, bambuk va b. yangi mintaqalarda ekiladigan bo'ldi. Yoki g'o'za yangi sharoitlar va kishilarning ehtiyojiga moslashtirilishi tufayli o'zgacha iqlim sharoitiga ega bo'lgan rayonlarga tarqalgan. G'o'zani madaniylashtirish va ularni dastlabki tarqalgan arealidan tropiklarning yuqori tog'li zonalari hamda shimoliy kengliklarga tarqalishida evolyusiyaning asosiy yo'nalishi g'o'zaning hayot siklini qisqartirish va uning tezpishar turlarini ajratib olishdan iborat bo'lgan. Dunyo bo'yicha g'o'za ekiladigan mintaq 44° shimoliy kenglikdan (O'zbekiston) 35° janubiy kenglikkacha

(Avstraliya) joylashgan. Oʻrta Osiyoning gʻoʻza mintaqasi dunyo boʻyicha eng shimoliy hisoblanib, u 37° bilan 44° shimoliy kenglik oraligʻida joylashgan (u hatto 1957 yilda 47° kenglikkacha borgan).

Iqlimga moslashish jarayoni oʻsimliklar seleksiyasida, ayniqsa, boshqa mintaqalardan keltirilgan formalardan dastlabki material sifatida foydalanilganda katta rol oʻynaydi. Oʻsimliklarni introduksiya qilish va iqlimlashtirish boʻyicha botanika bogʻlari va introduksiya parvarishxonolari katta ishlar olib bormoqda.

Tabiatni muhofaza qilish tabiat va uning boyliklaridan oqilona foydalanishga, tabiatni inson manfaatlarini koʻzlab ongli ravishda oʻzgartirishga, tabiat boyliklari va umuman tabiatni, uning goʻzalligi, musaffoligini saqlab qolishga va yanada boyitishga qaratilgan barcha tadbirlar majmuasi. Tabiatni muhofaza qilish tadbirlari majmuasiga davlatlar, xalqaro tashkilotlar, jamoat, ilmiy-texnik, ishlab chiqarish, iqtisodiy va maʼmuriy tashkilotlar, har bir odam tomonidan amalga oshiriladigan tadbirlar kiradi.

Hozirgi vaqtda inson yashab, toʻxtovsiz munosabatda boʻlib kelayotgan tabiiy muhit uzoq geologik davrlar (4,5–4,7 milliard yil) mobaynida bir qancha omillarning birgalikda taʼsirida, yaʼni Quyosh nuri, Yerning gravitatsiya kuchi, koʻlami, aylanma harakatlari, tektonik harakatlar, havo va suv qobiqlarining vujudga kelishi va oʻzgarishi, ekzogen jarayonlar taʼsiri, organik dunyoning paydo boʻlishi va taraqqiyoti taʼsirida tarkib topgan. Tabiiy muhitning holati oʻzaro taʼsir etib turuvchi koʻp omillarning murakkab majmuida tarkib topgan tabiiy muvozanatga bogʻliq.

Har qanday tirik mavjudot oʻz atrofini oʻrab turgan tabiiy muhit bilan oʻzaro taʼsirda boʻladi, undan oʻziga kerakli narsalarni oladi, shu muhitda moslashadi, muhit tarkibiga, undagi modda va energiyaning aylanma harakatiga maʼlum darajada oʻzgarish kiritadi. Yerning havo qobigʻidagi hozirgi gazlar tarkibi, miqdori, ayrim foydali qazilmalari, masalan, ohaktosh, toshkoʻmir, qoʻngʻir koʻmirning hosil boʻlishi, tuproq qoplaminin tarkib topishi, rivojlanishi organizmlarning hayot faoliyati natijasidir. Organik dunyoning tabiiy muhit bilan oʻzaro taʼsiri biologik evolyutsiya jarayonida yangi turlarning paydo boʻlishi, raqib turlar sonining koʻpayishi yoki kamayishi va atrof muhitning oʻzgarishi natijasida oʻzgaradi. Yerda odamning paydo boʻlishi organik dunyo bilan tabiiy muhit oʻrtasidagi oʻzaro munosabatni tubdan oʻzgartirib yubordi. Inson tabiatga mehnat qurollari vositasida yaylovlardan notoʻgʻri foydalanish oqibatida taʼsir koʻrsatadi. U oʻzining tabiat bilan boʻlgan oʻzaro taʼsiri usullarini takomillashtirib boradi. Natijada inson yashay oladigan hudud kengayadi, foydalaniladigan tabiiy elementlar soni va hajmi ortadi, binobarin, insonning tabiatga tazyiqi sifat jihatidan ham, koʻlam jihatidan ham koʻpayadi. Inson oʻzi yashashi va faoliyat koʻrsatishi uchun tabiiy muhitdan tashqari yana sunʼiy muhitni ham bunyod etadi. Masalan, shaharlar, turar joy binolari, bogʻlar, suv omborlari, yoʻllar va boshqa ishlab chiqaruvchi kuchlarning rivojlanishi, fan va texnikaning taraqqiy etishi bilan, tabiiy boyliklarning ahamiyati, ulardan foydalaniladigan sohalar, ularni ishlatish shakllari ham oʻzgarib boradi. Qadimda bir necha xil kimyoviy elementlardan foydalanilgan boʻlsa, hozirgi vaqtda mavjud barcha elementlardan foydalaniladi. Shu bilan birga

ko'pchilik foydali qazilmalar tobora ko'proq qazib chiqarilmoqda. Insonning tabiatga ta'siri kuchayishidan, antropogen landshaftlar ko'paymoqda. Hayvonot va o'simlik olamidani rejasiz foydalanish yoki inson faoliyati bilan bog'liq boshqa sabablar tufayli 16-asrning oxirlaridan 20-asrning 70yillarigacha umurtqali hayvonlarning 250 turi va kichik turlari butkul yo'qolib ketdi. 80-yillardan boshlab xar yili o'rtacha 1 ta hayvon turi va 50 ga yaqin o'simlik turi yo'qolib bormoqda. Qush va sut emizuvchilarning 1000 dan ortiq turi yo'qolib ketish arafasida turibdi. Yil davomida 1 milliard tonna yoqilg'i yoqiladi, atmosferaga yuzlab million tonna azot oksidi, oltingugurt, uglerod, qurum, chang va boshqalar chiqariladi. Tuproq va suvlar sanoat va maishiy chiqindilar (bir necha milliard tonna), neft mahsulotlari (bir necha million tonna), mineral o'g'itlar (yuz million tonnaga yaqin), og'ir metallar, radiaktiv chiqindilar bilan ifloslanadi.

Tabiiy boyliklardan oqilona foydalanishdan tabiatda ro'y beradigan jarayonlarning o'zaro bog'liqligi va rivojlanishi qonuniyatlari haqidagi bilimlar katta ahamiyatga ega. Busiz tabiiy jarayonlarga baho berish, ularni xisobga olish, tabiatga, tabiat komponentlariga ko'rsatilgan har qanday ta'sirning kelajakda qanday oqibatlariga olib kelishini oldindan bilish mumkin emas.

Tabiiy ekotizmlarni asrash: Tabiiy ekotizmlar insoniyatning faravonligi uchun zarur bo'lgan bir qator xizmatlarni taqdim etadi. Ular havoni tozalash, suvni filtratsiya qilish, biologik xilma - xillikni ta'minlash vaqq tuproq unumdorligini saqlashda muhim rol o'ynaydi. Ekotizmlar o'zining tabiiy muvozanatini yo'qotganda, bu faqat ekalogik tizimga emas, balki iqtisodiy va ijtimoiy tizimga ham salbiy ta'sir ko'rsatadi. Shuning uchun tabiiy ekotizmlarni asrashni davom ettirish juda muhimdir.

- *Biodiversitetni saqlash:* Yovvoyi tabiatni himoya qilish, qo'riqxonalar hududlarini kengaytirish va turlarni saqlab qolish uchun chora-tadbirlarni amalga oshirish.

- *Tuproqni saqlash:* Degradatsiyaga uchragan yerlarni tiklash, hosildorlikni oshirish va eroziya jarayonlarini oldini olish.

- *Ekoturizmni rivojlantirish:* Ekoturizm, tabiiy hududlarni himoya qilish orqali ularni iqtisodiy ahamiyatini oshirish mumkin, bu esa atrof-muhitni saqlashga rag'batlantiradi.

Xulosa va takliflar:

Iqlim o'zgarishi oqibatlariga moslashish va ularni yumshatish jarayonlari, shuningdek, tabiiy ekotizmlarni asrash insoniyatning kelajagi uchun juda muhimdir. Bularning barchasi birgalikda iqlim o'zgarishining ta'sirini kamaytirish, resurslarni tejash va barqaror rivojlanishni ta'minlashga xizmat qiladi. Ekotizmlarning himoya qilish va ularga zarar yetkazmaslik, shuningdek, energiya samaradorligini oshirish va yashil texnologiyalarni rivojlantirishimiz kerak. Iqlim o'zgarishining salbiy ta'sirlari tobora kuchayib bormoqda, lekin bu masalaga qarshi kurashishda ko'plab imkoniyatlar mavjud. Yumshatish va moslashish strategiyalarini iqlim o'zgarishining ta'sirini kamaytirish va tabiiy ekotizmlarni asrashda muhim ro'l o'ynaydi. Iqlim o'zgarishiga qarshi kurashish nafaqat ekalogik, balki iqtisodiy va ijtimoiy ahamiyatga ega bo'lib, barchamiz uchun barqaror kelajakni ta'minlashga

yordam beradi. Tabiiy resurslar va ekotizmlarni himoyasi orqali biz kelajak avlodlar uchun sog'lom va havfsiz hududni yaratishimiz mumkin.

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SYNTHESIS OF NATIONAL AND MODERN MUSIC: A NEW DIRECTION OF INNOVATION AND CULTURAL DEVELOPMENT

***Abstract:** This scientific article provides an in-depth analysis of the issue of the synthesis of national and modern music. It examines the theoretical and practical foundations of preserving national values and harmonizing modern musical trends through musical art. It also highlights the positive impact of this process on the preservation of cultural heritage, international integration, and the education of the younger generation. Foreign experience in the process of synthesizing national and modern music, existing problems, and their solutions are also examined in detail.*

***Key words:** National music, modern music, synthesis, cultural integration, innovation, creative development, national identity, new forms of art.*

Music is one of the most important elements of cultural heritage, reflecting the historical, spiritual and aesthetic values of the people. In the 21st century, modern technologies and globalization processes are having a serious impact on musical art. At the same time, the processes of modernization of the national musical heritage using new technologies are gaining momentum. This, in turn, expands the creative and pedagogical capabilities of music and creates the basis for the formation of new forms of cultural integration. This article is aimed at an in-depth analysis of the scientific and theoretical approach to the synthesis of national and modern music.

Methodology

The following scientific methods were used to study the issue of the synthesis of national and modern music:

1. Theoretical analysis - the existing literature on the development of national and modern music was analyzed.
2. Comparative method - the experiences of musical synthesis in different countries were studied.
3. Empirical research - interviews were conducted with modern musicians and art historians, and experiences of musical synthesis were analyzed.

Results and analysis

National music reflects the historical heritage, traditional values, and identity of the people. Modern music, on the other hand, includes new formats that have emerged under the influence of technological opportunities and Western trends. Their synthesis creates new forms of art, achieving the following results:

- Creative innovations - the emergence of new genres and musical formats.
- Strengthening cultural ties - musical integration between different peoples.

Nowadays, modern technologies provide the opportunity to promote national music in new forms. Examples:

Harmony of electronic music and national musical instruments - synthesis of national instruments such as dutor, doira or surnay with electronic rhythms.

Virtual platforms - bringing national music to a global audience through digital platforms such as TikTok, YouTube and Spotify.

Foreign experiences were also studied in detail during the writing of the article.

There are several successful examples of the process of musical synthesis at the international level:

India: Bollywood music has achieved global popularity by combining traditional Indian melodies with modern pop and electronic genres.

Africa: African music is being widely promoted internationally through the synthesis of jazz and afrobeat genres.

Turkey: Strengthening its position in the international arena by incorporating national methods into modern pop and rock genres.

Roots of Synthesis

Historical Context: The synthesis of national and modern music has its roots in the mid-20th century, when traditional melodies began blending with emerging global genres such as jazz, rock, and pop. This trend allowed nations to preserve their cultural identity while participating in global musical conversations.

First Examples in Uzbekistan: During the Soviet era, Uzbek composers like Mukhtar Ashrafi and Mutal Burhonov integrated maqom and folk melodies into symphonies, operas, and modern compositions. This marked the beginning of a new musical style that appealed to both traditional and contemporary audiences.

Technological Advances: The advent of electronic instruments and recording technology further facilitated this fusion. Synthesizers, drum machines, and audio effects enabled composers to reimagine traditional music in innovative ways.

International Experience

Japan: In Japan, the koto (a traditional stringed instrument) has been used alongside electronic music to create a harmonious blend of old and new. This approach has gained popularity in both traditional performances and modern genres such as J-pop.

South Korea: The global success of K-pop owes much to its incorporation of traditional Korean elements, such as the gayageum and samulnori rhythms, into a highly modern and commercial format. This has not only preserved traditional culture but also made it accessible to international audiences.

United States: The origins of jazz and blues exemplify how traditional African-American spirituals and work songs evolved into globally recognized modern music genres. This blending of cultural heritage with innovation remains a model for musical synthesis.

India: Bollywood music often combines classical Indian ragas with contemporary Western beats. This fusion has created a unique style that resonates with both domestic and international listeners.

Turkey: Turkish musicians frequently incorporate folk melodies and instruments like the saz and ney into pop and electronic music, showcasing a successful fusion of heritage and innovation.

Experiences in Uzbekistan. The first steps towards the synthesis of national and modern music are being taken in Uzbekistan:

International festivals: Modern trends in national music are developing through musical events such as "Sharq Taronalari".

Experience of creators: Modern creators are performing Alisher Navoi's poems in electronic music.

The cover style is also becoming widely popular.

Of course, there are problems in the field. There is a risk of losing the originality of national music - there is a possibility of westernization of national music in the process of globalization.

Technological limitations - many national musical instruments are not adapted to modern technologies. But I hope that these problems will find their solution in the future.

The synthesis of national and modern music poses a number of responsible tasks for creators and art critics:

Preserving national values - it is important to maintain a balance of national elements in musical synthesis. Using international experience - adapting foreign musical trends to national art. Educating the younger generation - forming the aesthetic taste of young people through modern formats of national music.

Conclusions and recommendations. The synthesis of national and modern music opens up great opportunities for the art of Uzbekistan. For the successful implementation of this process, it is necessary to pay attention to the following areas:

1. Expanding scientific research - increasing the number of scientific and creative studies on the issue of musical synthesis.
2. Innovations in the education system - teaching modern technologies in music schools and higher educational institutions.
3. Developing international cooperation - promoting the art of Uzbekistan on a global scale through music festivals and competitions.
4. Technological adaptation - creating special platforms to promote national music using modern technologies.

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GEOPOLITICAL INTERESTS OF UZBEKISTAN IN CENTRAL ASIA

***Abstract:** This article is devoted to the analysis of the geopolitical strategy of Uzbekistan in the region, according to which the Republic of Uzbekistan bears special responsibility for the integration of the countries of Central Asia. This issue requires a deep study of the elements of the "geopolitical strategy" of the state.*

***Keywords:** geopolitics, interest, strategy, integration, region.*

The term "strategy", which originally had a purely military meaning, acquired a broader interpretation in the 20th century. Strategy can be presented as the integration of forces and means based on a single plan of political actions aimed at achieving specific goals, taking into account the time, place and conditions (environment) of these actions, as well as possible benefits.

The highest level of strategy is the so-called "grand strategy" (which is, in essence, a national security strategy), which implies the highest level of political decision-making and mobilizes all necessary means to achieve them, covering virtually all key areas of state activity: military power, economic potential, trade opportunities, technological base, intelligence resources, diplomatic levers, ideological means, etc. [1]

As B.G. Liddell Hart noted, a grand strategy "must not only combine various instruments, but also regulate their use in such a way as to prevent the deterioration of the future state of the world – for the sake of security and prosperity" [2].

The development of a "grand strategy" requires a fundamental study of the above issues. Here we will limit ourselves to a brief analysis of some of them.

First of all, it is necessary to determine the issue of vital and strategic interests related to the physical, cultural and political survival of the nation, without the protection of which the country may be threatened by chaos, uncontrollable negative processes, the collapse of the political and economic system, etc. This category mainly includes the interests of national security, for the protection of which the state maintains a sufficient level of military power and mobilization readiness, strengthens state institutions and takes care to build up the economic potential of the country.

Strategic interests can be equated to vital interests in many ways, but they have their own characteristics. In particular, having an independent meaning, they play a "parallel", in some ways supporting role in relation to national interests of other types. Thus, cooperation with the USA contributes to the economic growth of Uzbekistan; therefore, it works for the implementation of the vital interests of the Republic of Uzbekistan (and, of course, is beneficial to the USA). Cooperation may

develop to the point of establishing a strategic partnership between them. However, the absence of a strategic partnership will not yet mean a dangerous vulnerability of vital interests. On the other hand, by realizing its strategic interests - in our example, in the form of cooperation with the United States - a nation can receive greater benefits and take a better position in the world community. This is why the future status of a nation in the international system depends on achieving strategic interests. And, although strategic guidelines are defined for the medium and long term, they always remain a priority.

The strategic interests of Uzbekistan include the construction of highways and railways leading from Central Asia to Europe, China, Iran, Afghanistan, Pakistan and India, as well as the construction of oil and gas pipelines through the territory of these countries in order to transport Central Asian energy resources to world markets. The implementation of various projects will not only help solve the problems of economic growth in Central Asian countries, but will also contribute to strengthening stability and order in the macro-region and eliminating threats to the national security of states, and will also provide them with more advantageous political and economic positions in the new world order of the 21st century.

The sphere of strategic interests of Uzbekistan (which complement vital interests and also have independent significance) undoubtedly includes the establishment and development of strategic partnership with the USA, the leading countries of the EU, Turkey, Russia, India, Japan, China, Central Asian states, Georgia, Azerbaijan, Ukraine, etc. Of great importance is active participation in the activities of the UN, OSCE, EU, NATO, CIS and OIC. The national and regional security of Uzbekistan, the creation of a network of transport and electronic communications, the transportation of energy and other resources, the attraction of investments and high technologies, as well as participation in the creation of a new world order depend to a decisive extent on these key subjects.

By strategic partnership we mean a high level of interstate relations, in which cooperation, firstly, covers a fairly wide range of different areas (economics, politics, military sphere, culture, etc.), secondly, is calculated for the long term, thirdly, serves the interests of national security of each of the parties and, fourthly, determines the unity or closeness of their positions on the most important problems of world politics, including a certain correlation of their foreign policy actions. Such cooperation indicates a high degree of mutual trust and reliability of relations.

The changing status quo in the region.

The independence of the Central Asian states (which turned them into subjects of international relations) led to a geopolitical transformation of the region and marked the beginning of the establishment of new strategic relations.

From the point of view of the systemic approach, it is appropriate to consider the changing status quo in Central Asia in the context of the emerging new world order (NWO). True, the process of the NWO formation itself is assessed by different politicians and experts in a very ambiguous and contradictory way, but consensus on this issue is hardly achievable in principle.

It seems that any model of the NWO based on the idea of an N-polar world will be vulnerable, since it is a priori considered within the framework of the power component of world politics, and it is becoming increasingly blurred (and the power itself is becoming increasingly diffuse).

Thus, even the system of a unipolar world order, which implies the global hegemony of the United States, is unable to set for other “elements” some fundamental parameters of political existence, to which they would have to adapt; it is no coincidence that Zbigniew Brzezinski could not admit that the United States would become the last empire in the world [3]. Thus, the position of a “monopoly” – in particular, the status of the United States as a pole of a unipolar world – can only serve as a concept appropriate in describing a transitional model. It is hardly possible to consider today’s real status of the United States as the “crown of the end of history” and a determinant of world order.

Of course, the power and values of the United States are indisputable, but neither is American global hegemony nor the Pax Americana doctrine indisputable: the establishment of a new world order requires that the world community simply recognize the global leadership of the United States. After all, even by the standards of the United States itself, this would contradict the idea of necessary pluralism.

If we talk about a multipolar world order, it would most likely be a mess. The poles of the world, representing different civilizations and socio-political systems, would most likely compete with each other, pursuing their own interests (as was the case during the bipolar order). A multipolar order would be, so to speak, a unipolar world “inside out” — all the pluralism of such a world would be limited exclusively to the “magic number” N, expressing the number of poles in the world at a given moment.

In addition, multipolarity is not yet ipso facto a sign of democratization of international relations, although the supporters of this concept justify their ideas precisely by its democratic nature. It seems that the most democratic formula of the NWO could be the currently discussed project "Pax Democratica". At first glance, it seems indisputable that only expanding democracy can claim the right to determine the content and character of the NWO: no world power will object to such an idea. But this concept is based on many idealistic ideas, while the model of a multipolar world is distinguished by realism.

Meanwhile, the idea of international democracy (which is easily extrapolated into the idea of regional democracy) is extremely important for the Central Asian countries. For the states of the region, national and regional democracy seem to mutually condition each other.

It is also very interesting that the concept of regional democracy can play not only an integration role, but also a geopolitical one, since it is the most important prerequisite and guarantee of conflict-free relations between the Central Asian states, each of which forms its own foreign policy strategy.

The presence of the United States in the Central Asian region and its strategic partnership with Uzbekistan has put the issue of political subjectivity (joint and individual) of the Central Asian states on the agenda. Against the backdrop of the

emerging NMP and the changing status quo, the American presence in the region is gaining unprecedented geopolitical significance.

This is why the Uzbek-American partnership is acquiring not only a purely bilateral but also, due to its implications, a regional dimension. It can also be seen as a strong impetus for regional integration. And if the strategic presence of the United States in Central Asia reflects the systemic geopolitical transformation taking place there, then the historical responsibility of all five states in the region (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) is to turn this transformation into a centripetal integration process. And Uzbekistan has a special role in this process.

The concept of Uzbekistan's special responsibility for Central Asia.

The parameters of power, strategic importance and political potential of Uzbekistan indicate that this state objectively bears special responsibility for the Central Asian region. Uzbekistan should become the initiator and leader of integration. This does not at all exclude the responsibility of other Central Asian states for the course of integration processes: the centripetal regional policy of each of them is certainly valuable in itself. In addition, the concept of special responsibility in no way assumes and even absolutely denies any dominance, expansion or hegemony that could give rise to a certain irresponsibility.

Having transformed from an object of superpowers' claims into a subject of international relations and geopolitics, Uzbekistan can choose the only possible and correct path, which consists of reconciling extra-regional rivals through rapprochement with each of them. It should be noted that, although the implementation of such a strategy begins with "balancing", it is not based on the principle of the so-called multi-vector foreign policy.

The policy pursued by Uzbekistan should acquire a regional dimension, and it should be linked to the prospects of strategic partnership with the United States.

If we take as a basis the four basic goals declared by the United States in Central Asia (strengthening independence, ensuring regional stability and security, conducting market and democratic reforms, developing regional cooperation), then we can see that all of them, to one degree or another, depend on the situation in the region as a whole.

Uzbekistan needs to ensure that the strategic partnership with the United States "works" in the integration direction as well: only this direction can have democratic content both at the national and regional levels, that is, be in harmony with the idea of "Pax Democratica".

In one of his books, the President of Uzbekistan I. Karimov emphasized: "This integration has always been and remains popular in its essence... Let us note that the integration of the peoples of Central Asia is not a dream or a project for the future, it is a given, it is a reality that only needs organizational and political forms" [4].

In Uzbekistan's place, any other Central Asian state would probably choose exactly this strategy. Therefore, there is no point in suspecting Uzbekistan of hegemonic ambitions, or of any missionary work or attempts at inadequate

leadership. The real leadership of the Republic of Uzbekistan lies in its special responsibility for the state of affairs in Central Asia. Moreover, this special responsibility is derived both from one or another form of Uzbekistan's participation in regional affairs, and from its non-participation in them.

Elements of the "grand strategy" of Uzbekistan.

The presented idea of the essence of strategic partnership and the nature of changes in the status quo in the region, as well as the concept of Uzbekistan's special responsibility, allow us to propose the following elements of the state's "grand strategy".

The presented idea of the essence of strategic partnership and the nature of changes in the status quo in the region, as well as the concept of special responsibility of Uzbekistan, allow us to propose the following elements of the "grand strategy" of the state.

1. Selection of strategic partners. The process of developing relations, up to the establishment of strategic partnership, was mutual: the initiative came not only from Uzbekistan, but also from those states that are now considered strategic partners of the republic. The parties managed to overcome "cool" relations, assess prospects and reliability and, finally, achieve friendly rapprochement and trust.

2. Regional cooperation. Central Asia is undoubtedly "its" region for Uzbekistan. As already noted, the Central Asian states have been strategic partners by nature from the very beginning. The once united Turkestan, which to a large extent represented a single Oikumene (from the Greek word oikumene – the part of the Earth inhabited by humans), but was divided into five parts during the Soviet era, began to reunite in 1991. The predictions of many Western and Russian analysts about the supposedly inevitable conflicts (interethnic, territorial, etc.) between the states of the region did not come true; on the contrary, almost simultaneously with the liquidation of the USSR and the creation of the CIS, the "Central Asians" (as they are called in the West) began regional integration. This integration was perhaps the most significant foreign policy achievement of Uzbekistan in the 1990s. [5]

The diversification of strategic guidelines of the newly independent Central Asian states instead of their exclusively pro-Russian orientation is predetermined by at least four factors:

- 1) the acquisition of independence;
- 2) the multiplicity and geopolitical diversity of countries involved in the "Great Game";
- 3) the actualization, mutual dependence and indivisibility of national and regional security of the Central Asian states;
- 4) the scale of the tasks of modernization and sustainable development.

Conclusion

With the inevitability of diversification of the foreign policy strategy of the Central Asian countries, it would be inappropriate to continue to view the region exclusively through the prism of Russian-American rivalry. Using the above-mentioned designation of strategic partnership, we can say that with a linear approach to the issue, strategic rapprochement with one state means strategic

distance from another. However, ensuring the vital interests of Uzbekistan requires a non-linear approach: only in this case will it be possible to solve the problems of national and regional security.

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EVOLUTION OF MAGMATIC COMPLEXES OF THE KULDZHUKTAU MOUNTAINS AND THEIR ORE CONTENT

***Abstract:** The evolution of magmatism is the most important pattern manifested in all periods of the Earth's geological history. At the same time, two sides of the evolution of magmatism are noted: on the one hand, cyclicity, on the other, irreversibility and directionality, the petrochemical data of the Kuldzhuktau complex show a regular homodromic change in the composition of the subdivisions of the complex from early ultrabasic to late acidic. First of all, this is a consistent increase in the total content of silica, potassium, sodium and total ferruginousness in the rock.*

***Keywords:** Magmatism, Granitoid, complex, formation, andesites*

The Kuldzhuktau Mountains are located in the southern part of Central Kyzylkum. Within the Kuldzhuktau mountains, magmatic formations comprise ~ 15% of the exposed area, with batholith-like bodies and granitoid rods predominating [1], intrusions of the main composition and rod-like bodies of alkaline rocks are less developed, volcanogenic formations belonging mainly to effusions of basic, medium and acid compositions are slightly widespread.

The host rocks are sediments of the Ordovician, Silurian, Devonian and Carboniferous with a characteristic set of formations and a folding plan. Several deposits are known on the territory, as well as a significant number of ore occurrences and mineralization points, the distribution of which is controlled by the tectonomagmatic structure formed by tectonomagmatic processes [3].

Research methods

The magmatic formations of the district were studied at different times and with varying degrees of detail by H.M. Abdullaev, I.H. Khamrabaev, A.F. Sviridenko, Yu.G. Likhoydov, A. Kayumov, Ya.B. Aisanov, A.I. Egorov, Z.A. Yudalevich, F.K. Divaev, U.D. Mamarazikov and many other researchers. The first scheme of magmatic formations of the Kuldzhuktau district was developed by Ya.B. Aisanov and A.I. Egorov in 1973 [1,2,8].

In the course of our research, five plutogenic and three volcanogenic complexes were studied with sampling for various analyses: description of the grinds, anshlifs. Based on the results obtained, classification and discriminant diagrams were compiled [3].

Discussion of the results

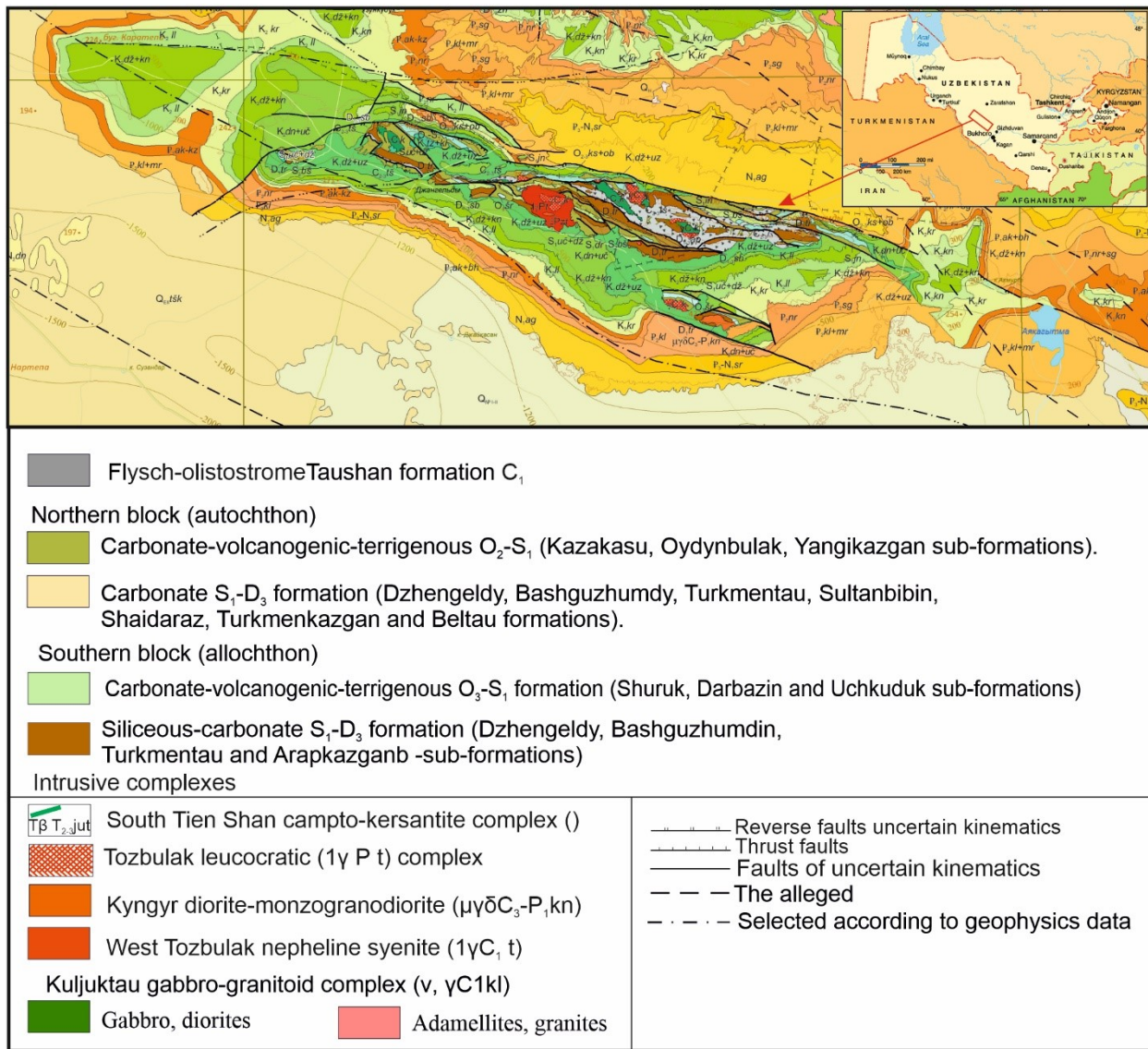


Fig. 1. Overview geological map of the Kuldzhuktau mountains.

The evolution of magmatism is the most important pattern manifested in all periods of the Earth's geological history. At the same time, two sides of the evolution of magmatism are noted: on the one hand, cyclicity, on the other, irreversibility and directionality [4]. The stages of magmatism evolution include a number of successive tectonomagmatic cycles, the beginning of each of which is generally fixed by the broader development of basal magmatism, and the end by the predominance of acidic, subalkaline and alkaline magmatism [5].

In the structure of the Western part of the Tien Shan, on the territory of Uzbekistan, it is customary to distinguish three segments that differ in geological structure and history of development: These are the Middle, Southern and Southwestern Tien Shan, which are bounded from the east by the Ustyurt block [7].

The folded system of the Southwestern Tien Shan is separated from the Southern one by the Zeravshan fault and stretches from the Kuldzhuktau mountains in the west through the Zirabulak-Ziaetdin hills to the Zeravshan and Hissar ranges, covering the Baisun-Kugitang zone [5].

The study of igneous rocks and magmatic processes (as one of the most important factors of ore formation) in Uzbekistan has always been given significant influence, which is reflected in numerous publications of Uzbek geologists [2,9].

There are three volcanogenic-sedimentary complexes, four plutonic, and two complexes of small intrusions in the Kuldzhuktau mountains (Table 1).

Table 1

Magmatic complexes of the Kuljuktauk mountains

Type	Complex / suite	Formation type	age	Geodynamic regime
dyke	South Tianshan	alkaline-basaltoid	T ₂₋₃ jut	Diffuse rifting
small intrusions	Central Kuldzhuktau	odinite - diorite-granitoid	Pck	Intraplate A-type
intrusive	Zapadno-tozbulaksky	syenite-granosienite	P1zt	Intraplate A-type
intrusive	Tozbulaksky	leukogranite	P t	Intraplate A-type
intrusive	Kuldzhuktausky	gabbro-granitoid	C ₃ kl	Intraplate A-type
intrusive	Kingirsky	monzonite-syenodiorite-syenite	C ₂ k	Intraplate A-type
volcanogenic	Darbaza	Dacite-rhyolite	S ₁ dr	Encymatic arcs
volcanogenic	Shuruk	basalt-andesite	O ₃ sr	Encymatic arcs
volcanogenic	Kazakasu	basalt-rhyolite	O ₂₋₃ kz	Encymatic arcs

In the course of our research, five plutogenic and three volcanogenic complexes were studied using various classification and discriminant diagrams.

Volcanogenic complexes. In the classification diagram (Na₂O+K₂O)-SiO₂, (Fig. 2.a) propylitized trachybasalts of the Kazakasui formation are in the field of subalkaline rocks, and andesites and rhyolites are in the field of calcareous-alkaline. The volcanites of the Shuruk and Darbaza formations also fall into the field of calcareous-alkaline rocks. In the Rb-Sr diagram, (Fig. 2.b) andesites and rhyolites of the Kazakasui formation fall into the field of oceanic tholeites, and propylitized basalts fall into the field of island-arc tholeites. Volcanites of the Shuruk and Darbaza formations are also recorded in the field of island-arc tholeites.

In the Mg-FeO-Al₂O₃ diagram (Fig. 2.c), all analyses of volcanites are concentrated in the basalt fields of oceanic ridges. In the AFM diagram (Fig.2.d), all volcanites coincide with the Tholeiitic trend. In the diagram Zr-Ti/100-3Y, all analyses of volcanites are concentrated in the basalt field of the oceanic bed (Fig. 2. e). In the Miyashiro diagram (FeO*/MgO)/SiO₂ (Fig. 2.f), the basalts of the Kazakasui formation fall into the field of the tholeiitic series, and all other volcanites fall into the field of the calcareous-alkaline series.

The distribution of impurity elements in the volcanic rocks of Kuldzhuktau is characterized by the following features.

The basalts and andesites of the Kazakasui formation are characterized by increased relative to Clark contents of V, Ti, Li, Sr, Mo, Re, Be, Au, Ag, B, As, Bi,

Te, Sb, Nb, Ta, Zr, Hf, elements of the light rare earths group (especially Ce (33 Clark)).

A different spectrum is observed for basalts and andesites of the Shuruk formation - they are characterized by elevated concentrations of Ni, Cr, B, As, Bi, Sc, Ag, Mo, W, Be relative to Clark.

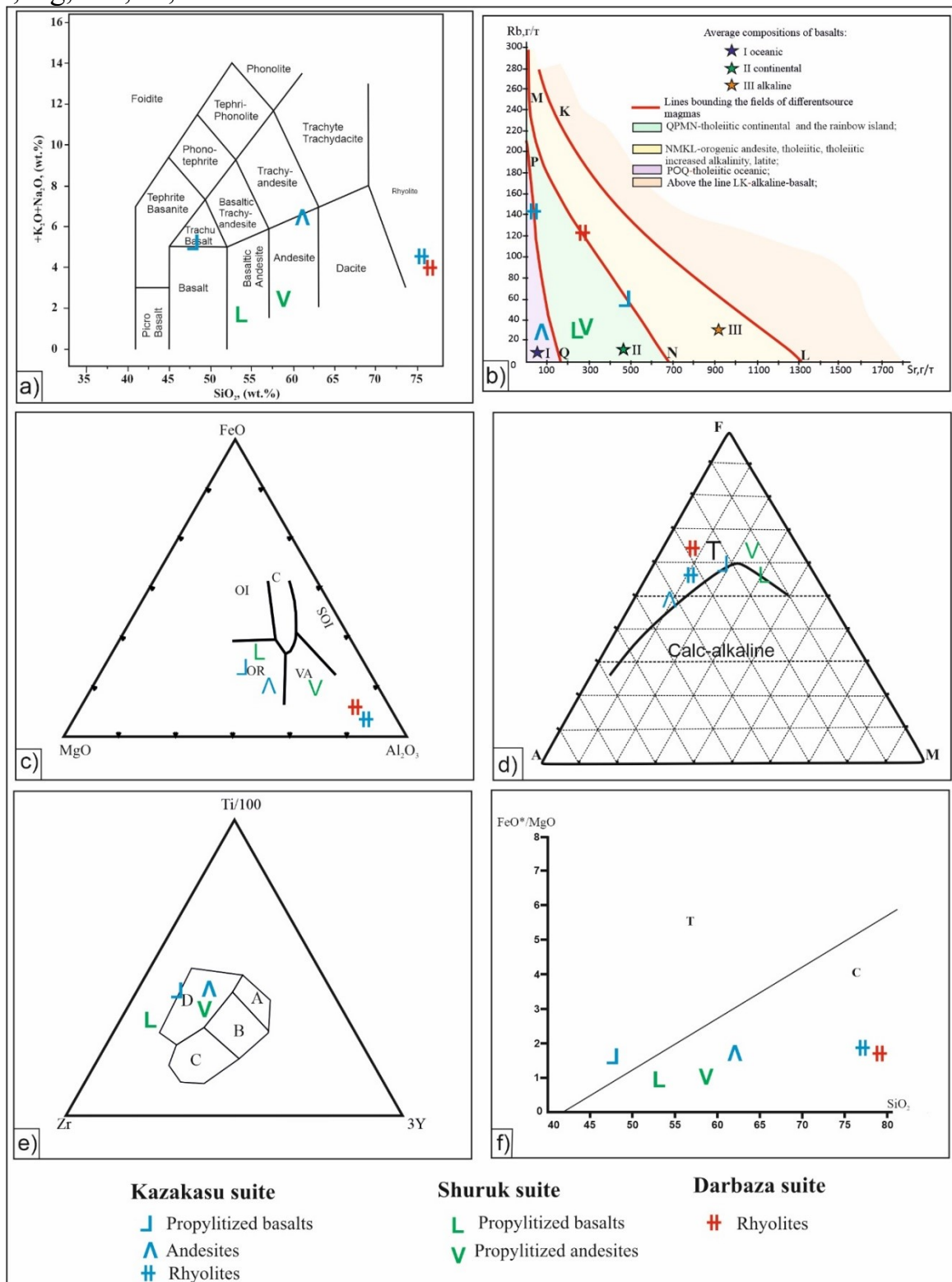


Figure 2. Diagrams of (a) (Na₂O + K₂O) vs. SiO₂ [10], (B) Rb-Sr , (C) Mg-FeO-Al₂O₃, (D)AlkaliFeOT-MgO (AFM) [11], (e) Zr-Ti/100-3Y and (f) FeO*/MgO)/SiO₂.

The rhyolites of the Kazakasui and Darbaza formations differ quite significantly in terms of the content of impurity elements. In the first, the Si content is higher, and the Pb content, on the contrary, is lower than, secondly. The content of such elements as B, As, Sc, Zr, La, Ce, Pr, Sm in Darbaza rhyolites is also noticeably higher.

Intrusive complexes of Kuldzhuktau. The petrochemical data of the Kuldzhuktau complex show a regular homodromic change in the composition of the complex units from early ultrabasic to late acidic. First of all, this is a consistent increase in the total content of silica, potassium, sodium and total ferruginousness in the rock.

Granitoids of the complex are calinatric in type of alkalinity (the subtype is mainly sodium-potassium). They are supersaturated with alumina and steadily contain corundum in the normative composition, which differs from the granites of the younger Tozbulak complex that look similar to them. Granites of the Tazbulak complex differ from granitoids of the Kuljuktau complex by their higher silicicity and ferruginousness. The granitoids of these two complexes also differ significantly in the content of trace elements. The granitoids of the Kuljuktau complex contain higher concentrations of Ni (46 and 7 g/t), Sr (71 and 54), Va (201 and 153), Sr (39 and 18), Au (0.04 and 0.01), B (41 and 19), As (42 and 7), Bi (1.25 and 0.33), Zr (72 and 57), Th (23 and 9).

In turn, the leucocratic granites of the Tozbulak complex have higher contents of Li (39 and 13 g/t), Mo (3.10 and 1.07), Re (0.013 and 0.004), Be (2.73 and 1.59), Ag (0.26 and 0.15), Tl (0.91 and 0.53), Se (4.28 and 1.56).

Rocks of the Kungur complex in the classification diagram (Na₂O + K₂O) - SiO₂ (Fig. 3.) fall into the field of calcareous-alkaline rocks, and rocks of the West Tozbulaksky - into the subalkaline field.

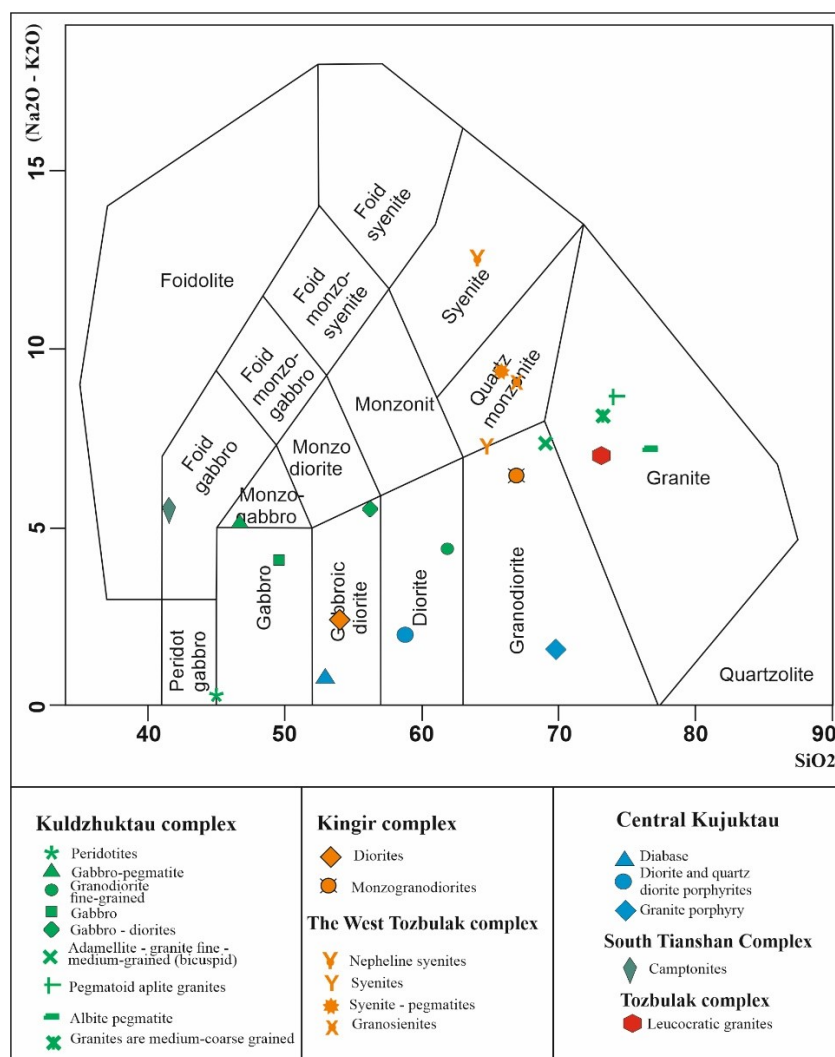


Figure 3. Classification of Granitoid Rocks (Middlemost, 1994)

In the Rb-Sr diagram (Fig. 3.2.7.), part of the samples of the West Tazbulak complex falls into the field of derivatives of oceanic tholeites, and the other part falls into the field of derivatives of tholeites of increased alkalinity. The rocks of the Ingyr complex fall into the field of derivatives of continental and island-arc tholeites.

In the FeO*/MgO diagram (Fig.4a), the rocks of the Kyngyr complex fall into the field of the lime-alkaline series, and the rocks of the Zapadno-Tozbulaksky into the toleite.

In the K₂O-SiO₂ diagram (Fig.4b), the diorites of the Kungur complex fall into the calcareous-alkaline field, and the monzogranodiorites fall on the boundary of the calcareous-alkaline and subalkaline fields. All rocks of the West Tozbulak complex fall into the field of subalkaline and alkaline rocks.

In the rocks of the Kingir diorite-Monze granodiorite complex, attention is drawn to the increased content of iron group elements relative to Clark -Ni (53-80 г/т), Co (11-27 г/т), Cr (96-160 г/т), V (77-126 г/т), а также Mo (1,07-1,83 г/т), Re (0,001-0,017 г/т), Sn (2,06-3,67 г/т), Ag (0,11-0,21 г/т), B (24-25 г/т), Bi (0,09-,23 г/т), Sb (0,2-0,46г/т), Yb (1,50-2,15г/т), U (2,96-4,91 г/т), Th (6,18-25,00 г/т).

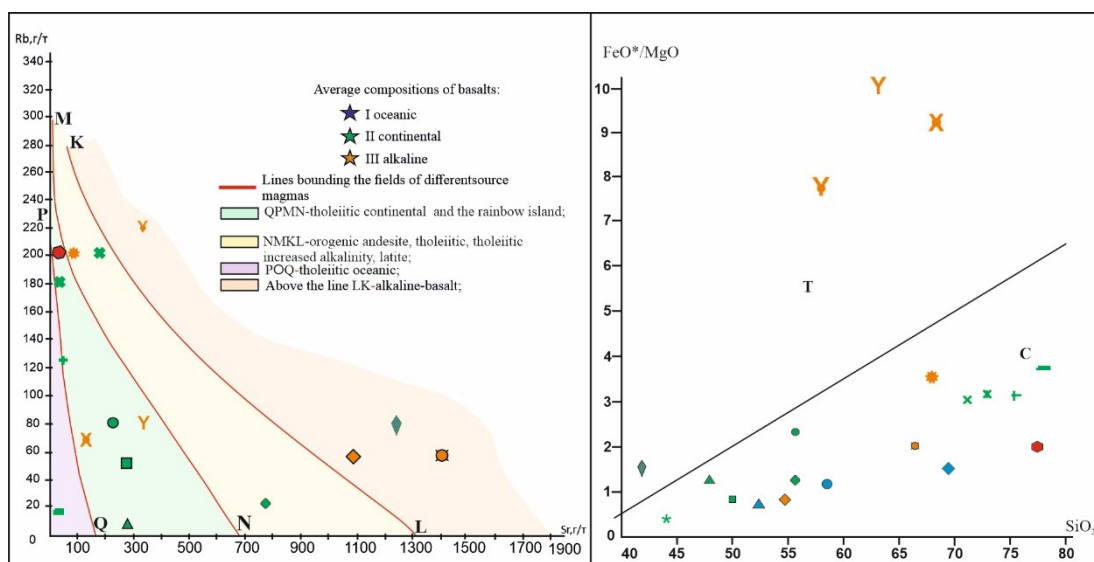


Fig. 4. a) The Rb-Sr diagram for the volcanic complexes of the Kuldzhuktau mountains (according to Fershtater, 1987). b) FeO*/MgO-SiO₂ diagram (according to A. Miyashiro, 1974) for granitoids of the Kuljukttau mountains. Fields of the series: T - tholeiitic, And lime-alkaline.

The syenites of the West Tozbulak complex are characterized by high concentrations Li (15-40 g/T), Rb (82-283 g/T), Mo (2,61-5,90 g/T), Re (0,010-0,012 g/T), Su (3,41-4-79 g/T), Ag (0,20-0,39 g/T), B (19-26 g/T), Te (0,001-0,110 g/T), Sb (0,43-0,70 g/T), Yb (1,63-2,87 g/T).

The chemical composition of the dykes of the central Kuljukttau complex largely inherits the features of the composition of the rocks of the Kuljukttau complex. In the classification diagrams, they also fall into the field of calcareous-alkaline rocks.

The rocks are low-titanium (0.63-1.03%), low-potassium (0.22-2.0%). The identification of petrochemical signs include increased levels of normative magnetite (1.19-5.03%) and ilmenite (0.44-2.11%). Of the impurity elements in the above Clarke contents Ni (21-209 g/T), Cr (76-324 g/T), V (80-154 g/T), Mo (0,78-2,46 g/T), W (0,607-9,74 g/T), Ag (0,10-0,21 g/T), Zn (69-76 g/T), As (52-70 g/T), Sb (1,19-5,11 g/T), Zr (61-152 g/T), Y (8,81-17,0 g/T).

The dikes of the camptonites of the South Tien Shan complex are characterized by chemical composition features inherent in the formation of alkaline basaltoids. On the classification and discriminant diagrams, the rocks of the complex fall mostly into the fields of subalkaline and alkaline rocks of the potassium-sodium subtype, containing ~ 10% of normative quartz and orthoclase, and on geodynamic diagrams in the field of intraplate magmatic formations.

Of the impurity elements present in the above Clarke concentrations, it should be noted Ni (110 g/T), Co (44 g/T), Cr (157 g/T), V (147 g/T), Ba (577 g/T), Sr (470 g/T), Mo (2,83 g/T), Ag (0,47 g/T), As (7,5 g/T), Nb (88 g/T), Ta (4,73 g/T), Zr (143 g/T), Hf (3,43 g/T), La (46 g/T), Ce (84 g/T), Nd (35 g/T), U (5,90 g/T).

Discussion

According to the theory of tectonics of lithospheric plates, the manifestations of magmatism They are divided into two large groups: 1) confined to the boundaries

of lithospheric plates; 2) intraplate. Magmatism of plate boundaries prevails in terms of volume and intensity. It is mainly divided into magmatism of constructive or divergent boundaries (plate extension) and destructive or convergent boundaries (plate displacement), although sometimes plate sliding magmatism (transform) is also distinguished. In turn, oceanic and continental rift magmatism are distinguished among the geodynamic settings of the constructive plate boundaries. Among the geodynamic settings of destructive plate boundaries, magmatism of intraoceanic island arcs is distinguished. active continental margins (Andean and Californian types), collisions or collisions of continents, as well as continents and island arcs. At the same time, each geodynamic environment has magmatic formations characteristic of it, and, conversely, each magmatic formation is formed in a strictly defined geodynamic environment. The evolution of the magmatic complexes of Kuldzhuktau obeys all the above-described patterns of the evolution of magmatic processes, therefore, the authors tried to consider the evolution of volcanogenic formations in conjunction with the geodynamic evolution of the Tien Shan folded belt.

Conclusion

Summarizing all the above-mentioned features of the chemical composition of the Kuljuktau volcanics, the following conclusions can be drawn. The formation of the volcanites of the Kazakasui formation occurred under oceanic conditions, while the chemistry of andesites and rhyolites corresponds to the differentiates of oceanic tholeites, and high-titanic basalts most correspond to the formation of alkaline olivine basalts characteristic of intraplate oceanic islands (simounts).

The geodynamic regime of the formation of the basalt-andesite formation of the Shuruk formation corresponds to the regime of young island arcs, and the andesite-dacite-rhyolite formation of the Darbaza formation corresponds to the regime of the mature island arc.

The obtained conclusions allow us to identify the development areas of the Kazakasui formation as promising for the detection of ore mineralization of Au, Ag, Fe, Mn, Si, as well as rare and rare earth elements.

The rock development sites of the Shuruk and Darbaza formations can be considered promising for gold, silver and rare metal mineralization.

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PAXTAOBOD TUMANI AGROSANOAT MAJMUALARI KO`RSATKICHLARI

***Annotatsiya:** Ushbu maqolada Andijon viloyatining Paxtabod tumani agrosanoat majmualari va uning rivojlanishi, rivojlanishining ahamiyati va aholini ish bilan ta'minlash hamda tumandagi imkoniyatlar va salohiyatlardan to'liqligicha foydalanish haqida so'z yuritilgan.*

***Kalit so'zlar:** Paxtaobod, agrosanoat majmuasi, kredit, melioratsiya, yengil sanoat, issiqxona xo'jaligi, qishloq xo'jaligi, intensiv, chorvachilik*

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INDICATORS OF AGRO-INDUSTRIAL COMPLEXES OF PAKHTABOD DISTRICT

***Abstract:** This article talks about the agro-industrial complexes of Pakhtabad district of Andijon region and its development, the importance of development and employment of the population and the full use of opportunities and potentials in the district.*

***Key words:** Pakhtaabad, Agro-industrial complex, Credit, Reclamation, Light industry, Greenhouse economy, Agriculture, Intensive, Animal husbandry.*

Asosiy qism: Paxtabod tumani Andijon viloyatining shimoliy sharqida joylashgan. Shimoliy va shimoli-sharqdan Qirg'iziston respublikasining Jalolobod viloyati, g'arbdan Izboskan tumani, janubdan Andijon tumani, sharqda (58 km masofada) Qirg'iziston Respublikasi va Jalaquduq tumanlari bilan chegaradosh. Paxtabod tumani viloyat markazi Andijon shahridan 24 km shimoliy-sharqda bo'lib, dengiz sathidan 300 metr balandlikda joylashgan.

Aholisi 208.7 ming kishi. Paxtabod tumanini Qoradaryo, Tentaksoy, Chirtaksoy, daryolari kesib o'tadi. Tuman markaziga 1975 yilda Paxtabod shahri maqomi berilgan. Umumiy yer maydoni 259.9 kv km ni tashkil etadi.

QISHLOQ XO'JALIGI-Paxtabodda qishloq xo'jaligi yaxshi rivojlanib kelmoqda. Asosan paxta, sholichilik, donli ekinlar, sabzavotlar, mevalar va bog'dorchilik ancha yaxshi rivojlangan. Paxtabod tumanida qishloq xo'jaligi mahsulotlari ishlab chiqarilishi hamda ularni qayta ishlash bilan bog'liq agrosanoat majmualari rivojlanib bormoqda. Agrasanoat majmuasi(ASM)-bu qishloq xojaligi mahsulotlarini ishlab chiqarish, qayta ishlash va taqsimlashni o'z ichiga olgan turli sohalardan iborat kopleks tizimdir. Agrosanoat majmuasining asosiy maqsadi - aholini sifatli oziq-ovqat va xalq iste'moli tovarlari bilan talab darajasida ta'minlashdan iborat. Paxtabod tumanida jami ekin yer maydoni 25 992 gektar ni tashkil etadi. Shundan: Sugoriladigan maydon 15 562 gektar; bosh turgan yer maydonlari 52.6 gektar (Qishloq xojaligi yer maydonlari -50 gektar, sanoat yer maydonlari -2.6 gektar) ni tashkil etadi. Qishloq xojaligida yerlardan unumli foydalanish, yerlarini holatini yaxshilash, tuproqlarning unumdorligini oshirish uchun melioratsiya tadbirlari o'tkazilmoqda. Qishloq xojaligida paxtachilik negizida tumanda yengil sanoat korxonalari, jumladan, tekstil sanoati, to'qimachilik ishlab chiqarish va qayta ishlash korxonalari, shuningdek yengil sanoat sektori rivojlanmoqda. Yangi korxonalar ishga tushirilgan sari mahaliy aholi bandligi taminlanmoqda. Yengil sanoat asosan paxta sanoatiga tayangan bo'lib, tumanda paxta tolasini qayta ishlash va toqimachilik mahsulotlari ishlab chiqarish rivojlangan. Yengil sanoatda paxta tolasidan tayyorlangan matolar, kiyim-kechak va boshqa paxtaga asoslangan mahsulotlar ishlab chiqariladi. Yengil sanoat rivojlanishi uchun paxta sanoati (dehqonchilik) rivojlantirish kerak. Dehqonchilik rivojlanishi uchun tumanda qulay tabiiy sharoit, tuproq va barqaror iqlim sharoiti mavjud. Bu imkoniyatlardan foydalangan holda tumanda paxtachilik bilan birga kartoshka, sabzavotlar, poliz, mevalar va rezavorlar yetishtirish rivojlanmoqda. 2024-yilning yanvar-sentabr oylarida ishlab chiqarilgan dehqonchilik mahsulotlarining hajmi 1733,1 mlrd. so'mni tashkil etadi.

Dehqonchilik mahsulotlari ishlab chiqarishda dehqon xo'jaliklarining salmogi yuqori bo'lmoqda, jumladan jami yetishtirilgan kartoshkaning 69,2%, sabzavotning 49,2%, poliz mahsulotlarining 23,6%, uzumning 85,7% va mevaning 52,5 % ular hissasiga to'g'ri keladi. 2024-yilning yanvar-sentabr oylarida barcha toifadagi xo'jaliklar tomonidan jami sabzavot 150401,3 tonna, meva 35300,2 tonna yetishtirildi.

Xo'jalik toifalari bo'yicha asosiy turdagi dehqonchilik mahsulotlarini ishlab chiqarish yilning yanvar-sentabr)

	Tonna	O'sish sura'ti,foi zda	Tonna	O'sish sura'ti,foi zda	Tonna	O'sish sura'ti,foiz da
Jami don	73184,4	100,8	2107,4	213,1	3043,6	163,1
Kartoshka	6412,9	61,8	14385,8	134	2	0,0
Sabzavotlar	76412,1	108,2	73959,2	107,1	30	0,0
Poliz	12968,5	100	4003,2	152,4	0,0	0,0
Mevalar va rezavorlar	16710,3	103,6	18529,6	103,1	60,3	32,6
Uzum	301,5	106,9	1817	101,7	2	0,0

Dehqonchilik mahsulotlari ishlab chiqarishda dehqon xo'jaliklarining salmogi yuqori bo'lmoqda, Jumaladan jami yetishtirilgan kartoshkaning 69,2%, sabzavotning 49,2%, poliz mahsulotlarining 23,6%, uzumning 85,7% va mevaning 52,5 % ular hissasiga to'g'ri keladi. 2024-yilning yanvar-sentabr oylarida barcha toifadagi xo'jaliklar tomonidan jami sabzavot 150401,3 tonna, meva 35300,2 tonna yetishtirildi. Tumanimiz o'zining yer resurslari va iqlimi bilan issiqxona biznesi uchun qulay hududdir. Issiqxonalar sabzavotlar, o'simliklar va boshqa qishloq xo'jaligi mahsulotlarini yetishtirishda iqlim sharoitlarini nazorat qilish imkonini beradi. Issiqxona xo'jaligini muvaffaqiyatli yuritish uchun zarur infratuzilma, ayniqsa, suv ta'minoti, elektr energiyasi va transport tizimlarini yaxshilash zarur. Tumanimizda issiqxona xo'jaligi kichik va o'rta biznesni rivojlantirish uchun davlat tomonidan kichik fermerlarga va tadbirkorlarga imtiyozli kreditlar berildi. Tumanimizda yengil sanoatni rivojlantirish uchun ham chora tadbirlar o'tkazilmoqda. Xususan tumanimizda yengil sanoatni rivojlantirish uchun imkoniyatlar bor. Jumladan, "Xayotbaxsh" mahallasi xududidagi to'qimachilikka ixtisoslashgan kichik sanoat zonasida 55 gektar yerda 10 ta lotlarda tekstil va to'qimachilik ishlab chiqarish, matolarni bo'yash, tayyor trikotaj mahsulotlari ishlab chiqarish xamda 5000 nafardan ziyod ish o'rni yaratish imkoniyati bor. Tumanimizda barcha sohalar tez rivojlanib bormoqda. Buning uchun tumanimizda barcha shart-sharoitlar mavjud.

Xulosa va Takliflar : Shuni xulosa qilib aytish mumkinki, Paxtabod tumanida yildan yilga agrosanoat majmuasi rivojlanib bormoqda. Ayniqsa, yengil sanoatga doir songgi yillarda juda ko'p korxonalar ishga tushurildi. Bu korxonalar ishga tushurilishi natijasida bosh turgan joylar korxonalar bilan band bo'ldi va aholi ish bilan ta'minlandi. Aholini bandligini ta'minlashda yana bir loyiha "Navbaxor mahallasida "2U" MCHJ tomonidan umumiy qiymati 28,5 mln. Dollorlik agrosanoat klasterini tashkil etish loyihasini amalga oshirish natijasida 150 ta doimiy, 1200 ta mavsumiy ish o'rni yaratish imkoni bor. Bu imkoniyatlardan to'laligicha foydalanilsa tumanimizda aholi bandligi ta'minlanadi va agrosanoat

ham rivojlanib boradi. Tumaniz rivojlanib borishi uchun barcha shart- sharoitlar yaratilgan. Shuni ta'kidlab o'tish lozimki, tumanimizda aholi bandligini ta'minlash uchun aholiga foizsiz kreditlar berilmoqda. Berilgan kreditlardan aholi foydalanib, issiqxona, tikuv sexlari, parrandachilik fabrikasi, chorva mollarini boqib ko'paytirish intensiv usulda qo'yilishi kerak.

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XORIJ TAJRIBALARI ASOSIDA O'ZBEKISTONDA PEDAGOG KADRLAR TAYYORLASHNI TAKOMILLASHTIRISH MASALALARI

***Annotatsiya.** Ushbu maqolada o'qituvchilar uchun o'quv, ijtimoiy va kasbiy qo'llab-quvvatlash tizimini rivojlantirish istiqbollari belgilashda mamlakatimiz uchun ham, umuman jahon hamjamiyati uchun ham katta qiziqish uyg'otayotgan ayrim fanlar bo'yicha o'qituvchilarga bo'lgan ehtiyojlarni o'rganish asosida pedagog xodimlarni tayyorlash va ular bilan samarali ishlash tufayli yuqori pedagogik ta'lim jarayonlariga erishgan mamlakatlar tajribasi tahlil etiladi.*

***Kalit so'zlar:** pedagog kadr, sivilizatsiya, o'qituvchi, standartlar, ta'lim dasturlari, strategiya, tizim, tarkibiy o'zgarishlar, dolzarblik.*

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BASED ON FOREIGN EXPERIENCES TEACHER TRAINING IN UZBEKISTAN IMPROVEMENT ISSUES

***Abstract.** This article discusses the needs of teachers in some disciplines, which are of great interest for both our country and the world community in determining the prospects for the development of the system of educational, social and professional support for teachers. The study analyzes the experience of countries that have achieved high pedagogical education processes due to the training of pedagogical staff and effective work with them.*

***Keywords:** pedagogical staff, civilization, teacher, standards, educational programs, strategy, system, structural changes, relevance.*

Jahonda inson omili va kapitali, qobiliyati va salohiyatidan innovatsiyalarni, raqamli boshqaruv tizimi va axborot kommunikatsiya vositalarini joriy qilish asosida samarali foydalanish keng tadbiiq etilayotgan bugungi kunda, pedagog kadrlar tayyorlashdagi muammolar inson kapitali sifatining o'sishini susayishiga sabab bo'lmoqda. Pedagogika oliygohi bitiruvchisi, nafaqat fuqarolarni bilimli qilib tayyorlash va mamlakat inson kapitalini shakllantirish, shu bilan birga mavjud o'qituvchilik qadriyatlarini asrab-avaylash, rivojlantirish va keyingi avlodga uzatishda ham muhim bo'g'in hisoblanadi.

Shu bilan birga ohirgi yillarda dunyoning qator mamlakatlarida (iqtisodiy taraqqiy etgan mamlakatlarda ham) ta'lim tizimining barcha bosqichlarida yuqori malakali pedagog kadrlar tanqisligi kuzatilmoqda. Respublikamizda ham kadrlar bo'shlig'ini to'ldirish, shu jumladan, umumta'lim maktablarida pedagog kadrlarga

bo'lgan ehtiyojlarni qondirish ob'ektiv zarurat. Ushbu masalalarni hal qilish mexanizmlarini ilg'or horijiy tajribalar asosida ishlab chiqish zarurati tadqiqotning dolzarbligini belgilaydi va ushbu ishning tadqiqot mavzusi sifatida tanlanishiga asos bo'ldi.

Ta'limda ixtisoslashtirishning ilmiy asoslangan tizimi joriy qilinmaganligi, ta'lim tarmoqlarida moddiy-texnik va innovatsiya tizimining talab darajasida emasligi, oliy ma'lumotli professional pedagog kadrlar tayyorlaydigan Oliy ta'lim muassasalari (OTM)ning malaka oshirish va qayta tayyorlash muassasalari bilan integratsion munosabatlaridagi muayyan muammolarning yuzaga kelishi natijasida xalq ta'limi tizimida ayrim fanlar (boshlang'ich ta'lim, rus tili va adabiyoti, ingliz tili, matematika, informatika va axborot texnologiyalari, kimyo, fizika va astronomiya) bo'yicha o'qituvchilarga bo'lgan ehtiyoj qondirilmay qolmoqda.

Pedagoglar tayyorlash hamma davrda aniq tarixiy tavsifga ega va shunday bo'lib qoladi. Keyingi davr Sharq va O'rta Osiyo allomalari, ma'naviyat va ma'rifat darg'alari pedagog kasbi mohiyati, uning ijtimoiy-iqtisodiy tavsifi to'g'risida qimmatli so'zlarni aytganlar. Buni biz Abdulla Avloniy, Oybek, G'afur G'ulom, Abdullo Oripov va kenja avlod ta'limotida yaqqol ko'ramiz.

O'zbekiston Respublikasi Prezidentining 2020-yil 27-fevraldagi "Pedagogik ta'lim sohasini yanada rivojlantirish chora-tadbirlari to'g'risida"gi PQ-4623-son Qarorida pedagogik ta'lim sohasini yanada takomillashtirish, zamonaviy bilim va pedagogik texnologiyalarni qo'llash ko'nikmalariga ega, mamlakatimizni ijtimoiy-iqtisodiy rivojlantirishda munosib hissa qo'shuvchi yuqori malakali mutaxassislar tayyorlash uchun professional pedagog kadrlar yetkazib berish, sohaga ilg'or ta'lim texnologiyalarini joriy qilish kerakligi asosiy maqsad ekanligi qayd etilgan. 2022-2026-yillarga mo'ljallangan O'zbekistonning taraqqiyot strategiyasi"da ham ushbu mavzu yuzasidan fikrlar yuritilib, bir qancha ustuvor vazifalar belgilab berilgan.

Ushbu maqolada o'qituvchilar uchun o'quv, ijtimoiy va kasbiy qo'llab-quvvatlash tizimini rivojlantirish istiqbollari belgilashda mamlakatimiz uchun ham, umuman jahon hamjamiyati uchun ham katta qiziqish uyg'otayotgan ayrim fanlar bo'yicha o'qituvchilarga bo'lgan ehtiyojlarni o'rganish asosida pedagog xodimlarni tayyorlash va ular bilan samarali ishlash tufayli yuqori pedagogik ta'lim jarayonlariga erishgan mamlakatlar tajribasi tahlil etiladi. Ma'lumki, hozirgi kunda mamlakatimizda ta'lim tizimini, xususan, pedagogikani jamiyatning yangi talablariga muvofiq, tez o'zgaruvchan ijtimoiy-iqtisodiy shart-sharoitlar, umuman ta'lim paradigmasining o'zgarishi bilan isloh qilishga katta ahamiyat berilmoqda.

O'zbekistonda salohiyatli pedagogik ta'lim tizimi azaldan mavjud. Shu bilan birga o'zbek pedagogik ta'lim tizimining ijobiy jihatlaridan biri, O'zbekiston iqtisodiyoti rivojlanayotgan va mehnat bozorining barqaror bo'lmagan sharoitida pedagogika ta'lim yurti bitiruvchisi o'z kasbi bo'yicha faoliyat yuritmasa ham, shu diplom bilan boshqa sohada o'z faoliyatini davom ettira olish imkoniyati kengligidir. Chet el universitetlarida, shu jumladan, Amerika pedagogika oliy o'quv yurtlari bitiruvchilarining tor doiradagi mutaxasislari mehnat bozori ehtiyojlari va o'zgarishlariga moslashuvda hamda ayrim fanlar bo'yicha o'qituvchi-mutaxasislarni tayyorlashda muammolar paydo bo'lmoqda. Shunga ko'ra,

O'zbekistonda pedagogika ta'lim yurtlari bitiruvchilarining umumiy va kasbiy malakasi yuqoriligi o'tish davri iqtisodiyoti uchun qulay bo'ldi. Yevropa mamlakatlarida maxsus pedagogika oliy ta'lim muassasalari yo'q, biroq pedagogika institutlarini o'z ichiga olgan yirik universitetlar faoliyat yuritadi. Yevropa standartlariga ko'ra, ta'lim doirasida turli tarmoqlar va kasblar o'rtasida harakatlanishga imkoniyat ko'plab oliy o'quv yurtidan keyingi ta'lim dasturlari orqali ta'minlanadi va ular bo'lajak o'qituvchiga yetarli darajadagi malaka beradi.

Finlyandiyada maktab o'qituvchisi bo'lish uchun juda qattiq tanlovdan o'tish zarur: pedagogika mutaxassisliklarining eng yaxshi talaba-bitiruvchilari 12% atrofida maktablarga ishga olinadi. Finlyandiya ta'lim tizimining yana bir ijobiy jihati, kichik guruhlarda o'qitishga ustuvorlik berilishi. Bu shubhasiz, ta'limning yuqori sifatda bo'lishiga olib keladi. Mamlakatda maktab ta'limining muvaffaqiyati maktab o'quvchilarini qo'llab-quvvatlash tizimi bilan ham bog'liq. Finlyandiyada jami iqtisodiyotda bandlar ulushida ijtimoiy ishchilar va psixologlar soni jihatidan, barcha Yevropa mamlakatlari orasida yetakchi o'rinlardan birini egallaydi. Buyuk Britaniyada ham o'qituvchilarni tayyorlash va qayta tayyorlash tizimini takomillashtirish uchun qulay shart-sharoitlar yaratilgan. Malakali o'qituvchi maqomini olish uchun muqobil ta'lim dasturlari ishlab chiqilgan va amalga oshirilmogda. Bular maktab bazasida o'qituvchilarni tayyorlash (School Centered Initial Teacher Training), "tezkor yo'l" (The Fast Track Programs) deb ataluvchi dasturlar va boshqalardir. Bugungi kunda ta'lim sohasida yetakchi o'rinni "aqli maktablar, ziyoli millat" strategik dasturida o'z aksini topgan mavjud imkoniyatlarni amalga oshirish paradigmasiga ega bo'lgan Singapur egallaydi. Ushbu strategiyaning asosiy g'oyasi "umrbo'yi ta'lim" g'oyasi bo'lib, u bilan mamlakat kelajagi uzviy bog'liq. Singapurda Finlandiyadagi kabi o'qituvchilik kasbi ijodkorlik hisoblanib, o'qituvchi kasbi ijobiy va jamiyatda sharaflil hisoblanadi, shuning uchun, o'qituvchi kasbiga talabgor nomzodlar eng yaxshi deb tan olinishi uchun yetarlicha uzoq va murakkab tanlov jarayonidan o'tadilar. Xitoy dunyoda eng katta aholi soniga ega bo'lgan davlat bo'lganligi sababli ham hukumat qashshoqlikni kamaytirish maqsadida ta'lim tizimini rivojlantirish dasturini ishlab chiqqan. Olib borilgan islohotlar natijasida keyingi 10 yilliklarda Xitoy ta'lim tizimi katta yutuqlarga erishdi. XX asrning o'rtalariga qadar Xitoy iqtisodiyoti asosan qishloq xo'jaligiga ixtisoslashgan bo'lib, qo'l mehnatiga tayangan dehqonchilik bilan shug'ullanishgan. Aholining katta qismi qishloqlarda istiqomat qilgan va ta'limda ko'proq gumanitar fanlar falsafa, tarix va ijtimoiy sohalarga ustuvorlik berilgan.

Xitoy yoshlari uchun pedagogik oliy o'quv yurtlariga qabul qilishning jozibali jihatlaridan biri bepul ta'lim olishning joriy etilishi bo'ldi. Bu bepul ta'lim uchun talabalar OTMni bitirganidan so'ng qishloq maktablarida ikki yil davomida ishlab berishi kerak va keyin boshlang'ich yoki o'rta maktablarda yana o'n yil ishlashlari lozim. Biroq, bunday qat'iy sharoitlarning o'zi o'qituvchilik kasbini olishga bo'lgan qiziqishni oshirish uchun etarli emas. Shuning uchun o'qituvchilar uchun ijtimoiy imtiyozlar va yuqori ish haqi oshishi doimiy ko'zda tutilgan. Amerika, Yevropa va Osiyoning bir qator mamlakatlarida pedagog kadrlar tayyorlashdagi umumiy tendensiya o'qituvchilik kasbining nufuzini oshirish, kasbiy malakali o'qituvchini

ish bilan ta'minlash va saqlab qolish, kadrlar siyosatini takomillashtirish, o'qituvchilarni o'z ustida ishlashga jalb etish, professional jamoalarni, zamonaviy pedagogik texnologiyalarni rivojlantirish orqali kasbiy kompetentlikni oshirish bo'yicha sa'y-harakatlarni yo'naltirishdan iboratdir.

Angliya va AQSh universitetlarida bo'lajak o'qituvchilarni kasbiy tayyorlash tizimi ko'p darajali-bakalavr, magistraturadan iborat. Qozog'iston va Rossiyada bakalavr, mutaxassis, magistr sifatida bo'lajak o'qituvchilarni kasbiy tayyorlash tizimi shakllangan. Ta'lim muddati 4 yildan 11 yilgacha belgilangan. Aksariyat o'qituvchilar ta'lim sohasida gumanitar fanlar magistri yoki aniq fanlar magistri darajasi bilan universitetlarni bitirib chiqadilar. O'rta hisobda ma'lum bir mutaxassislik bo'yicha magistr darajasini olgan talabalar 4-5 yil davomida o'qiydi. Hozirgi kunda Angliyadagi davlat maktablarida ta'limning barcha darajalarida (maktabgacha, boshlang'ich, shu jumladan tayyorlov va o'rta ta'lim sinflarida) dars berish uchun malakali o'qituvchi maqomiga ega bo'lish lozim.

Jumladan, maktabgacha ta'lim qamrovining oshishi, 11 yillik umumiy o'rta ta'lim tizimini qayta joriy qilinishi hamda oliy ma'lumotli kadrlar tayyorlash ko'lamining kengayishi munosabati bilan yuqori malakali mutaxassislarga nisbatan yuzaga kelayotgan ehtiyojni o'z vaqtida ta'minlash maqsadida so'nggi yillarda pedagog kadrlar tayyorlashga ixtisoslashgan xorijiy va mahalliy oliy ta'lim muassasalari faoliyati kengaytirildi, mazkur ta'lim sohasi bo'yicha xorijiy davlatlar bilan qo'shma ta'lim dasturlari tashkil etildi. Bugungi kunda umumiy o'rta ta'lim maktablari soni 1990-1991-o'quv yiliga nisbatan 1797 taga ko'payib, 21,6 foizga oshgan. Shundan, shahar joylardagi umumiy o'rta ta'lim maktablari soni yillar davomida o'sib borib, 1990-1991-o'quv yiliga nisbatan 2 188 taga ko'payib, 1,3 barobar oshgan. Qishloq joylarda umumiy o'rta ta'lim maktablari soni 5,1 foizga kamayish tendensiyasi urbanizatsiya jarayoni ta'sirida qishloqlarni shaharga aylantirilishi hisobiga sodir bo'lgan. O'quvchilar soni dinamikasining tahlil natijalari shuni ko'rsatmoqdaki, 2000-2001 o'quv yiliga nisbatan 199 500 taga ko'payib 3,3 foizga oshgan. O'zbekiston Respublikasida 2000-2001 o'quv yilida 6 083 700 o'quvchi ta'lim olgan bo'lsa, 2010-2011 o'quv yilida 4 695 300 o'quvchi, 2020-2021 o'quv yilida esa 6 283 200 nafar o'quvchi ta'lim olgan. Tahlillar natijasiga ko'ra, o'n yil davomida o'rtacha 19,3 foizga o'quvchilar soni oshib borsa, 2030-yilga kelib O'zbekiston Respublikasida o'quvchilar soni 7 495 858 dan, ya'ni bir yilda 749 585 nafar o'quvchidan oshib ketishi prognoz qilinmoqda.

Tahlillar shuni ko'rsatmoqdaki, shahar joylarda o'qituvchilar soni 2,2 barobarga ortgan bo'lsa, qishloq joylarda 4,0%ga oshgan xolos. Sababi yuqori bilimli kadrlar shahar joylarda qolishmoqda. Bir o'qituvchiga to'g'ri keladigan o'quvchilar soni dinamikasi, kishi Bitta o'qituvchiga to'g'ri keladigan o'quvchilar soni dinamikasi o'rganilganda, o'rtacha ko'rsatkich 2010-2011 o'quv yiligacha -2,4 nafargacha kamayib kelayotgan edi. 1 ta maktabga to'g'ri keladigan o'qituvchi soni yillar mobaynida o'sib borib 2016-2017 o'quv yiliga nisbatan 9 nafarga ya'ni 22,0% ga oshgan. Umumiy o'rta ta'lim maktablariga o'qituvchilarining qaytishi, so'nggi yillarda mamlakatimizda ta'lim tizimida amalga oshirilayotgan islohotlar, ta'lim sohasining barcha bosqichlarini zamonaviy talablar asosida tashkil etish bo'yicha

amaliy ishlarning amalga oshirilishi, jumladan moddiy va ma'naviy rag'batlantirishlarning muntazam ravishda oshib borayotganligi sababli ushbu o'rtacha ko'rsatkich oshib bormoqda.

Xulosa qilib shuni aytish mumkinki, xalq ta'limi tizimida ayrim fanlar bo'yicha o'qituvchilarga bo'lgan ehtiyojlarni o'rganish asosida pedagog kadrlar buyurtmasini shakllantirish mexanizmlarini takomillashtirish asosida tarmoq samaradorligini oshirishda to'planib qolgan yuqoridagi muammolarni xalq ta'limi bo'yicha ilmiy jixatdan asoslangan va amaliy ahamiyatga molik bo'lgan fikr muloxazalar, taklif va tavsiyalarni ishlab chiqish bugungi kunning eng dolzarb masalalaridan biri bo'lib qoladi.

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MAKTABGACHA TA'LIM TASHKILOTLARIDA ERTAKTERAPIYADAN FOYDALANISH

Tayanch so'zlar: "Art terapiya", diagnostika, estetik ehtiyojlar, rivojlanish, Ertak terapiya, kompleks yondashuv, meditatif, psixoterapevtik yondashuv, didaktik yondashuv, psixologik yondashuv, psixokorreksion yondashuv.

Annotatsiya: Ushbu maqolada Maktabgacha ta'lim tashkilotlarida ertak terapiyaning qo'llanilishi, ularning ahamiyati va maktabgacha yoshdagi bolalarning har tomonlama rivojlanishida art-terapiyaning ahamiyati haqida so'z yuritildi.

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THE USE OF ERTACTHERAPY IN PRESCHOOL EDUCATIONAL ORGANIZATIONS

***Key words:** "Art therapy", diagnostics, aesthetic needs, development, fairy tale therapy, integrated approach, meditative, psychotherapeutic approach, didactic approach, psychological approach, psychocorrectional approach.*

***Abstract:** This article discusses the use of fairy tale therapy in preschool education organizations, their significance, as well as the significance of art therapy in the comprehensive development of preschool children.*

Ertak terapiyaning masadi va vazifasi bolalardagi agressivlik kayfiyatini yo'qotish, o'z-o'zini emotsional boshqarish va o'zgaralar bilan ijobiy munosabatni rivojlantirishdir. Buning uchun ertakterapiya soddaligi va bolalarning ertakka bo'lgan qiziqish tufayli ular uchun tushunarli bo'lgan ertak uslubi va bolalar bilan ishlash yo'llaridan foydalanishdir. Har bir bola bir yoki boshqa ertakni o'zicha tushunadi va qabul qiladi. Shuning uchun bir ertak unda katta ta'surot qoldiradi, boshqasi esa uning his-tuyg'ulari qo'zg'almay, yonidan o'tib ketadi. Hayotiy vaziyatlar daftarchasi yana bir katakchaga ko'paymaydi, degani emas, u shunchaki

bola bu kabi muammoga, masalan, kuyov va qaynona kelin va qaynona o'rtasidagi tanlov muammosiga duch kelmaguncha ta'sir kuchiga ega bo'lmaydi. Ertak terapiyasi bu bolani tarbiyalashga kompleks yondashuv. Ammo agar siz terapiya orqali ta'lim jarayonini tarkibiy qismlarga ajratib tahlil qilsangiz, ushbu ajoyib usul hal qiladigan vazifalarning to'liq ro'yxatini olishingiz mumkin: Ertakning vazifalari: diagnostik; prognostik; terapevtik.

"Ertak"-so'zi "er", aslida "ir" ("yir", jir) so'ziga o'xshatishni bildiruvchi "tak" qo'shimchasining qoshilishidan tarkib topgan bo'lib, qo'shiqqa o'xshash degan ma'noni anglatadi. Negaki, ertaklar avji boshlanmasi qo'shiqqa o'xshab ketadi. Shuningdek, ba'zi ertaklar tarkibida she'riy qismlar ham uchrab turadi.

Ertak terapiyasi bola idroki uchun murakkab narsalarni unga yengil shaklda yetkazish bilan ertak yordamida ishonchli aloqa o'rnatish, unga yaqin kishiga aylanish usullaridan biridir. Bolalar uchun ertak terapiyasi mutaxassislarining ta'kidlashicha, ertaklar bolaning dunyoqarashini kengaytirib, uning hayotga ongli munosabatini shakllantirar ekan. Bola ertak orqali yaxshilik va yomonlik, ezgulik va yovuzlikni bir-biridan farqlashni o'rganadi. Bu tushuncha uning psixologiyasida bir umrga muhrlanib qoladi va bola voyaga yetganidan keyin ezgu ishlarga odatlanadi. Korney Ivanovich Chikovskiy shunday yozgan edi:

"Menimcha ertakning maqsadi bolada birovning g'am-tashvishi uchun qayg'urish, o'zganing shodligi uchun xursand bo'lish, begona insonning taqdirini xuddi o'ziniki kabi boshdan o'tkazish kabi insoniylikni qanday bo'lmasin tarbiyalashdan iboratdir". E'tibor bering-a, bu yerda ikki insonning o'zaro bir-birini tushinishi, bir-biriga g'amxo'rlik qilishi haqida gap bormoqda. Ertaklarga o'z ijodidan jahon psixologlaridan E.Fromm, E. Bern, E. Gordner, I. V. Vajkov, M. Osorina, E. Lisina kabi psixologlar murojaat qilganlar.

"Ertak terapiyasi" - bu psixoterapiya yo'nalishidir, uning yordamida xulq-atvor reaksiyalari va qo'rquvlarini tuzatish, ijodiy salohiyatni rivojlantirish va ongni kengaytirish amalga oshiriladi. Ushbu usul turli yoshdagi bemorlarga muvaffaqiyatli qo'llanilmoqda. Ammo ko'pincha bolalarning xulq-atvori patologiyalari bo'lsa, ertaklarning yordamiga murojaat qilishadi. Ertaklar uslubini o'rgangan olimlar orasida I. Vachkov, T. Zinkevich-Yevstegneeva, E. Lisina va boshqa hurmatli mutaxassislar bor. Ertaklarga bolalar adolat va adolatsizlik haqida o'zlarining ilk tasavvuriga ega bo'ladilar. Ertak bolaning murakkab hayotiy muammolarni hal qilish usullarini ongida saqlab qolishga va qayg'urishga majbur qiladi. Bunda hayotga qarama-qarshi kuchlarning to'qnash kelishi va ularni hal qilish borasidagi tajriba ortib boradi hamda ijodiy tasavvur rivojlanadi. Aynan xotira bilan uyg'unlashgan tasavvur bolaga hayotda bolaga shu kabi muammolarga duch kelganda qisqa vaqt ichida to'g'ri va samarali yechimini topishga imkon beradi. Hayotda boshi berk ko'chalar bo'lmaydi. Ko'pincha inson shunchaki, ulardan chiqib ketishga tayor bo'lmaydi. 3. Ertak terapiyasi usuli quyidagilarni o'z ichiga oladi :

1. didaktik;
2. psixologik;
3. psixokorreksion.
4. meditatif;



5. psixoterapevtik;

Didaktik ertak - o'qish eng oddiy va oson. Ular boshlang'ich maktab yoshidagi bolalar va maktabgacha yoshdagi bolalar bilan ishlashda qo'llaniladi. Bunday ertaklarning vazifasi - misollar yordamida ko'nikmalarni etkazish va chaqaloqqa yangi bilimlarni o'rgatish. Bunday terapevtik hikoyalar qahramonlari oddiy vazifalarni bajaradilar va bu mahorat nima uchun juda muhimligini tushuntiradilar (qanday qilib yo'lni kesib o'tish, idishlarni o'z-o'zidan yuvish, xushmuomala bo'lish,

o'yinchoqlarni tozalash va boshqalar).

Ertak ertakni "jonlantiradi" va oddiy harakatlar sehr bilan tegadi, shuning uchun chaqaloqni to'g'ri harakatlar uchun juda samarali tashviqoti olinadi.

Psixologik ertak - psixologik ertak, didaktik singari, bolaga xayoliy qahramonlar misolida to'g'ri xulq-atvorni o'rgatadi. Ammo agar didaktik variant hayotning har kungi tomoniga tegishli bo'lsa, unda psixologik variant shaxsiy o'sish sohasiga ta'sir qiladi. Bu yerda rivoyat qiluvchi yuqori toifalarga kiradi, yaxshilik va yomonlikning namoyon bo'lishi, nima uchun boshqalarni sevish, nega bu juda muhim va bor narsangizni qadrlash.

Psixokorreksiya haqida ertak-bu odamning xatti-harakatlarini o'zgartiradigan xayoliy hikoya. Bunday ertaklar har doim taqqoslashga asoslangan. Birinchi holda, qahramon "yomon" harakat qiladi (ya'ni samarasiz), keyin tinglovchiga qahramon xatti-harakatlarining alternativ modeli ko'rsatiladi. Natijada, bola nafaqat ota-onasining zerikarli o'rgatuvchi ma'ruzasini tinglaydi. Uning o'zi tinglangan materialga asoslanib, o'zini qanday tutish kerakligi to'g'risida xulosa qiladi.

Meditativ ertak -eng qiyin ertak terapiya arsenalidir. Bu mantiqiy tuzilmani va aniq hikoya chizig'ini talab qilmaydi. Asosiy shart - bu yorqin tasvirlar va tasvirlarni osongina tinglashadi. Tinglovchilarni maksimal qiziqish va kontsentratsiya tufayli ertakga botirish juda muhimdir.

Bolaga ertak aytib berayotib unga quyidagi savollarni berishingiz mumkin:

1. Bu ertak nima haqida?
2. Ertak qahramonlarni qanday sifatlarga ega? Ular kimga o'xshaydilar?
3. Nega ertak qahramonlari qanday sifatlarga ega?
4. Bosh persanaj qiyin vaziyatlardan qanday chiqib ketadi? buni uning o'zi uddalaydimi yoki yoki unga bu ishda kimdir yordam beradimi?
5. Qahramonlarning xatti-harakatlari atrofdagilarga nima beradi-quvonchmi, qayg'umi? Qahramonlar o'rtasidagi o'zaro munosabatlar qanday?
6. Ertak, uning ayrim qismlari qanday tuyg'ularni uyg'otadi?

Bolalar uchun ertak ularning xayolini, mantiqiy va obrazli tafakkurini rivojlantirib, nutqini o'stiradi. Ertaklar xavotirlikni yo'qotib, o'ziga ishonch orttiradi. N.L.Kryajeva qizg'anchiq, egoist bolalarga "Baliqchi va baliq" haqidagi ertakni, qo'rqoq bolalarga - "Qo'rqoq quyonlar" haqidagi ertakni, ishonuvchanlariga "Buratinoning sarguzashtlari"ni, qaysar bolalarga "No'xat ustidagi malika"

ertagini, tinib-tinchimas bolalarga "Etik kiygan mushuk"ertagini aytib berish taklif qiladi.1-1.5 yoshdagi bolalar uchun ertak mazmuni tushunarsiz bo'lishi mumkin, lekin ertakdagi "bobo", "buvi "sichqoncha kabi so'zlar biroz tanish bo'lib, bu ertakni bola uchun qiziqarli qiladi hamda uyqu oldidan aytib berish uni tinchlantiradi. 3 yoshdan keyin bolada obrazli tafakkur shakllana boshlaydi, u endi tasavvur qila oladi.Ularga endi murakkabroq mazmundagi sehrlil ertaklarni taklif qilish mumkin.

4.Ota-onalarga maslahatlar:

1.Ota-onalar farzandiga ertakni o'qib emas, balki aytib bersalar maqsadga muvofiqdir.Chunki bu ota-onaga dilbandining ertakga qanday munosabat bildirganligini kuzatish imkonini beradi.Qolaversa, ota-onalar farzandi bilan birgalikda ertaklar olamiga sayr qiladi, bu esa bolaning unga yolg'iz sayohatidan ko'ra avzaldir.

2. Bolalar o'zgarlar tomonidan tasvirlangan obrazlarni yaxshiroq qabul qilish qobiliyatiga ega. Shuning uchun farzandingizga ertak aytib berish chog'ida unda yozilgan barcha manzaralarni tasvirlab berishga harakat qiling.

3. Bolangizga ertakni o'zi tanlash imkonini bering. Agar u o'n martalab "Qizil qalpoqcha" haqida eshitishni xohlasa, demak bu bekorga emas.Bu ertak unin ongi shakllanishiga imkon bermoqda, unda qandaydir jarayon sodir bo'lmoqda.

4. Muhim bo'lgan yana bir qoida-bolaga ertakning chuqur ma'nosini tushuntirib bermaslik kerak.Aks holda, ertak o'ladi-o'z ahamiyatini yo'qotadi va undan hech qanday naf bo'lmaydi.Xalq ertaklariga iloji boricha tuzatish va o'zgartirishlar kiritmaslik kerak, ayniqsareal hayot bilan bog'liq bo'lgan.bu o'zgartirishlar bolaning ertaklar olamini qabul qilishida qiyinchilik tug'diradi.

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G'ALLAOROL TUMANI GEOEKOLOGIK MUAMMOLARI

Annotatsiya: Ushbu maqolada kichik hududlardagi asosiy geoeologik muammolar, ularning inson xo'jalik faoliyatiga ta'siri va asosiy yechimlari haqida so'z yuritilgan.

Kirish so'zlar: Geoeologiya, geoeologik muammo, sel, ko'chki, tuman, sho'rlanish muammosi, tabiiy va antropogen omillar

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GEOECOLOGICAL PROBLEMS OF GALLAOROL DISTRICT

Abstract: This article talks about the main geoeological problems in small areas, their impact on human economic activity and the main solutions.

Key words: Geoeology, geoeological problem, flood, landslide, fog, salinity problem, natural and anthropogenic factors

Kirish. Insoniyat butun tarixi davomida tabiiy boyliklardan foydalanib kelishi natijasida yer qa'rining foydali qazilmalari qazib olinadi, suv, o'simlik, hayvon va yer resurslaridan faol foydalaniladi. Bunda zararli chiqindilar biosferaga chiqarilib yuboriladi. Bu jarayon atrof-muhitning keskin yomonlashtirishi, biosferaning kuchli salbiy tomonga o'zgarishi XX asrning o'rtalaridagina sezila boshlandi. Biosfera faoliyatining qonuniyalarini yaxlit tizim sifatida tushunish masalasi bugungi kunda dolzarb bo'lib qolmoqda. Geoeologik muammolar hozirgi zamonda umuminsoniy miqyosda hal qilinadigan muammolarga aylanib bormoqda. Hozirgi kunda yurtimizda antropogen va tabiiy omillar ta'sirida ko'plab geoeologik muammolar vujudga kelmoqda. Jumladan cho'llashish, tuproq sho'rlanishi va melorativ holatining buzulishi, sel, suv toshqini, kuchli shamollar, surilma va boshqalar.

G'allaorol tumanida tabiiy kuchlar ta'sirida ro'y beradigan va geoeologik resurs imkoniyatlariga ta'sir etuvchi hodisa va jarayonlar natijasida yuzaga keluvchi eroziya, deflyasiya, sho'rlanish, cho'llashish, sel, tuproq ko'chishi, zilzila va h.k. jarayonlar yuz bermoqda. Shu kabi ba'zi geoeologik muammolarni tumanida ham uchratish mumkin. Jizzax viloyati tarkibiga kiruvchi G'allaorol tumani Sangzor -

G'allaorol tog' oralig'i botig'ida joylashgan. Tuman viloyatning g'arbiy va janubi - g'arbiy qismidan o'rin olgan. Uning hududini Qo'yto'sh tog'lari, sharqdan G'arbiy Turkiston tog'larining davomi hisoblangan Molguzar tog'i o'rab turadi.

G'allaorol tumani 1926-yil 29-sentabrda tashkil etilgan. 1931-yilgacha Yangiqo'rg'on deb atalgan. Tuman tashkil etilgan vaqtda uning tarkibiga Qoraqishloq, Galduravut, G'o'bdin, Chag'alak, Qoratosh, Baxmal, Mo'g'ol, Tangatopti, Yangiqo'rg'on, Korizquduq qishloq kengashl 1931 yili tuman nomi G'allaorol deb o'zgartiriladi. 1962-yili sobiq Ittifoqning ma'muriy tuzilishiga o'zgartirishlar kiritilishi munosabati bilan, hududiy boshqarmalar tuzilib, tumanlar yiriklashtiriladi. Shunda, G'allaorol va Bulung'ur tumanlari bitta hududiy boshqarmaga aylantirilgan. 1964 yilga kelib tuman yana qayta tashkil qilingan. G'allaorol tumanining umumiy maydoni 1859 km. kv, bu viloyat umumiy maydonining salkam to'qqiz foizini tashkil etadi. Tuman viloyatda maydonining kattaligiga ko'ra Forish (9,54 ming km. kv) va Zomin (2.2 ming km. kv) tumanlaridan keyin, uchinchi o'rinda turadi. G'allaorol tumanining umumiy chegara uzunligi 204,6 kilometr. Tuman shimoldan Forish (chegara uzunligi 59,2 km), sharqdan SH.Rashidov (chegara G'allaorol tumani tabiiy-geografik o'rniga ko'ra markaziy va g'arbiy qismlari tekislikdan iborat bo'lsada, tumanning shimoliy va shimoli-g'arbiy qismi qir, baland qir va tog'lardan iborat. Shimoldan Nurota tizmalari, sharqdan Molguzar tog'i bilan o'ralgan. Tuman hududi shimolda 1600-1900 metr dan markazga qarab 350-400 metr gacha pasayib boradi.

Tumanning aynan tog'lik qismida Nurota va Molguzar tog'larining etaklarida joylashgan qishloqlar Moltob, Juma, Qorong'ul, Jiydali, Baxmalsoy va boshqa hududlarda har yili bahor va kuz mavsumida yog'ingarchilik ko'p bo'lgan vaqtda sel xavfiga duch kelishadi. qazilib, mavjudlari ham yog'ingarchilik mavsumidan oldin kengaytib tozalanadi.



1-rasm.Sel toshqini oqibatlari

Bir necha soat ichida jala tarzida yog'gan yomg'irlar ta'sirida ushbu hududlar sel xavfi ostida qolishadi. Bunga misol qilib 2019-yil 5-7 aprel kunlari mamlakatimizga bo'lgan kuchli yog'ingarchilik ta'sirida G'allaorol tumani Moltob qishlog'iga sel kelgan. Natijada juda ko'p xonadonlar zarar ko'rgan ba'zilari butunlay qulab tushgan, odamlar ekin dalalari va chorva mollaridan ayrilgan hattoki qishloq hududidan o'tgan "Toshkent-Samarqand" tezyurar "Afrosiyob poyezdi" temir yo'li ostidan o'tgan quvurlarga ham zarar yetgan.

Bundan tashqari 2022-yil may oyidagi kuchli yog'ingarchilik tuman hududidagi Qorong'ul qishlog'i ham yetarlicha talofat yetkazgan. Aloha o'zining chorva mollaridan ayrilgan, ba'zi eski uylarning devorlari qulab tushgan. Har yili aynan yog'ingarchilik mavsumida tog' etaklarda joylashgan qishloqlar shu kabi talofatlar ko'radi. Sel xavfini kamaytirish maqsadida ushbu hududlarda turli xil kanallar va ariqlar G'allaorol tumani atmosfera havosining ifloslanishi ham boshqa bir lokal ko'rinishdagi geoeologik muammo bo'lib, asosan sanoat zonasi va Marjonbuloq koni atrofida yashaydigan aholi vakillari uchun muammo keltirib chiqarmoqda. Tabiiy komponentlarning, shuningdek yonma-yon geotizimlarning uzviy bog'liqligi komponentlardan biriga biror maqsadda qilingan ta'sir ko'pincha boshqa komponentlarga ataylab qilinmagan ta'sirning sodir bo'lishiga olib keladi (suv omborlarini qurish – atrofdagi yerlarni suv bosishiga, yer osti suvlarining olinishi – yer yuzasining cho'kishiga va h.k.

Xususan, Marjonbuloq oltin koni Janubiy Nurota tog'larining sharqiy tarmog'idagi Marjonbuloq qirlarida joylashgan bo'lib, respublika ahamiyatidagi kon hisoblanadi. Kondan har yili ko'plab miqdorda rudalar qazib olinadi. Bevosita qazib olish jarayonida va kon o'z ish faoliyatini olib borishi davomida atmosferaga ko'p miqdorda zaharli tutun va gazlarni chiqaradi. Bu esa Marjonbuloq koni atrofida joylashgan qishloqlar havosining ifloslanishiga sabab bo'ladi. Aholi vakillarining fikriga ko'ra keyingi yillarda kon atrofida yashovchi aholi vakillarida o'pka kasalliklarining ortish kuzatilgan. Hamda chorva mollarining asosan mol va qo'ylarning kasallanishi, ularning tishlari to'kilish holati kuzatilgan. Ayniqsa kon atrofi qishloqlaridagi mevali daraxtlar hosil bermayotgani ham anchagina jiddiy muammo hisoblanadi.

Shunga o'xshash yana bir muammo hozirgi vaqtda G'allaorol shahri Samarqand va G'ofur G'ulom mahallalari aholisini ham tashvishga solmoqda. Har qanday xo'jalik faoliyati geotizimlarning bir maromda rivojlanishiga ta'sir etish bilan kechadi. Antropogen ta'sir aholi soni va ehtiyojining ortishi hamda texnikaning rivojlanishiga mos holda jadal sur'atda ortib bormoqda. Mazkur ta'sirning miqyosi, tezligi va boshqa ko'rsatkichlari asosida tabiiy muhit ma'lum darajada o'zgarishga uchraydi.

Chunki ushbu mahallalardan 200 metr narida kimyoviy og'it ishlab chiqarish korxonasi "G'allaorol kaliy fosfat MCHJga tegishli "Mineral og'it kalsiy-sulfat" kombinati barpo etilmoqda. Ammo korxonada rasman o'z faoliyatini boshlamasdan ishlashni boshlagan. va ushbu kombinat o'zidan zaharli gazlarni chiqarmoqda bu esa aholi orasida ko'plab noroziliklarni keltirib chiqmoqda. Keksa yoshdagilar va bolalar orasida nafas qisish holatlari kuzatilgan. Aynan yuqoridagi ikki korxonada va boshqa ishlab chiqarish obektlari hamda transport vositalaridan chiqayotgan turli xil gazlar ta'sirida tuman Atmosfera havosi yomonlashmoqda.

Aholini sel xavfidan saqlash uchun dastlab sel xavfi bor hududda yashayotgan aholiga sel kelish mavsumida yoki sel kelgan vaqtda nimalar qilish mumkinligi va nimalar qilish mumkin emasligi haqida tushuntirish ishlari olib borish lozim. "O'zgidromet", FVV, hokimiyatlar vakillari tomonidan berilgan ko'rsatmalardagi sel va suv toshqinidan himoya qilish haqidagi yo'l-yo'riqlarini bilishlari lozim. Sel xavfi kelishi haqida FVV tomonidan yuborilgan xabarlarini qabul qilishgandan so'ng xavfsizroq joyga borishlari kerak. Bundan tashqari tog' adirlarida suv yo'llarini ochish, daryo o'zanlari va tog' adirlarida daraxt ko'chatlarini ekish, yonbag'irlarga ko'ndalang ishlov berish, pog'ona-pog'ona qilish ham sel xavfini kamaytiradi. Shu bilan birga sel suvlarini yig'uvchi ishlab turuvchi selxonalarni qurish ham sel jarayoni natijasida paydo bo'ladigan xavfni kamaytiradi.

Xulosa. Yuqorida nomi tilga olingan har ikkala korxonada ham mamlakat miqyosida muhim ahamiyatga ega. Ularning faoliyati nafaqat tuman uchun balki butun mamlakat uchun ham foyda keltiradi. Masalan barpo etilayotgan kaliy zavodi G'allaorol sanoat zonasida joylashtirilayotgan bo'lib, ushbu sanoat zonasida joylashgan aholi vakillariga o'z xonadonlarini ko'chirish taklifi berilmoqda va ular uchun yer maydonlari ajratilishi takidlab o'tilmoqda. Bu borada aholi, korxonada faollari va tuman hokimligi birgalikda kelishgan holda ko'chish yoki ko'chmaslik

masalasini hal qilishi lozim. Korxonada qurilish jarayonida filtirlash tizimiga alohida e'tibor berish lozim. Aynan atmosfera havosi zaharli bo'lgan kon atrofida yashayotgan aholi vakillari salomatligini muhofaza qilish maqsadida har yili bir marta yoki ikki marta bepul tibbiy ko'rikdan o'tish, bazi dori vositalari bilan ta'minlash, sanatoriya va davolanish muassasalari uchun yo'llanmalar berish kon faoliyati natijasida paydo bo'lgan zararni oz bo'lsada kamaytirish imkonini berishi mumkin. Kon filtirlash tizimini yanada yaxshilash, yangi zamonaviy uskunalardan bilan eskilarini almashtirish ham mumkin. Aholining ekologik madaniyatini shakllantirish lozim.

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O'ZBEKISTONDA HASHAROTLARNI O'RGANILISH TARIXI VA HOZIRGI HOLATI, MUAMMOLAR, YECHIMLAR

***Annotatsiya:** Maqolada O'zbekistonda hasharotlarning o'rganilish tarixi, hasharotlarning turini aniqlashda yuzaga kelayotgan muammolar bayon etilgan. O'zbekiston entomofaunasining dastlabki o'rganilish davrlari va taraqqiyoti, mustaqillik yillaridagi entomologik tadqiqotlarning taraqqiy etishi bayon etilgan.*

***Kalit so'zlar:** hasharotlar, fitofag, zararkunanda, entomofaglar, o'rganilish davrlari, hasharotlar turini aniqlashdagi muammolar va zamonaviy yechimlar.*

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HISTORY AND CURRENT STATUS OF INSECT STUDY IN UZBEKISTAN, PROBLEMS, SOLUTIONS

***Annotation:** The article describes the history of the study of insects in Uzbekistan, the problems that arise in determining the type of insect, the initial study period of the entomofauna of Uzbekistan, agricultural entomology, scientific study and development in Uzbekistan, the progress of entomological research in the years of independence.*

***Key words:** Insects, phytophagous, pest, entomophages, scientists, study periods, problems and modern solutions in identifying the type of insects.*

Hozirgi global iqtisodiyot sharoitida jahonda aholi soni ortib borishi bilan oziq-ovqat mahsulotlariga bo'lgan ehtiyoj oshib bormoqda va bu O'zbekistonni ham chetlab o'tgani yo'q. Shuning uchun yetishtirilayotgan qishloq xo'jalik ekinlari hosiliga va sifatiga alohida e'tibor berishni talab etmoqda. Bulardan kelib chiqib qishloq xo'jaligi ekinlariga va ularning hosiliga zarar yetkazadigan hasharotlarning turlar tarkibini, tashqi va ichki tuzilishi, tanasining mutanosib shakllanganligi, yashash tarzi, tashqi muhit bilan munosabati, zararli va foydali tomonlarini o'rganishni taqozo etmoqda.

Jahonda hasharotlarni ilmiy asosda o'rganish 1667-yilda T.Redii tajribalaridan boshlangan. Italiyalik olim I.Malpigi (1668) hasharotlar anatomiyasini o'rgangan. Hasharotlarni ilmiy asosda o'rganish O'zbekistonda

XIX asrning 30-yillariga to'g'ri keladi va F.Gebler hamda E.Reyterlarning (1931) ilmiy asarlarida uchraydi. Zararkunanda hasharotlar ta'sirida ekinlar hosildorligi 10%-40% gacha kamayishi bu asarlarda qayd etilgan. O'zbekistonda hasharotlarni ilmiy asosda o'rganishni A.P.Fedchenko, V.F.Oshanin (1911) boshlab bergan. Toshkentda birinchi ilmiy entomologik stantsiya 1911-yilda ochilgan (hozirgi O'zbekiston o'simliklar karantini va himoyasi ilmiy tadqiqot instituti). A.P.Fedchenko boshchiligida Turkiston faunasini o'rganish bo'yicha 1868-1871-yillardagi ekspeditsiyaning ilmiy xulosalari ham sohadagi tadqiqotlarning tamal toshi bo'ldi. Mintaqada zararli va foydali bo'g'imoyoqli hayvonlarni o'rganishni V.V.Yaxontov rejali tarzda boshladi.

XX asr ikkinchi yarmida hasharotlarning o'rganilishi

I.I.Lindt (1964) mevali bog'larda yashovchi tangachaqanotlilar turkumi vakillarining tarqalishi, biologiyasini tadqiq etib, rivojlanish xususiyatlarini o'rgangan. V.G.Kovalevskiy (1969) sitrus mevali daraxtlar zararkunadalarining biologiyasi va qarshi kurash choralari haqida ma'lumotlar keltirgan. O.P.Kulkovning (1986) "O'zbekistonning subtropik mevali ekinlari" asarida O'zbekiston anor butasida uchraydigan zararkunandalar va anor mevaxo'ri haqida ma'lumotlar keltirilgan. V.V.Yaxontov (1962) tomonidan olib borilgan ilmiy izlanishlar esa, ham amaliy, ham nazariy ahamiyatga ega bo'lib, ko'plab zararkunanda hasharotlarni, jumladan anor butasida zararkunandalik qiladigan hasharotlarni o'rganish va qarshi kurash usullariga bag'ishlangan. Olimning ta'kidlashicha, anorning birlamchi zararkunandalaridan komstok qurti hisoblanib, u birinchi marta Toshkentda va uning atrofida topilgan. Komstok qurtining zararidan novdalar qing'ir – qiyshiq bo'lib, barglar sarg'ayadi va qurib qoladi. Komstok qurti anordan tashqari, shaftoli, katalpa, tutga shuningdek, makkajo'xori, kartoshka, sabzi, lavlagi, karam, pomidor, qovoq, tarvuz va boshqa o'simliklarga zarar yetkazadi. V.I. Piskunov tomonidan Gelechiidae oilasi vakillarining mevalariga keltiradigan zarari ilmiy asosda o'rganilgan. S.M.Pospelov, M.V.Arsenevalarning "O'simliklarni himoya qilish" asarida komstok qurtining biologiyasi va ekologiyasga oid hamda komstok qurtining dunyoning ko'p mamlakatlarida (Kavkazorti, Markaziy Osiyo va Qozog'istonda) uchrashi haqida ma'lumotlar keltirilgan. V.V.Pashchenko, K.B.Pashchenkolarning fikrlariga ko'ra, komstok qurti polifag zararkunandadir, 300 xil o'simlik turida yashashi, u anorning gulkosalariga o'r'nashib olib, o'sha yerga tuxum qo'yishi, natijada anor mevalari ifloslanib sifatsiz bo'lib qolishi qayd etilgan. O.P.Kulkovning (1986) "O'zbekistonning subtropik mevali ekinlari" asarida O'zbekistonda anor butasida uchraydigan zararkunandalar va anor mevaxo'ri haqida ham ma'lumotlar bayon etilgan.

O'zbekistonda Mustaqillik yillarida hasharotlarning o'rganilishi.

Qayd etish lozimki, O'zbekiston olimlari tomonidan qishloq xo'jaligi ekinlarining zararkunanda va foydali hasharotlarini fundamental va amaliy tadqiq etish borasida erishilgan natijalar ko'p jihatdan e'tirofqa molikdir (M.I.Kosobutskiy, V.V.Yaxontov, Sh.T.Xo'jaev, G.Sh.Shomuratov, I.K.Maxnovskiy va b.). Jumladan, S.Alimuxamedov va Sh.Xo'jaevlar

O'zbekistonda qishloq xo'jaligining rivojlanishiga munosib hissa qo'shdilar. Mualliflar zararkunanda hasharotlarning tez ko'payishiga yo'l qo'ymaydigan tejamkor agrotexnik tadbirlar ishlab chiqishga muvaffaq bo'ldilar. Har xil asosiy ekinlar zararkunandalarining sistematik holati va turli sharoitda zarar yetkazish darajasi aniqlab berildi. Hozirgi vaqtda O'zbekiston o'simliklarni himoya qilish ilmiy-tadqiqot instituti mavjud bo'lib, unda qishloq xo'jaligi entomologiyasining barcha yo'nalishlarida ilmiy izlanishlar olib boriladi. Xususan, bu institut bilan hamkorlikda va Toshkent Agrar Universiteti bilan Surxondaryoda A.F.Xaytmurodov asosiy qishloq xo'jaligi ekinlari parazit va zararkunanda hasharotlarini o'rganib, "Qishloq xo'jaligi entomologiyasi" nomli darslik yozgan. Shuningdek, issiqxona zararkunandalarini o'rganish bo'yicha ilmiy tadqiqotlar olib bormoqdalar.

Hozirgi vaqtda hasharotlarni o'rganishda yuzaga kelayotgan muammolar.

Dunyo miqiyosida kechayotgan iqlim o'zgarishlari, tuproqlar degradatsiyasi, cho'llanish, urbanizatsiya jarayonlari, antropogen omillarning haddan ortiq ta'siri foydali hasharotlarning tarqalishiga salbiy ta'sir etmoqda va qirilib ketishiga sabab bo'lmoqda. Hasharot turlarining yetarlicha aniqlanmaganligi, aniqlanish usullarining to'liqroq ishlab chiqilmaganligi ham hasharotlarni o'rganishda muammolarni yuzaga keltirmoqda. Ilmiy manbalarning tahlili shuni ko'rsatadiki, xorijiy mamlakatlar va respublikamizda hasharotlarni o'rganishga oid tadqiqotlarning ayrimlari mavjud bo'lib, biroq hududlarda foydalaniladigan yagona tadqiqot usullari Hozircha ishlab chiqilmagan. Bu agroekotizimlarda tarqalgan hasharotlarning turlar tarkibi, asosiy turlarning bioekologiyasini o'rganish, trofik aloqalarini tahlil etish hamda zararkunanda turlarga qarshi ilmiy asoslangan kurash chora-tadbirlarini takomillashtirishga doir keng ko'lamli izlanishlar olib borishni taqozo etadi.

XULOSA.

Buning yechimi sifatida jahonda va bir qator rivojlangan davlatlarda molekulyar biologik usullar asosida hasharotlarning turlarini aniqlashmoqda. Buning uchun hasharotlarni aniqlashda asos bo'ladigan markerlarni aniqlash, ularni ajratib olish va turlarni aniqlashni yo'lga qo'yish asosiy muammo hisoblanadi. Tabiatda hasharotlar keng tarqalishiga asosiy sabab bo'ladigan namlik, yorug'lik va boshqa ekologik omillar kengroq o'rganish va undan parazit va zararkunanda hasharotlarga qarshi kurashda foydalanish ham muhimdir.

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HUDUDLARDA XIZMATLAR SOHASINI JADAL RIVOJLANTIRISH (QASHQADARYO VILOYATI MISOLIDA)

***Annotatsiya:** Maqolada hududlarning ijtimoiy-iqtisodiy rivojlanishida xizmat ko‘rsatish sohasining rolini baholashning reyting usuli tadqiq etilgan. Unda xizmat ko‘rsatish sohasining asosiy ko‘rsatkichlari hududlar kesimida tahlil etilgan.*

***Kalit so‘zlar:** hudud, hududlar rivojlanishi, xizmat ko‘rsatish sohasi, davlat xususiy sherikchiligi, hududlar toifasi, hududlar tavsifi, baholash, reyting.*

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RAPID DEVELOPMENT OF THE SERVICE SECTOR IN THE REGIONS (using the example of the Kashkadarya region)

***Abstract:** The article examines the rating method for assessing the role of the service sector in the socio-economic development of regions. It analyzes the main indicators of the service sector by region.*

***Keywords:** region, regional development, service sector, public-private partnership, category of regions, characteristics of regions, assessment, rating.*

Kirish. Ilg‘or mamlakatlarning zamonaviy rivojlanish darajasi turli xil xizmatlar ishlab chiqish va ularning bozorini jadal rivojlanishini ko‘rsatmoqda. Shu bilan birga, xizmat ko‘rsatish sohasini rivojlantirish darajasi jamiyat shakllanishining asosiy mezonidir.

Xizmat ko‘rsatish sohasini rivojlantirish mamlakatimizda amalga oshirilayotgan islohotlarning asosiy masalalaridan hisoblanadi. Chunki bu soha iqtisodiy o‘rningning muhim drayveri sifatida milliy iqtisodiyot raqobatbardoshligini ta‘minlashda alohida ahamiyat kasb etishi zarur. Shu boisdan xizmatlar sohasi hududlar ijtimoiy-iqtisodiy rivojlanishini baholashning asosiy mezonini hisoblanadi. Bu borada, mamlakatimizda xizmatlar sohasining tezkor o‘rning sur‘atlarini ta‘minlash, sohada tadbirkorlik faolligini yanada qo‘llab-quvvatlash va aholi uchun yangi ish o‘rinlarini yaratish¹, hududlarni ijtimoiy-iqtisodiy rivojlantirishni reyting baholash tizimini joriy etish² borasidagi vazifalar belgilab qo‘yilgan. Belgilangan vazifalardan kelib chiqib, hududlarni ijtimoiy-iqtisodiy rivojlanishida xizmat

ko'rsatish sohasidagi tendensiyalar va bu jarayonlarda xususiy tadbirkorlikning rolini baholashga alohida e'tibor qaratdik. Chunki, xizmat ko'rsatish sohasini rivojlantirishda tadbirkorlikning rolini oshirish masalalari tadqiqot ob'ekti sifatida kam o'rganilgan.

Ilmiy muammoning qo'yilishi.

Hududlarni rivojlantirishda xizmatlar sohasining rolini baholashning reyting va toifalash usulini tadqiq etish borasida shu kunga qadar qator tadqiqotlar amalga oshirilgan, va bular qatorida quyidagilarni ko'rishimiz mumkin: hududiy rivojlanishning ijtimoiy-iqtisodiy siyosati, ijtimoiy-iqtisodiy samaradorligi ijtimoiy-iqtisodiy xavfsizligi va boshqalar Keyingi yillarda yangicha yondashuvdagi tadqiqotlar ham amalga oshirilmoqda. Xususan, oilaviy tadbirkorlik va hududiy rivojlanish, hududlar rivojlanishida oilaviy tadbirkorlikning rolini "mahallabay" yondashuvda baholash⁸ kabilarni ta'kidlash joiz.

Biroq, ushbu sohada tadbirkorlik rolini, mavjud iqtisodiy ijtimoiy vaziyatdan kelib chiqib ilmiy-amaliy jihatdan o'rganish ham amalga oshirilayotgan islohotlarning muhim tarkibiy qismi hisoblanadi. Shu jihatdan mazkur tadqiqot xizmat ko'rsatish sohasini tadqiq etishning alohida uslubi bo'lib, ushbu sohada aholining tadbirkorlik faolligini oshirishga qaratilgan samarali chora-tadbirlarni ishlab chiqishda muhim ilmiy metodologik ahamiyat kasb etadi.

Hududlar ijtimoiy-iqtisodiy rivojlanishining muam molari va omillariga ko'ra, hududlarni tadqiq etishning yo'nalishlari va metodologik konsepsiyalari farq qiladi. Bunday baholash natijalari ham hududlar rivojlanishida notekis tendensiyalarning mavjudligini tasdiqlaydi. Buning sabablari hududlarning qulay geografik joylashuvi, tabiiy resurslar va iqlim sharoitlari, infratuzilma ob'ektlarining rivojlanganlik darajasi va boshqa omillar bilan bir qatorda hududlarda kichik biznes va oilaviy tadbirkorlikning rivojlanganlik darajasi va bunda "mahalla" va "sektor"larning roli bilan bog'liqligi asoslantirilgan. Ushbu uslubiy yondashuvlarga tayangan holda, bizning tadqiqotimizda hududlarni rivojlantirishda xizmatlar sohasining roli va bu jarayonlarda davlat xususiy sherikchiligining ahamiyati o'rganildi.

Hududlarda xizmatlar sohasi rivojlanishini baholash, o'z tarkibiga ko'ra savdo, tashish va saqlash, yashash va ovqatlanish bo'yicha xizmatlar, axborot va aloqa, sog'liqni saqlash va ijtimoiy xizmatlar ko'rsatish kabi faoliyat turlarini qamrab oladi. Xizmatlar sohasi faoliyatining yakuniy natijasi ko'rsatilgan xizmatlar hajmi bilan belgilanadi. Shu bois, xizmatlar sohasining iqtisodiyotda xususan, hududlar rivojlanishidagi rolini aniqlashda aholiga ko'rsatilgan xizmatlar hajmi indikatoridan foydalaniladi. Shunga asoslanib, ushbu soha rivojlanishida tadbirkorlikning hissasini baholash mumkin. Bunda hududlarda faoliyat ko'rsatayotgan tadbirkorlik sub'ektlari tomonidan ko'rsatilgan xizmatlar hajmi tahlil qilindi.

Mamlakatimiz iqtisodiyotida xizmat ko'rsatish sohasining rivojlanishini baholash bu boradagi muhim chora-tadbirlarni ishlab chiqishda muhim ahamiyatga ega. Shu bois, mazkur tadqiqotda xizmat ko'rsatish sohasining rivojlanishini hududlar kesimida baholash asosiy maqsad etib belgilandi. Bunda hududlarning

o'zni aholi jon boshiga to'g'ri keladigan xizmatlar hajmi bo'yicha aniqlandi va quyidagi ko'rsatkichlar orqali hisoblandi:

hisobot davrida doimiy aholi o'rtacha yillik soni (ming kishi);
hisobot davrida ko'rsatilgan xizmatlari hajmi (mlrd. so'm).

Hududlarning xizmat ko'rsatish sohasining rivojlanishini tavsiflovchi xususiy ko'rsatkichlari rasmiy statistika ma'lumotlari asosida shakllantirildi. Bunda, aholi jon boshiga to'g'ri keladigan xizmatlar hajmi quyidagi formula orqali hisoblandi.

Hududlarni rivojlantirish va bu jarayonlarda xizmatlar sohasining rolini oshirishga oid tadqiqotimiz natijalari asosida quyidagi ilmiy-nazariy xulosa va takliflar ishlab chiqildi: **birinchidan**, hududlarni rivojlantirishning muhim ijtimoiy-iqtisodiy ko'rsatkichlari tizimi qo'shimcha rivojlantiruvchi omillar ta'sirini hisobga olib yondashish zaruratini ko'rsatmoqda; **ikkinchidan**, tadqiqot natijalariga asoslanib shunday xulosaga kelindiki, hududlar rivojlanishining ijtimoiy-iqtisodiy mohiyatini aniqlashda hamon qarama-qarshi fikrlar uchraydi. Chunki hududlarni ijtimoiy-iqtisodiy rivojlantirishning turli xil metodologik yondoshuvlarida turlicha ko'rsatkichlar tizimidan foydalanib, hududlar iqtisodiyotining u yoki bu sohasi baholangan. Shuning uchun tadqiqot natijalarini boshqa tadqiqotlar bilan solishtirish imkoni bo'lmadi; **uchinchidan**, o'rganilgan tadqiqotlarda hududlar rivojlanishida davlat xususiy sherikchiligining o'zni va ahamiyati hisobga olinmagan. Shu bois hududlarning rivojlanishiga oid tadqiqot natijalarini sinergetika tamoyillari asosida birlashtirish yoki umumlashtirishda qiyinchiliklar uchradi; **to'rtinchidan**, mamlakatimizda amalga oshirilayotgan iqtisodiy islohotlar mazmunidan kelib chiqqan holda, xizmat ko'rsatish sohasida DXShni rolini oshirish orqali hududlarning rivojlanishini baholash ham muhim vazifa lardan hisoblanadi. Bu borada tadqiqot uchun to'plangan ma'lumotlar DXSh faoliyatining ishlab chiqarish, qurilish va qishloq xo'jaligi sohaslarining rivojlanishidagi rolini baholash uchun yetarli bo'lmadi. Shuning uchun keyingi tadqiqotlarda ushbu sohalarda ham DXShni o'zni va rolini baholash bo'yicha tadqiqotlar olib borish vazifasi belgilandi. Bunda xizmat ko'rsatish sohasining barcha faoliyat turlari bo'yicha DXSh asosidagi loyihalarni baholash, hududlarning "xizmat ko'rsatish sohasining rivojlanishida DXShning roli" indeksi bo'yicha hududlarni toifalash mezonlarini ishlab chiqish keyingi tadqiqotlarning vazifalari sifatida belgilandi.

Hududlarda xizmatlar sohasini jadal rivojlantirish mamlakat iqtisodiyotini diversifikatsiya qilish va aholi farovonligini oshirishning muhim vositalaridan biri hisoblanadi. Xizmatlar sohasi yuksalishi uchun iqtisodiy, infratuzilma, moliyaviy va ijtimoiy sharoitlarni yaxshilash talab etiladi. Qashqadaryo viloyati misolida bu jarayonni quyidagi yo'nalishlarda ko'rib chiqish mumkin:

1. Xizmatlar sohasining hozirgi holati

- **Turizm:** Qashqadaryo viloyati tarixiy va tabiiy boyliklari bilan mashhur. Shahrisabz va Qarshi shaharlari kabi diqqatga sazovor joylar mavjud.
- **Transport va logistika:** Viloyatda ichki va tashqi transport infratuzilmasini rivojlantirish orqali xizmatlar sohasini kengaytirish imkoniyatlari bor.

- **Savdo va maishiy xizmatlar:** Hududda yangi savdo markazlari va xizmat ko'rsatish shoxobchalarini tashkil etish talabi yuqori.

2. Xizmatlar sohasini rivojlantirishning ustuvor yo'nalishlari

- **Turizmni rivojlantirish:**

- Mahalliy va xalqaro turistlarni jalb qilish uchun infratuzilma (mehmonxonalar, transport tizimi, yo'l ko'rsatkichlari)ni yaxshilash.
- Hududning tarixiy va madaniy boyliklarini targ'ib qilish.
- Ekoturizm va agroturizmni rivojlantirish.

- **Raqamli xizmatlar:**

- Internet xizmatlarini kengaytirish va raqamli texnologiyalarni joriy etish.
- Onlayn savdo platformalari va elektron xizmatlarni yo'lga qo'yish.

- **Kichik biznes va tadbirkorlikni qo'llab-quvvatlash:**

- Xizmat ko'rsatish sohasida startaplar va tadbirkorlarni moliyalashtirish.
- Yangi ish o'rinlari yaratish uchun soliq imtiyozlari va kredit dasturlarini taklif etish.

3. Infratuzilmani rivojlantirish

- Zamonaviy bozorlar, savdo markazlari va xizmat ko'rsatish shoxobchalarini tashkil etish.
- Qishloq joylarda transport va aloqa tizimlarini modernizatsiya qilish.

4. Ta'lim va kadrlar tayyorlash

- Hududda xizmat ko'rsatish sohasi uchun malakali kadrlar tayyorlash dasturlarini amalga oshirish.
- Turizm, mehmonxona biznesi, IT va boshqa xizmat sohaslarida o'quv markazlari tashkil etish.

5. Investitsiyalarni jalb qilish

- Xizmatlar sohasiga mahalliy va xorijiy investorlarni jalb qilish uchun qulay biznes muhitini yaratish.
- Turizm va savdo sohasida investitsion loyihalarni qo'llab-quvvatlash.

6. Marketing va targ'ibot ishlari

- Viloyatning xizmatlar sohasidagi imkoniyatlarini targ'ib qilish uchun maxsus dasturlarni amalga oshirish.
- Ijtimoiy tarmoqlar va zamonaviy media vositalari orqali hududning imkoniyatlarini yoritish.

Qashqadaryo viloyati xizmatlar sohasini jadal rivojlantirish uchun katta salohiyatga ega. Yuqoridagi yo'nalishlarni amalga oshirish orqali viloyat iqtisodiyoti diversifikatsiya qilinib, aholi turmush darajasini oshirishga erishiladi.

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KICHIK BIZNES VA XUSUSIY TADBIRKORLIKNI IQTISODIYOTIMIZDA TUTGAN O‘RNI VA DOZLARBLIGI

Annotatsiya: Ushbu maqolada kichik biznes va xususiy tadbirkorlikni rivojlantirish yo‘nalishlari, kichik biznesni milliy iqtisodiyotdagi o‘rni va ahamiyati iqtisodiy ko‘rsatkichlar orqali yoritilgan. Kichik biznes va xususiy tadbirkorlik bozor muhitiga tez moslasha olishi, bandlikni ta‘minlash, daromadlarni shakllantirish va shu orqali uning tengsizligini yumshatish hamda o‘rta mulkdorlar qatlamini qaror toptirishdagi afzalliklari ochib berilgan.

Kalit so‘zlar: kichik biznes, mulk, investitsiya, ishsizlik, rag‘batlantirish, raqobat, tadbirkorlik, texnologiya, innovatsion g‘oyalar, korporatsiya, kapital va moliyalashtirish imkoniyatlari

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THE ROLE AND IMPORTANCE OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP IN OUR ECONOMY

Abstract: This article describes the development directions of small business and private entrepreneurship, the role and importance of small business in the national economy through economic indicators. The advantages of small business and private entrepreneurship in quickly adapting to the market environment, providing employment, generating income and thereby reducing inequality, as well as finding a solution for the middle class of owners are revealed.

Keywords: small business, property, investment, unemployment, incentives, competition, entrepreneurship, technology, innovative ideas, corporation, capital and financing opportunities.

Kirish. Kichik biznes va xususiy tadbirkorlik bozor muhitiga tez moslasha olishi, bandlikni ta‘minlash, daromadlarni shakllantirish va shu orqali uning tengsizligini yumshatish hamda o‘rta mulkdorlar qatlamini qaror toptirishdagi afzalliklari bilan birga xususiy va shaxsiy mulkni ro‘yobga chiqarishda xo‘jalik yuritishning eng samarali shakllaridan hisoblanadi.

Tadbirkorlik faoliyatining erkinligi, xususiy mulk dahlsizligini amalda ta‘minlash bundan buyon ham davlat siyosatida ustuvor yo‘nalish bo‘lib qoladi.

Kichik biznes bozor iqtisodiyotida xo‘jalik yuritish shakli sifatida mulkchilikning har qanday shaklini inkor etmaydi. Kichik biznes mulkiy tavsifiga ko‘ra murakkab xo‘jalik yuritish shakli hisoblanib, mulkchilikning mavjud barcha shakllariga asosan tashkil qilinib, faoliyat yuritishi mumkin. Bugungi jamiyatda kichik biznes va xususiy tadbirkorlikni rivojlantirish muhim bo‘lishining asosiy sabablaridan biri bu innovatsiyalarni rag‘batlantirish va iqtisodiy o‘shiga xizmat qilishidir. Kichik biznes o‘zgaruvchan bozor talablari va tendentsiyalariga tezda moslashish qobiliyatiga ega bo‘lib, ularga bozorga yangi mahsulot va xizmatlarni olib kirish imkonini beradi. Kichik biznes o‘zining innovatsion g‘oyalari va tavakkal qilishga tayyorligi orqali iqtisodiyotning umumiy raqobatbardoshligi va dinamikasiga hissa qo‘shadi. Bundan tashqari, kichik biznes ham ish o‘rinlari yaratishda muhim rol o‘ynaydi, an’anaviy bandlik yo‘llaridan foydalana olmaydigan shaxslarni ish bilan ta‘minlaydi

Bozor iqtisodiyotida rivojlangan mamlakatlar tajribasi turli mulk shakllariga asoslangan kichik biznes sub’ektlaridan faqat xususiy mulkchilikdagi shunday korxonalar faoliyati birmuncha samarali ekanligini ko‘rsatadi.

Aynan shu sababli, 2017–2025 yillarda O‘zbekiston Respublikasini rivojlantirishning beshta ustuvor yo‘nalishlari bo‘yicha harakatlar strategiyasida kichik biznes va xususiy tadbirkorlik rivojlanishini rag‘batlantirishga qaratilgan institutsional va tarkibiy islohotlarni davom ettirish ustuvor yo‘nalish sifatida qaraladi. Xususiy tadbirkorlik kichik biznesdan farq qilib, moliyaviy mablag‘lari va iqtisodiy resurslarini shakllantirish (tadbirkorning o‘z mulki, meros qoldirilgan, qarz yoki ijaraga olingan mulk va boshqalar) qat’iy xususiy mulkka asoslanadi va xo‘jalik yuritishda shaxsiy tashabbuskorlik ustuvor o‘rin egallaydi.

Respublikamizda iqtisodiy rivojlanishning hozirgi bosqichida kichik biznesni yanada rivojlantirishni rag‘batlantirish bilan birga, uning tarkibida xususiy mulkka asoslangan sub’ektlar ulushini to‘xtovsiz oshirib borishga alohida e‘tibor qaratilmoqda. Islohotlarimiz natijasida o‘tgan yili 93 mingta yoki 2018 yilga nisbatan qariyb 2 barobar ko‘p yangi tadbirkorlik sub’ektlari tashkil etildi. Jahon bankining “Biznes yuritish” reytingida 7 pog‘ona ko‘tarilib, biznesni ro‘yxatga olish ko‘rsatkichi bo‘yicha dunyoning 190 ta davlati orasida 8 o‘rinni egalladik va eng yaxshi islohotchi davlatlar qatoridan joy oldik

Mamlakatimizda kichik biznes va xususiy tadbirkorlik sohasining iqtisodiyotda band bo‘lganlardagi ulushi 2018 yilda 2010 yilga qiyosan 74,3 % dan 78,2 % ga, YaIM ni shakllantirishdagi salmog‘i 52,5 % dan 59,4 % ga, sanoat mahsulotlari ishlab chiqarishdagi shunday ko‘rsatkichi 18,8 % dan 34,7 % ga ortgan. Bu davrda kichik biznes sub’ektlarilari soni 1,3 barobarga, ularning eksportdagi ulushi 2 martaga yaqin ko‘paygan.

Respublika hududlarida kichik biznesning yalpi hududiy mahsulot, tarmoqlar mahsuloti, asosiy kapitalga qo‘yilgan investitsiyalar, chakana tovar aylanmasi va xizmat ko‘rsatish hajmi hamda boshqa makroiqtisodiy ko‘rsatkichlardagi ulushida ham katta ijobiy o‘zgarish ro‘y bergan va ayrim nomutanosibliklar ham kuzatiladi. Jumladan, respublikaning deyarli barcha hududiy sub’ektlarda kichik biznes va xususiy tadbirkorlikning yalpi hududiy mahsulotdagi ulushi 2010 yilga qiyosan

2018 yilda turli xil darajada ortgan bo'lsa, ayrimlarida bu ko'rsatkich bir muncha kamaygan. Uning eng yuqori o'sishi 11,3 % ni (Andijon vil.), eng ko'p pasayishi esa 8,7 % ni (Sirdaryo vil.) tashkil qilgan. 2018 yilga kelib kichik biznes va xususiy tadbirkorlikning YaHM dagi eng yuqori ulushi Jizzax va Namangan (80,9 %) va eng past salmog'i Navoiy (37,6 %) viloyatiga tegishli bo'lgan.

2010–2018 yillarda kichik biznesning YaIM dagi salmog'i yiliga o'rtacha 0,4 % ga ortgan bo'lsa, sanoat mahsulotida esa uning ulushi 2010 yilda 19,6 %ni, 2016 yilda 45,0 %, 2018 yilga kelib esa 34,7 foizni tashkil etgan yoki 2016 yilga nisbatan 10,3 % pasayish kuzatilgan. Qurilish sohasida kichik biznesning ulushi 2010 yilda 52,3 % ni, 2016 yilda 67,2 %, 2018 yilda 66,6 %ni tashkil etgan bo'lsa, xizmatlar soxasida esa mos yillar bo'yicha 36,6 %; 60,5 % va 55,2 %ni tashkil etmoqda.

Birinchi marta tadbirkorlarga ichki bozorda sotgan mahsuloti bo'yicha qo'shilgan qiymat solig'ining bir qismini qaytarish tartibi joriy etilmoqda. Hozirgacha bu tartib faqat mahsulot eksport qilinganda qo'llanar edi. Buning hisobidan tadbirkorlar ixtiyorida 3,4 trillion so'm yoki o'tgan yilga nisbatan 2,5 barobar ko'p mablag' qoladi.

Chunonchi, mamlakatimizda kichik biznes va xususiy tadbirkorlikni rivojlantirish orqali:

- o'rta mulkdorlar sinfi shakllanadi;
- makroiqtisodiy beqarorlik, ishsizlik va taqchillik kabi iqtisodiy muammolar barham topadi;
- sog'loq raqobatchilik muhitining yaratilishi orqali YaIMning miqdor va sifat jihatidan o'sishi kuzatiladi;
- ichki bozor zarur tovar (xizmat)lar bilan to'yinadi va ularning sifati oshadi;
- va pirovardida aholi turmush darajasining o'sishiga erishiladi.

Kichik biznes va xususiy tadbirkorlikni rivojlantirish nafaqat davlat va jamoat taraqqiyotida, balki xar bir insonning yuksalib borayotgan xayotiy extiyojlarini qondirishda muhim ahamiyatga ega, ya'ni xizmat ko'rsatish, chakana savdo, oziq-ovqat maxsulotlarini ishlab chiqarish kabi soxalarda ushbu faoliyat yaqqol namoyon bo'ladi.

Ayni paytda kichik biznes va xususiy tadbirkorlikni jadal o'sishini ta'minlash, xususiy mulkni ximoya qilish, tadbirkorlikni rivojlantirish yo'lidagi ba'zi ma'muriy to'siqlarni bartaraf etish, respublikamizda investitsiya va ishbilarmonlik muhitini sifat jixatidan yangi bosqichga ko'tarish orqali xalqaro me'yorlarga to'liq javob berishini ta'minlashda o'z aksini topadi.

Xulosa qilib aytish mumkinki, bugungi kunda jamiyatda kichik biznes va xususiy tadbirkorlikni rivojlantirish dolzarbligicha qolmoqda. Ushbu insho davomida muhokama qilinganidek, kichik biznes innovatsiyalarni qo'llabquvvatlash, ish o'rinlarini yaratish va iqtisodiy o'sishni rag'batlantirish orqali iqtisodiyotda hal qiluvchi rol o'ynaydi. Ular jismoniy shaxslarga tadbirkorlik orzularini ro'yobga chiqarish va mamlakatning umumiy farovonligiga hissa qo'shish imkoniyatini beradi.

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ECONOMIC AND SOCIAL GEOGRAPHICAL CHARACTERISTICS OF KATTAKURGAN DISTRICT

***Abstract:** This article describes the natural conditions, demographic situation, agriculture, industry, and service sectors of the district based on the geographical approach to the Kattakurgan district of the Samarkand region. Also, scientific proposals and recommendations are presented for the economic and social geographical development of the population.*

***Keywords:** District city, population, agriculture, industry, transport, service, reservoir, migration.*

Main part. Kattakurgan district is located in the southern part of the Samarkand region, the area of the district is large, and the size of the area compared to other districts has a great impact on the economic and social life of the residents of this area. It is also one of the largest districts of the Samarkand region, and it is significant due to its proximity to the city of Samarkand, the regional centre.

It is the name of a city and a rural district in the Kattakurgan-Samarkand region. The district is located on the left bank of the Narpay canal in the plain part of the Zarafshan valley at an altitude of 485. Excavations have been carried out here by archaeologists since ancient times, and this indicates a rich ancient culture. "Assyrian spool coffins" were found during the archaeological excavations conducted by B.Kastolisky. The toponym is made up of the words big and korgon. E.Mirzayev connects the word "big" with the Persian word "big" which means "hill".

Kattakurgan district was established on September 28, 1926, and borders several other districts, i.e. from the north with Nurobod district of Samarkand region, from the west with Narpay district, from the east with Pastargham, from the north - in the west, bordering Navoi region, the total area is 1.47 thousand km, and the population is 189 thousand people. There are 3 cities in the district, their names are Kattakurgan, Kadan, and Payshanba, and the district consists of 17 villages. These are Abulqasim, Uyshun, Shorak, Alijan, Durbesh, Kattakorpa, Omonboy, Moybulok, Koshtepa, Murtak, Zarafshan, Girdikorgan, Jumaboy, Saraykorgan, Kiyikmindon.

Residents of the district mostly live in rural areas. The demographic change of the population changes due to migration and other factors. The majority of the

population of the district are young people and young people who can work. The main part of them organizes internal migration to the cities of Samarkand, Tashkent, and Navoi for education, while some of them go abroad, mainly to Russia, Kazakhstan, and other CIS countries due to labour migration. The population of the district increased steadily between 2010 and 2024 (Fig. 1).

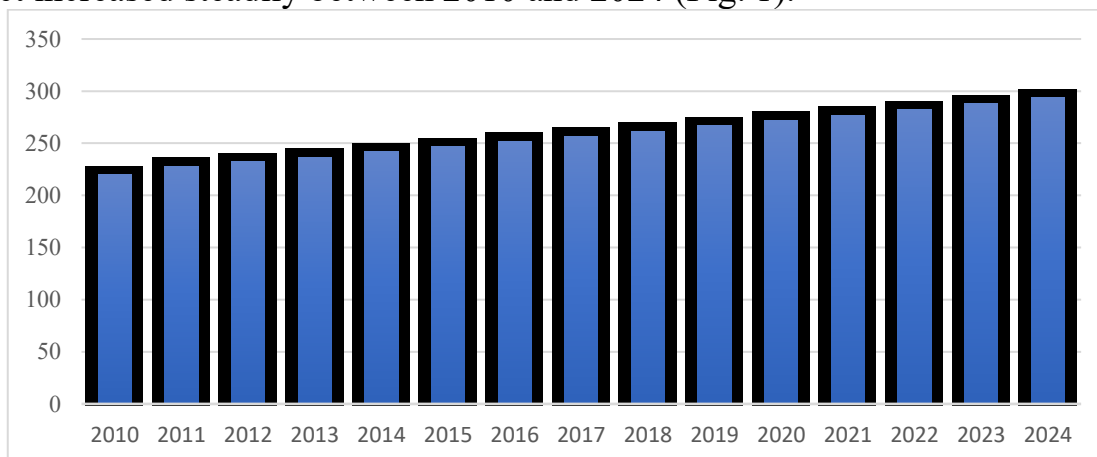


Figure 1. Population of Kattakurgan district in 2010-2024 (thousands of people)

The population of the district is mainly engaged in agriculture, they are engaged in farming horticulture and animal husbandry. In agriculture, the cultivation of cotton, grain, and vegetables is widely developed in this district. In horticulture, fruit trees, especially grapes, apples and other fruits are grown, and in animal husbandry, dairy and meat breeding is well established.

Also, the industrial sector is growing in the district. In particular, jobs are being created in light industry, production of building materials and other sectors. The administrative centre of Kattakurgan district is the city of Kadan. This district is one of the largest industrial districts in the Samarkand region. In the district, there are oil-oil, meat, milk-oil, bread, flour combines, "Pakhtamash" factory, which produces machines for cotton production, brick, cotton ginning factories, fruit canning, confectionery, local industrial enterprises, lime, furniture, artistic pottery workshops, branches in the fields of cultural trade and household services are operating.

In the district, the production of artistic ceramics has been going on for a long time. In the Kattakurgan district, a tungsten processing and beneficiation plant, namely "Ingichki Metals" JV, is operating. There is a drama theatre named "Abdulhamid Majidi" in Kattakurgan district, which continues its activities to this day. This theatre has been helping the residents of the district to provide cultural entertainment. In addition, several construction organizations, general education and music schools, colleges, national craft lyceums, cultural houses, hospitals, recreation parks, libraries, and maternity hospitals operate in the district.

The service sector, i.e., trade, transport, tourism, etc., is developing well in the district. This leads to the improvement of the social condition of the population. In particular, due to the geographical location of the Kattakurgan district, its proximity to other districts of the region and the city of Samarkand, it also occupies an important place in the field of transport. The district has a network of highways

and railways, which ensures its economic integration. There are also shops, markets and shopping centres in the cities and villages of the district. Trade in food and industrial products is highly developed in Kattakurgan.

A water reservoir was built near Kattakurgan and it is known as the Kattakurgan reservoir. Today, during the construction of this reservoir in 1946, there are underground chambers like a labyrinth with ventilation and several clay chambers. It is reported that a large Zoroastrian tomb similar to the appearance was found. Today, this reservoir is a hydro-technical facility. It is the first water reservoir built in Uzbekistan, and it was built at a medical depth. It provides water to cultivated fields in the Zarafshan valley. The Kattakurgan reservoir was built and put into use in 1940-1951. The Kattakurgan Reservoir consists mainly of dams that supply water, drain water, and release water. The volume of this reservoir is increasing year by year. In the project of 1954, we can see that it reached 662 mln. m³, 1956 In 2008, the channel bringing water to the reservoir was repaired and reconstructed, and the water transfer capacity was increased to 100 m³ per second. With such water in the reservoir, 94 thousand lands in the Samarkand and Bukhara regions are irrigated, except for Zarafshan lands. Water from the Kattakurgan reservoir flows into the Karadarya through a canal. Fishing is developed in the reservoir, and it plays a key role in supplying the population with fish products. The natural conditions of the Kattakurgan district are favourable for the population to live and for the social and economic development of the region. That is the relief consists of flat plains, with an average height of 450 m, sloping from west to east. The climate is continental, summer is hot and dry, and winter is moderate and cold. The average annual temperature is -1.9 C in January, 29.1 C in July, the maximum temperature is 44 C, and the minimum temperature is -35 C. The first cold days of autumn begin in the first ten days of October. Days without a cold are 177 days. Southeast and east winds blow in Kattakurgan. The average annual precipitation here is 282 mm. Precipitation occurs mainly in spring and winter. The soils are normally grey, and light in colour. Soil fertility in this area is the basis for the development of all branches of agriculture. This makes it an important profession in rejuvenating the population's employment in agriculture and the economic situation of the region.

Conclusion. Kattakurgan district plays an important role in agriculture, animal husbandry and transport directions of the Samarkand region economically and geographically. The district is rich in natural resources and due to the availability of water sources, its economic development is characterized by continuous growth, especially in the agricultural and agrarian sectors. Geographical location and transport connections create an opportunity to further expand the economic activity of the district.

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ECONOMIC GEOGRAPHICAL DESCRIPTION OF KHARTICHI DISTRICT

***Abstract:** This article presents the natural, economic, and social geographical features of the Khatirchi district of the Navoi region, i.e., the natural geographical conditions, regional features, climatic analysis, and geographical opportunities. Also, the district's population and the economic and social geographical features created for it are highlighted.*

***Keywords:** Khatirchi district, geographical location, population, climate, nature, agriculture, animal husbandry, horticulture, mountain.*

Main part. Khatirchi District, a part of Navoi Region, which has the most beautiful sub-mountainous climate of Uzbekistan, was founded on September 29, 1926. Since ancient times, the name of the district has been named after Sogdiyona, Kushan, Miyanqal and several other khanates and emirates.

The geographical location of the district has very favourable conditions, it is bordered by Nurota of the region from the north and northwest, Navbahor district from the west, Pakhtachi and Narpay districts of the Samarkand region through the Zarafshan river from the south, Kattakurgan from the east, and Kattakurgan from the northeast. It borders with the districts of Khoshrabot. This border is 1.37 thousand square km. including the field.

As of January 1, 2023, the permanent population of Khatirchi District is 209,761 people. The population is mainly Uzbeks, as well as representatives of Tajik, Russian, Ukrainian, Tatar, Azerbaijani, Kazakh and other nationalities. The average population density is 105 people per 1 sq. km. 60-65 per cent of the population of the district live in villages. According to statistical data, as of January 1, 2024, the population of the district is 213,200 people (Fig. 1).

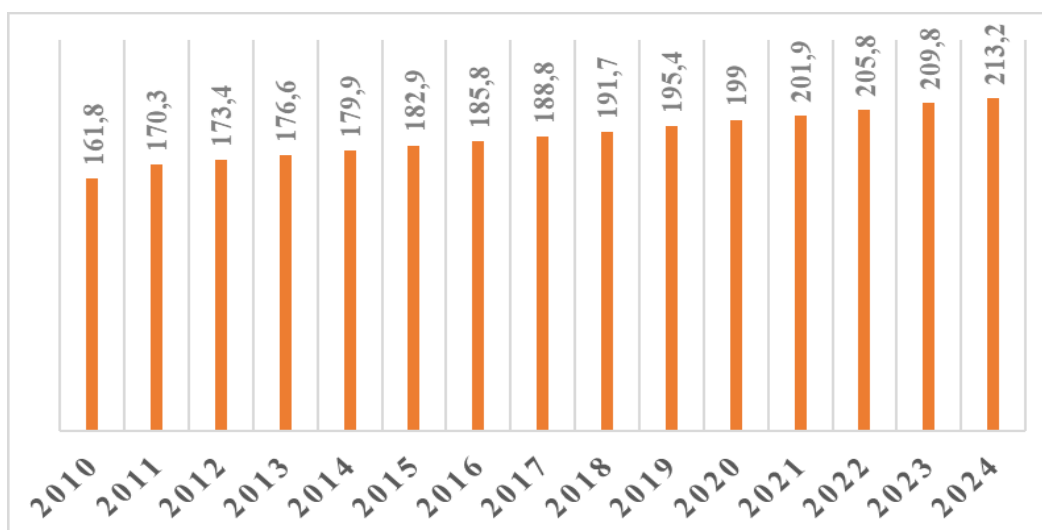


Figure 1. Population of Khatirchi district in 2010-2024

From the data of Figure 1, we can see that the population of Khatirchi district has been increasing steadily. The main occupation of the population is in agriculture, they are engaged in cotton growing, grain growing, fruit and vegetable growing, cattle breeding, as well as poultry farming and fishing branches of cattle breeding. The centre of the district is the city of Yangirabot, there are cultural houses, sports facilities, and libraries in the city, and various cultural events, festivals and traditional holidays are held in the district throughout the year.

Khatirchida has a continental climate type, which is important for the settlement of the population and the formation of agricultural industries. Annual air temperature indicators of Khatirchi district are shown in Table 1.

Table 1

Annual air temperature of Khatirchi district	
Temperature change	Gradus
Average annual temperature	13.5 ⁰ C,
average temperature in January	-1.7 ⁰ C
the lowest	-33 ⁰ C
Average temperature in July	28.7 ⁰ C
the highest temperature	44 ⁰ C

The vegetation period in the district is 212 days. The amount of annual precipitation is 200 mm in the northern mountainous part and 300 mm in the southern plain. The soils are typically grey, light grey soils in the foothills, and grey alluvial, meadow and meadow-swamp soils that are irrigated in the south.



Figure 2. Nature of Oltinsoy, Khatirchi district

Animal husbandry and viticulture are developed on the sloping plains at the foot of the mountains. Such conditions are a very favourable area for cattle breeders and farmers in the area. Among the wild plants, reed, sedge, wheat, sedge, elderberry, yulgin and others are widely distributed on the river terraces and banks. In the foothills of Nurota mountain, saffron, yaltyrbosh, chalov, carrack, deer grass, white safrak, gulkhairi, betaga, and ephemerals grow in the spring.

As part of the decision of the Cabinet of Ministers in 2018 aimed at the comprehensive development of the Khatirchi district, projects were implemented in 17 industries, 12 agriculture and 25 service sectors. These projects improved the standard of living of the population, increased wages, and employed women, young people, and needy families.

The nature of the area is very favourable for the residents of villages such as Angidon, Oltinsoy, and Maidonsoy of Khatirchi district. You can see the life of such villages, an abundance of streams in the mountains and hills, and various phenomena in nature. One such neighbourhood is Oltinsoy, the geographical features of this area are famous throughout Uzbekistan. Miraculous mineral water flows from the Oltinsoy region from 160 m above the ground, a hot spring of 76 degrees in 4 seasons of the year. This water is very beneficial and healing for the human body. Taking advantage of this opportunity, local entrepreneurs focused on establishing a health centre in the village. For this purpose, the private enterprise "Oltinsoy Mineral Water" established its activities in 2009, and it is possible to treat about 10 diseases here. It has the characteristic of treating an average of 300-400 people a year in different regions of our republic. "Oltinsoy" sanatorium adjacent to this enterprise is designed for 80 people. The sanatorium covers an area of 7 hectares. It is equipped with modern diagnostic and medical equipment for the treatment of the circulatory system, neurology, endocrine system, gynaecology, and skin diseases. In this sanatorium, thousands of people enjoy the clean air and mineral waters of Altynsoy every year, and the natural scenery and mineral waters play an important role in restoring the health of the population.

This hot water contains minerals and its constant temperature has a scientific basis. The meeting of this hot spring in the village of Altinsoy in Khatirchi district proves the uniqueness of the location and topography of this area.

Oltinsoy region is a very favourable region both ecologically and in terms of terrain. The inhabitants of Oltinsoy are mainly engaged in animal husbandry, in addition to this, crops such as wheat and barley are cultivated in the arid lands consisting of hills. Livestock farming is the main income of the inhabitants of that area. Due to the nature of the area, the taste of watermelons planted in dry areas is especially delicious. Also, chemical fertilizers are not used at all in the cultivation and maintenance of these crops. Because the nature of the region has the full potential to produce these products of high quality and taste. There is an opportunity to develop all branches of agriculture in Khatirchi district.

Conclusion. Khatirchi district is one of the economically and culturally developing districts of the Navoi region. Agriculture, especially cotton and grain farming, plays a key role in the district's economy. Population growth and infrastructure development are positive indicators for the future of the district. Also, the educational and cultural sectors are developing, which will serve the future social and economic growth of the district.

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SPREAD OF PARASITIC PLANT NEMATODES IN SURKHANDARYA REGION

Abstract. *This study analyzes the distribution of parasitic nematodes on over 20 species of cultivated and weed plants in the Surkhandarya region. Approximately 50 species of parasitic nematodes were recorded, including four species of gall nematodes. Additionally, representatives of the genera Pratylenchus, Tylenchorhynchus, Paratylenchus, Helicotylenchus, and Rotylenchus were identified.*

Keywords: *Nematodes, parasites, fauna, Meloidogyne, Pratylenchus, Tylenchorhynchus, Paratylenchus, Helicotylenchus, Rotylenchus.*

The Surkhandarya region, characterized by its subtropical climate, supports the growth of subtropical crops such as bay laurel, fig, pomegranate, persimmon, jujube, peanut, cotton, and various vegetable and melon crops. The diversity of crops in the region is of interest in terms of their infestation by phytoparasitic nematodes.

According to limited literature and our studies, approximately 55 species of parasitic nematodes have been registered on various plants in the Surkhandarya region. This article lists these nematodes with indications of their host plants and locations. The sequence of species is presented according to their harmfulness.

Materials and Methods. The study was based on samples of subtropical fruit trees and vegetable-melon crops collected from agrocenoses in the Surkhandarya region. The research was conducted using the standard survey method. Samples were collected during the summer seasons.

Phytoparasitic nematodes were extracted using Berlese funnels and preserved in a 4% formalin solution. Clearing of nematodes was performed with a mixture of glycerin and alcohol.

Soil samples for cyst-forming nematodes were analyzed using Seinhorst's rapid method and Decker's standard methodology. Species identification was performed under a microscope based on morphological parameters using de Man's formula.

Results and Discussion

Gall Nematodes. The first record of nematodes parasitizing plant roots dates back to the mid-19th century. In 1855, M. Berkeley described root galls on greenhouse cucumbers containing numerous microscopic eggs and larvae.

In 1877, French naturalist Jobert discovered root galls on coffee trees in Brazil. Under the microscope, he identified small pear-shaped females and transparent eggs containing thread-like worms.

By 1887, E.A. Göldi published observations of coffee tree diseases, including root galls caused by *Meloidogyne exigua*.

Pratylenchus. Several species of *Pratylenchus* were found in the Surkhandarya region, including *P. pratensis*, *P. penetrans*, *P. convallariae*, and *P. crenatus*. These nematodes were recorded on crops such as sugarcane, figs, and pomegranate, as well as weeds like crabgrass.

Tylenchorhynchus. Species such as *T. dubius*, *T. cylindricus*, and *T. nanus* were identified in large numbers on crops like sugarcane and cotton, as well as on weeds. Severe infestations were associated with poor root development and reddish spots on affected plants.

Helicotylenchus. Nematodes like *H. erythrinae*, *H. multincinctus*, and *H. nanus* were found in the root systems of laurel, jujube, persimmon, and melons. These nematodes were associated with significant plant damage, affecting growth and productivity.

Rotylenchus. Species of *Rotylenchus* were recorded in areas like the Denau and Sherabad districts, affecting sugarcane, pomegranate, and tomatoes.

Conclusion. The parasitic nematodes identified in the agrocenoses of the Surkhandarya region have both theoretical and practical significance. Further studies are needed to develop effective management strategies for these pests.

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USE OF MENTAL MAPS IN TEACHING THE SUBJECT “CYTOPLASM ORGANOIDS (WITH A SINGLE-LAYER MEMBRANE) - STRUCTURE OF THE ENDOPLASMIC RETICULUM, LYSOSOMA, GOLGI APPARATUS AND PEROXISOMA”

***Annotation:** The article is used in the teaching of cytology, histology and embryology to students of biology education at higher educational institutions on the topic "Cytoplasmic organoids (single-layer membrane) - structure of endoplasmic reticulum, lysosome and Golgi apparatus and peroxisome" and students focused on issues of making mental maps in strengthening cognitive activity.*

***Key words:** endoplasmic reticulum, lysosome, Golgi apparatus, membrane, mental map.*

Today, modern education is an integral and integral part of the pedagogical process, which serves to educate a mentally and physically well-rounded person in accordance with the purpose of science.

Pedagogical conditions for the organization of the biological education process through the development of a modern educational system based on the competence approach, the organization of the learning activities of students in accordance with didactic goals through the effective application of educational technologies that develop the educational process we will achieve the formation of students' competences related to science.

With the help of mental maps, the right and left hemispheres of the brain work well. Mind map, mind map, mental map, associative diagram, thinking scheme, associative map are all just a few names of the way we organize our personal thoughts. Usually we think with associations from the center to the side. In this process, there is a single central idea, from which connecting threads lead to other associations, and from them to others. It reminds me of a tree in some way. Its body is the central idea, and its branches are the ideas that arise from it. A mental map is created in this way. There is no single rule about how it should be. The main task is to define the main idea, with the help of associations, many links can be created. With the help of mental maps, it is possible to learn a new topic and to strengthen the previously learned topic.

Research methodology

Creating a mental map has several stages:

1. Create a main idea and idea
2. The first level is creating topics
3. Development of the second level of subjects
4. Clarify the topic

Analyzes and results

We want to study the subject of single membrane organoids from the science of cytology, histology and embryology. Basically, we get single-layer membrane organoids. Then we divide it into clauses depending on the type. Then we clarify these clauses. You can give a complete description of a new topic through the created mental map.

Single-layer membrane organelles include: endoplasmic reticulum, lysosome, Golgi apparatus, and peroxisomes.

Endoplasmic reticulum. In 1945, using an electron microscope, this cell organoid was discovered by Porter to have a fine mesh in the mesoplasm of cells stained with osmium tetroxide, and named it endoplasmic mesh. Some time later, Pallade and Porter discovered that the endoplasmic reticulum is a complex network of interconnected microscopic tubules, vesicles, and cisternae. An elementary membrane forms the wall of the endoplasmic reticulum system. The thickness of the membrane is around 70 \AA , and the inner diameter of the round channels is $300\text{-}500 \text{ \AA}$. The surface of the endoplasmic reticulum membrane is smooth and rough. Granular, smooth areas are called smooth reticulum due to the adhesion of ribosomal granules with a diameter of $100\text{-}150 \text{ \AA}$ to the surface of the membrane.

Function: The granular (granular) endoplasmic reticulum performs the function of protein and enzyme production. Granular endoplasmic reticulum is well developed in protein-producing cells. According to many scientists, the smooth endoplasmic reticulum is primarily involved in the synthesis, aggregation and transport of lipids and carbohydrates.

Lysosomes. Lysosomes were isolated from acid phosphatase in 1955 by De Duve et al. These enzymes include glucuronidase, sour ribonuclease, sour deoxyribonuclease and cathepsins. Lysosomes are characterized by the presence of digestive enzymes in a latent (hidden) state, which is primarily due to the membranes that surround them. According to the current scientific results and according to the morphological aspect of lysosomes, they are divided into the following groups: primary lysosomes, secondary mesosomes, autophagosomes and telolysosomes (residual bodies).

Function: Lysosomes are vacuole-like organoids that have enzymes necessary for the body to break down proteins and nucleic acids inside the cell and to regenerate them. Enzymes in lysosomes break down various substances entering the cell.

Golgi apparatus. In 1898, the Italian microscopist K. Golgi, using the properties of heavy metal (silver and osmium) mixtures, identified a reticular

structure in nerve cells and called it "internal reticular apparatus". There are two structural states of the Golgi apparatus: reticular and consisting of separate structures typical for plant cells - diffuse form. With the help of an electron microscope, it was found that the Golgi apparatus consists of three different sections:

1. Cys section - consists of cisternae surrounded by a smooth membrane and located near the nucleus. In them, transit proteins are phosphorylated and move to the medial compartment. Tanks are constantly updated here. They are formed from smooth endoplasmic reticulum.

2. Medial section - consists of small vesicles located at the ends of cisternae, transit proteins undergo changes and move to the trans section.

3. Trans section - consists of expanded cisternae and vacuoles located in their central part, located close to the plasma membrane.

Function: One of the main functions of the Golgi apparatus is the secretory function. Membrane vesicles of the Golgi apparatus take part in the accumulation, chemical transformation and maturation of the synthesized product in the endoplasmic reticulum. Synthesis of polysaccharides and mucoproteins takes place in the cisterns of the Golgi apparatus, and most importantly, secretion products are released from the cell with the participation of the Golgi apparatus.

Peroxisomes. Peroxisomes are very small structures (0.1–1 μm in diameter) with a fine granular matrix. Peroxisomes are surrounded by a membrane. Peroxisomes contain oxidases and catalases, which ensure the vitality of the organism. The number, size, and protein content of peroxisomes are variable, depending on the cell type and environmental conditions. For example, when baker's yeast is well supplied with glucose, only a few, tiny peroxisomes are observed. 20 to 25 large peroxisomes have been found when yeasts are supplied with very long-chain fatty acids.

Function: The primary function of the peroxisome is to break down very long-chain fatty acids by β -oxidation. In animal cells, long-chain fatty acids are converted to medium-chain fatty acids, which are then transported to the mitochondria and eventually broken down into carbon dioxide and water. In fungi and plant cells, this process takes place only in peroxisomes.

Conclusions

Thus, if we explain and reinforce the topic with the help of mental maps, we will make the students think logically, develop the acquired knowledge, skills and abilities of the students, and increase their interest in the lesson.

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ON THE ISSUE OF USING ACTIVE LEARNING METHODS

***Abstract.** This paper's primary goal is to measure how an active learning approach affects students' motivation in a process control course. During the first phase of the study, the impact of the active learning technique on students' motivation was measured using the relative performance of the students. (69%) learners' performance was improved by the active learning technique, according to the data. The author also explains how a metric was created to examine how the active learning approach affected students' motivation.*

***Key words:** learning approach, effective learning, positive motivation among the students, availability of learning tools*

Teaching a foreign language is inherently complex and time-consuming, even in specialized language universities where students undergo rigorous entrance exams and possess a high initial proficiency in various language skills. In non-language universities, foreign language courses have often been viewed as "easier" subjects, resulting in limited class hours and no entrance exams for these courses. Consequently, many first-year students arrive with very low, sometimes nonexistent, language skills. Despite this, there is a prevailing expectation that graduates of non-language universities should achieve fluency comparable to those from language-focused institutions.

The primary goal, therefore, is to cultivate students who can think creatively and apply their knowledge practically, while also defending their viewpoints. Current research in pedagogy and psychology indicates that effective learning is closely tied to student motivation. One of the most critical and challenging tasks for educators is to foster a strong, positive motivation among students that encourages consistent and dedicated academic efforts, particularly in learning a foreign language. To combat this, teachers need to tap into students' creative potential and utilize engaging teaching methods that stimulate mental activity and interest in foreign languages. Creating an environment where students are eager to learn is essential, as many approach language studies merely to obtain credits rather than for personal development.

The choice of methods depends on a number of conditions: on the specifics of the content of the material being studied, on the general tasks of training specialists, on the teaching time available to the teacher, the characteristics of the composition of students, and on the availability of learning tools. A positive result for the formation of students' analytical skills is directly dependent on the means and conditions in which this quality will be formed. The following conditions can be distinguished:

- 1) individual approach to the student;
- 2) creation of comfortable (psychological) conditions in which the creative potential of students will be revealed;
- 3) careful selection of educational material that is meaningful and interesting for students;
- 4) the use of new technologies in teaching foreign languages (group, pair work, individual). As many researchers note, analytical skills are formed in various cognitive research exercises, situational play exercises, problem situations, various contests, role-playing games.

In learning a foreign language, the primary focus should be on the underlying motives that drive student needs. These motives shape individual goals and give personal significance to the learning process. A growing emphasis on personality-oriented education has led to a shift in goals, content selection, and teaching methods. The most effective approach involves tailoring instruction to the individual student, considering their abilities and interests, and presenting material in a way that highlights cultural nuances and practical applications.

Teachers should encourage independent thought and inquiry rather than merely delivering established knowledge. This involves giving students choices in their learning materials and encouraging reflection on their experiences. A personality-oriented approach enables the incorporation of active learning methods that enhance students' creative skills, critical thinking, and adaptability in a rapidly changing world. Collaborative work in pairs or groups takes precedence over traditional lectures.

Effective teaching strategies include collaborative learning, project-based methods, and activities that foster emotional relaxation. The choice of teaching methods should align with the specific content, the overall training objectives, and the diverse characteristics of the student group. A positive outcome in developing analytical skills is contingent upon appropriate conditions and teaching methods, which should include personalized approaches, a supportive learning environment, meaningful educational content, and innovative teaching technologies.

Active learning methods can be applied at various stages of the educational process and are categorized into non-imitative, imitative, non-gaming, and gaming approaches. Unlike traditional methods, active learning fosters critical thinking and encourages student engagement. The goal is not to force students into activity but to inspire genuine interest and initiative in their learning.

In practice, students actively participate in discussions, role-playing, and project work, all of which enhance their cognitive abilities. The project method, recognized for developing critical thinking skills, encourages students to construct their knowledge independently while fostering creativity and collaboration. This method also promotes reflection and the pursuit of new solutions.

In university language classes, it is common to have students with varying language proficiency levels. Traditional classes may leave less prepared students hesitant to participate. However, project-based activities create a relaxed

atmosphere where students feel more comfortable contributing based on their knowledge and interests, fostering a sense of shared responsibility for project outcomes.

This shift from teacher-centered to student-centered learning transforms the teacher's role into that of a facilitator and partner, thereby enhancing cognitive interest. Cognitive interest, defined as a comprehensive and in-depth curiosity about the surrounding world, is vital for promoting active thought processes and creative exploration. Active learning methods empower students to analyze information, articulate their viewpoints, and respect differing opinions—skills crucial for their future careers.

During the learning process, the student and the teacher are constantly put in a situation of choice (texts, exercises, sequence of work). It should also be noted that the personality-oriented approach assumes that, by showing independence in choosing one or another additional material, students proceed from their needs and interests, and this gives personal meaning to learning. This approach also provides for the development of their reflection, the ability to see them "from the outside", independently assess their capabilities and needs.

The most appropriate learning technologies are collaborative learning, the project method, and the inclusion of such types of work that cause emotional relaxation of students. When choosing a teaching method, the teacher should realize that the main thing in studying the discipline is the formation of knowledge, skills, as well as the upbringing and development of 640 students. Each of the methods used in pedagogical practice has its advantages and disadvantages, but using them in the system, in conjunction, will help achieve the best results in the assimilation of knowledge by students and in the development of their mental activity. The choice of methods depends on a number of conditions: on the specifics of the content of the material being studied, on the general tasks of training specialists, on the teaching time available to the teacher, the characteristics of the composition of students, and on the availability of learning tools.

A positive result for the formation of students' analytical skills is directly dependent on the means and conditions in which this quality will be formed. The following conditions can be distinguished:

- 1) individual approach to the student;
- 2) creation of comfortable (psychological) conditions in which the creative potential of students will be revealed;
- 3) careful selection of educational material that is meaningful and interesting for students;
- 4) the use of new technologies in teaching foreign languages (group, pair work, individual). As many researchers note, analytical skills are formed in various cognitive research exercises, situational play exercises, problem situations, various contests, role-playing games.

In summary, active learning methods aim to create a motivating and supportive environment for learning foreign languages, fostering analytical thinking, mental engagement, and creativity among students

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O‘QUVCHILARNING TA’LIM JARAYONIGA STEAM YONDASHUVLARINING AHAMIYATI

Anotatsiya: Maqolada O‘zbekistonda ta’lim jarayonida olib borilayotgan islohotlarda STEAM yondashuvning muhim bo‘lgan hususiyatlari, ta’limdagi o‘rni va yetuk kadrlarni tayyorlashdagi asosiy ahamiyatiga qaratilgan ma’lumotlar ko‘rsatib o‘tilgan.

Kalit so‘zlar: STEAM yondashuv, ta’lim sifati, fanlar o‘rtasidagi bog‘liqlik, loyihalar ustida ishlash, muammolarni ijodiy hal qilish, ijodiy fikrlash.

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THE IMPORTANCE OF STEAM APPROACHES TO THE EDUCATIONAL PROCESS OF STUDENTS

Annotation: The article highlights the important features of the STEAM approach in the reforms carried out in the educational process in Uzbekistan, its role in education and its main importance in the training of mature personnel.

Keywords: STEAM approach, quality of Education, connection between disciplines, work on projects, creative problem solving, creative thinking.

O‘zbekistonda ta’lim jarayonida olib borilayotgan islohotlarda STEAM yondashuvi tobora ko‘proq ahamiyat kasb etmoqda. Davlat tomonidan ta’lim sifatini yaxshilash, zamonaviy talablarga javob beradigan mutaxassislar tayyorlashga qaratilgan islohotlar doirasida STEAM yondashuvi quyidagi yo‘nalishlarda qo‘llanilmoqda:

O‘quv dasturlarini yangilash: Maktab o‘quv dasturlari STEAM fanlarini integratsiyalashtirishga yo‘naltirilmoqda. Fanlar o‘rtasidagi bog‘liqlikni ko‘rsatib, o‘quvchilarning amaliy ko‘nikmalarini rivojlantirishga qaratilgan yangi fanlar va kurslar kiritilmoqda. Masalan, robototexnika, 3D modellashtirish, dasturlash asoslari kabi fanlar o‘quv dasturlariga kiritilmoqda.

STEAM ta’lim markazlari va laboratoriyalari: Mamlakat bo‘ylab STEAM ta’lim markazlari va zamonaviy jihozlangan laboratoriyalar ochilmoqda. Bu yerda o‘quvchilar amaliy mashg‘ulotlar o‘tkazish, loyihalar ustida ishlash va o‘z bilimlarini amalda qo‘llash imkoniyatiga ega bo‘ladilar.

O‘qituvchilarning malakasini oshirish: O‘qituvchilar STEAM yondashuvi asosida dars berish usullarini o‘rganish uchun maxsus treninglar va kurslarga jalb qilinmoqda. Ularga yangi texnologiyalar bilan ishlash, o‘quvchilar bilan samarali

muloqot qilish va loyiha asosida o'qitish usullarini o'rgatishga qaratilgan ta'lim berilmoqda.

Loyiha asosidagi o'qitish: Ta'lim jarayonida loyiha asosidagi o'qitishga tobora ko'proq e'tibor qaratilmoqda. O'quvchilar hayotiy muammolarni hal qilishga qaratilgan loyihalar ustida mustaqil yoki jamoada ishlashlari kerak bo'ladi. Bu ularning muammo hal qilish, ijodiy fikrlash va jamoada ishlash ko'nikmalarini rivojlantirishga yordam beradi.

Texnologiyalardan foydalanish: Ta'lim jarayonida zamonaviy texnologiyalardan, jumladan, kompyuterlar, interaktiv doskalar, robotlar, 3D printerlar va boshqa jihozlardan foydalanish ko'paymoqda. Bu o'quvchilarning bilimlarni o'zlashtirishini tezlashtiradi va o'rganish jarayonini yanada qiziqarli qiladi.

Xalqaro hamkorlik: O'zbekiston STEAM ta'limi sohasida xalqaro tashkilotlar va mamlakatlar bilan hamkorlikni rivojlantirmoqda. Tajriba almashish, yangi texnologiyalar va usullarni o'rganish uchun xorijiy mutaxassislar jalb qilinmoqda.

STEAM yondashuv – bu o'quvchilarni jalb qilish va ularning 21-asr ko'nikmalarini rivojlantirishga qaratilgan ta'lim uslubi bo'lib, u Fan, Texnologiya, Muhandislik, San'at va Matematika fanlarini integratsiyalashgan holda qo'llaydi. Bu yondashuv o'quvchilarga bilimni nafaqat nazariy tarzda, balki amaliy tarzda, haqiqiy muammolarni hal qilish orqali o'zlashtirishga imkon beradi.

STEAM yondashuvi quyidagi asosiy xususiyatlarga ega:

- Interdissiplinarlik: STEAM yondashuvi turli fanlarni bir-biri bilan bog'lab o'rganishga imkon beradi. Bu o'quvchilarga muammolarni turli burchaklardan ko'rish va ularga ijodiy yechimlar topishga yordam beradi.

- Amaliylik: STEAM loyihalari o'quvchilarga o'z bilimlarini amalda qo'llash imkonini beradi. Bu ularga o'rganayotgan mavzuni chuqurroq tushunishga va ularni keyinchalik hayotda qo'llashga yordam beradi.

- Muammolarni hal qilish: STEAM yondashuvi o'quvchilarni haqiqiy dunyo muammolarini hal qilishga o'rgatishga qaratilgan. Bu ularga muammolarni aniqlash, ularni tahlil qilish va ularga ijodiy yechimlar topishga o'rgatishni o'z ichiga oladi.

- Ijodkorlik: STEAM yondashuvi o'quvchilarni o'zlarini ijodiy ifoda etishga rag'batlantiradi. Bu ularga turli xil g'oyalarni ishlab chiqish, yangi narsalarni yaratish va o'zlarini qiziqtirgan sohalarda tajriba o'tkazishga imkon beradi.

- Texnologiyalarni qo'llash: STEAM yondashuvi o'quvchilarni texnologiyalardan foydalanishga rag'batlantiradi. Bu ularga yangi texnologiyalarni o'rganish, ularni o'z maqsadlari uchun qo'llash va o'zlarini 21-asr ko'nikmalariga moslashtirishga imkon beradi.

STEAM yondashuvning hozirgi kun zamonaviy ta'limiga xos bo'lgan bir qator afzalliklari mavjud bo'lib ular quyida keltirilgan:

O'quvchilarni jalb qilish: STEAM loyihalari o'quvchilarga o'rganishni qiziqarli va jozibador qiladi.

O'rganish natijalarini yaxshilash: STEAM loyihalari o'quvchilarning akademik natijalarini yaxshilashga yordam beradi.

Katta yoshli hayotga tayyorlik: STEAM loyihalari o'quvchilarni ish topish bozorining talablariga mos keladigan ko'nikmalar bilan ta'minlaydi.

Innovatsion fikrlash: STEAM loyihalari o'quvchilarni innovatsion fikrlashga va muammolarni yangi usullarda hal qilishga rag'batlantiradi.

STEAM yondashuvini amalga oshirish usullari:

STEAM klublari: Maktablarda STEAM klublari tashkil etish va o'quvchilarni o'zlarini qiziqtirgan loyihalarda ishlashga rag'batlantirish.

STEAM loyihalari: O'quvchilarni STEAM bilan bog'liq loyihalarda ishlashga undash va ularga o'z bilimlarini amalda qo'llash imkonini berish.

STEAM o'quv dasturlari: STEAM bilan bog'liq o'quv dasturlarini maktablarda joriy etish.

STEAM tadbirlari: STEAM bilan bog'liq tadbirlar, masalan, tanlovlar, ko'rgazmalar va konferensiyalar tashkil etish.

Xulosa sifatida aytishimiz mumkinki, STEAM yondashuvi o'quvchilarga 21-asr ko'nikmalarini rivojlantirishga yordam berishi mumkin bo'lgan muhim ta'lim yondashuvidir. Ularga bilimni amalda qo'llash, ijodiy fikrlash va muammolarni hal qilish qobiliyatlarini rivojlantirishga imkon beradi, bu esa ularni kelajakda muvaffaqiyatli kadr bo'lishga tayyorlaydi. Shunday qilib, O'zbekistonda ta'lim islohotlari doirasida STEAM yondashuvi muhim o'rin tutadi. Ammo, ushbu yondashuvni samarali amalga oshirish uchun qo'shimcha resurslar, o'qituvchilarning malakasini oshirish va o'quv dasturlarini yanada moslashtirish zarur.

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O‘QUVCHILARNING BILIM, KO‘NIKMA VA MALAKALARINI TASHXIS ETISHDA STEAM YONDASHUVNING ZARURIYATI

Anotatsiya: Maqolada O‘zbekistonning taraqqiyot strategiyasi asosida o‘quvchilar o‘rgangan nazariy bilimlarni haqiqiy hayotlarida, faoliyatlarida bajarib ko‘rishlari uchun sifatli ta’limga erishishni o‘rgatishga qaratilgan ma’lumotlar ko‘rsatib o‘tilgan.

Kalit so‘zlar: Taraqqiyot strategiyasi, Ta’lim to‘g‘risidagi Qonun, bilim, ko‘nikma, malaka, tashxis etish zarurati.

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THE NEED FOR A STEAM APPROACH TO DIAGNOSING STUDENTS ‘KNOWLEDGE, SKILLS AND COMPETENCIES

Annotation: The article shows information on the development strategy of Uzbekistan aimed at teaching students to achieve quality education so that they can carry out the theoretical knowledge learned in their real lives, activities.

Keywords: Development strategy, Education Law, knowledge, skills, qualifications, the need for diagnosis.

Yangi O‘zbekiston taraqqiyot strategiyasida sifatli ta’limga erishishning eng muhim vazifalari belgilanib, amalga oshirilmoqda. Shu jihatdan bu jarayonda o‘quvchilarning bilim, ko‘nikma va malakalarini tashxis etish dolzarb bo‘lib turibdi. Mazkur o‘rinda ana shu masalaning tahliliga e‘tiboringizni tortamiz [1].

O‘zbekiston Respublikasi “Ta’lim to‘g‘risida”gi yangi tahrirdagi Qonunida umumiy o‘rta ta’limni zamonaviy talablar asosida rivojlantirish huquqiy-me’yoriy jihatdan belgilab qo‘yilgan [2]. Shu jihatdan o‘quvchilarning bilim, ko‘nikma va malakalarini tashxis etishning metodikasi muammosini tadqiq etish dolzarb bo‘lib turibdi.

Bilim – borliqni bilish jarayonining amaliyotda tasdiqlangan natijasi bo‘lib, u inson ongida aks etadi hamda bilimning ilmiy, empirik va nazariy turlari farqlanadi [3]. Shu sababli bizning yondashuvimizga ko‘ra, o‘quvchilarning bilim darajasini quyidagilar tashkil etadi:

- 1) o‘quv fanlari bo‘yicha nazariy tushunchalarga ega bo‘lish;
- 2) o‘quv fanlari bo‘yicha yangi axborot va ma’lumotlarni egallash;
- 3) voqelik va hodisaning mazmunini tushunish;
- 4) ijtimoiy ong va mustaqil fikrga ega bo‘lish.

Mazkur mezonlar umumiy oʻrta taʼlim maktablari oʻquvchilarining bilim darajasini belgilaydi.

Koʻnikma – bu malakaning tarkibiy qismi boʻlib, harakatning nihoyatda tez, aniq va maqsadga muvofiq ravishda oʻz-oʻzidan bajarilish qobiliyatini ifodalaydi hamda oʻquvchilarda takrorlanadigan mashqlar natijasida yuzaga keladi. Shu jihatdan koʻnikma ongli faoliyatni tez, tejamli, toʻgʻri, kam jismoniy va aqliy kuch sarflagan holda bajarish jarayonining natijasi hisoblanadi. Oʻquvchilarning koʻnikmasi oʻzlashtirgan bilimlari asosida tarkib topadi. Koʻnikma quyidagi xususiyatlarga ega:

- 1) bilim olishga odatlanish;
- 2) axloqiy fazilatlarni oʻzlashtirish;
- 3) ijtimoiy jihatdan faollashib borish;
- 4) yangiliklarni oʻzlashtirishga qiziqish.

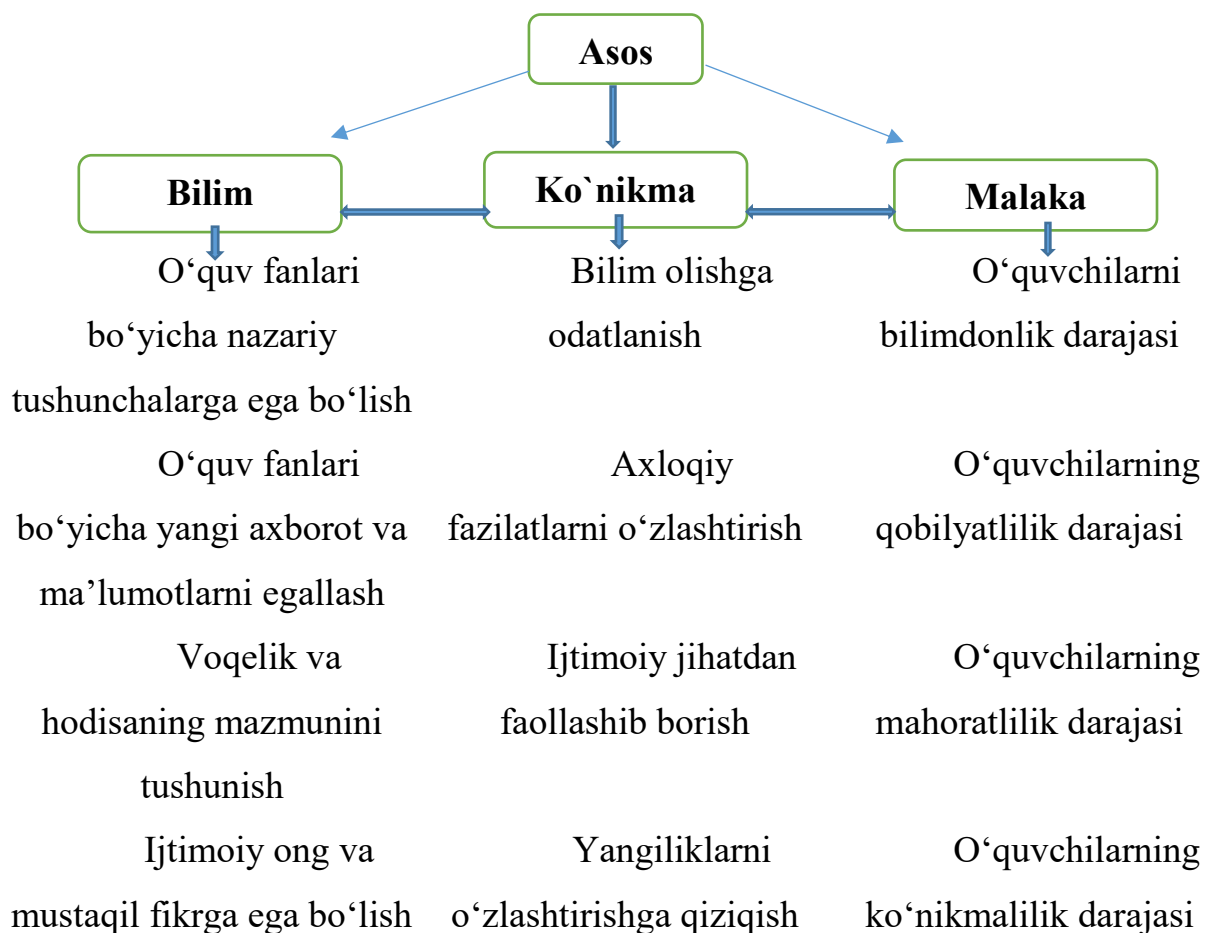
Bular umumiy oʻrta taʼlim maktablari oʻquvchilarining koʻnikmasini tashxis etishda mezonlar hisoblanadi.

Malaka – Oʻzbekiston Respublikasi “Taʼlim toʻgʻrisida”gi Qonunida mazkur tushunchaga quyidagi taʼrif berilgan: “Shaxsning kasbiy faoliyatining muayyan turini bajarishga tayyorgarligini ifodalaydigan, maʼlumot toʻgʻrisidagi tegishli hujjat bilan tasdiqlanadigan bilim, qobiliyat, mahorat va koʻnikmalari darajasidir.” (3-modda). Shu jihatdan oʻquvchilarning malakasini quyidagilar tashkil etadi:

- 1) oʻquvchilarning bilimdonlik darajasi;
- 2) oʻquvchilarning qobiliyatlik darajasi;
- 3) oʻquvchilarning mahoratlik darajasi;
- 4) oʻquvchilarning koʻnikmalik darajasi.

Bu mezonlar umumiy oʻrta taʼlim maktablari oʻquvchilarining malaka darajasini tashxis etishda asos hisoblanadi.

Umuman oʻquvchilarning bilim, koʻnikma va malakalari mazmuni quyidagi tasvirga ega:



1-chizma. O`quvchilarning bilim ko`nikma va malakalarining tarkibi

Bizning yondashuvimizga ko`ra o`quvchilarning bilim, ko`nikma va malakalarini *tashxis etish mazmuni* quyidagilardan iborat:

- 1) o`quvchilarning bilim darajasini aniqlash;
- 2) o`quvchilarning ko`nikma darajasini aniqlash;
- 3) o`quvchilarning malaka darajasini aniqlash;
- 4) o`quvchilarning o`zlashtirish darajasini rivojlantirish uchun tavsiyalar ishlab chiqish. Bularning barchasi o`quvchilarning bilim, ko`nikma va malakalarini aniqlash hamda ularni rivojlantirib borish uchun asos hisoblanadi. Shu jihatdan bu jarayonda tashxis etish omilidan foydalanish muhim ahamiyatga ega.

O`quvchilarning bilim, ko`nikma va malakalarini tashxislash vazifalari quyidagilardan iborat:

- o`quvchilarning bilim darajasi o`sib borishini o`rganish;
- o`quvchilarning ko`nikma darajasi o`sib borishini aniqlash;
- o`quvchilarning malaka darajasini aniqlash;
- o`quvchilarning bilim, ko`nikma va malakalarini rivojlantirib borish tadbirlarini belgilash hamda tavsiyalarini ishlab chiqish.

O`quvchilarning bilim, ko`nikma va malakalarini tashxislash uslublari quyidagilardan iborat:

- maxsus tuzilgan testlardan foydalanish;
- statistika;
- induksiya va deduksiya;
- bashorat qilish;
- tadbirlarni rejalashtirish va amaliy tavsiyalarni taqdim qilish.

O'quvchilarning bilim, ko'nikma va malakalarini tashxislashning asosiy bosqichlari quyidagilardir:

- mo'ljallarni aniqlash; aniqlangan darajalarni modellashtirish;
- holatni rivojlantirish; o'quvchilar bilan individual ishlash.

Bularning barchasi o'quvchilarning bilim, ko'nikma va malakalarini tashxis etishda asos hisoblanadi [4].

O'quvchilarning bilim, ko'nikma va malakalarini tashxis etish zaruriyatlari quyidagilar bilan belgilanadi:

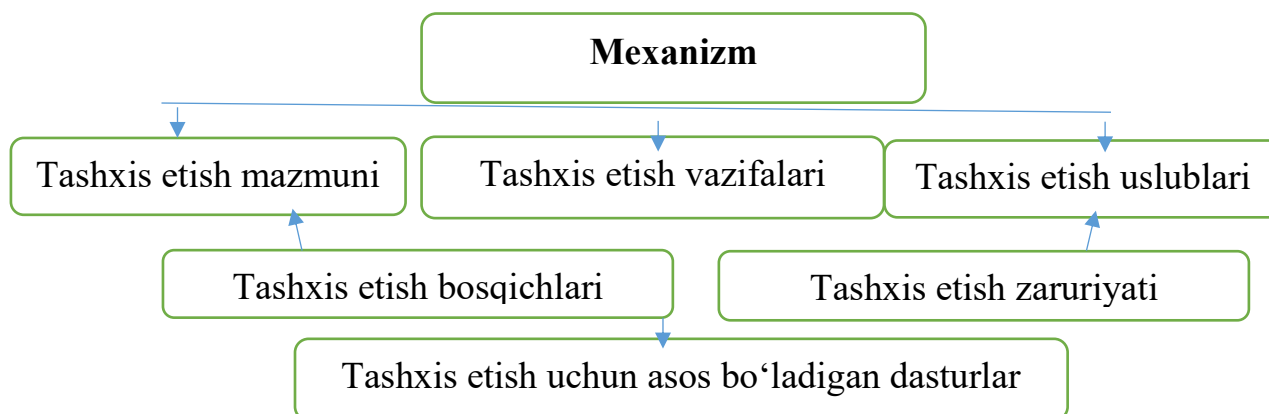
1) o'quvchilarning bilim darajasi bo'yicha aniq ma'lumotga ega bo'lish va ularning bilimini rivojlantirishga doir reja tuzish;

2) o'quvchilarning ko'nikma darajasini aniqlash va uni rivojlantirish tadbirlarini belgilash;

3) o'quvchilarning malaka darajasini aniqlash va uning o'sib borish yo'nalishlarini belgilash;

4) o'quvchilarning bilim, ko'nikma va malaka darajasini xalqaro ta'lim dasturlari asosida tashxis etish. Bunday yondashuv o'quvchilarning bilim, ko'nikma va malaka darajasini maqsadli rivojlantirib borish imkonini beradi.

Umuman, o'quvchilarning bilim, ko'nikma va malakalarini tashxis etishning an'anaviy metodikasi mexanizmlari quyidagicha yaxlit idrok etiladi:



2-chizma. O'quvchilarning bilim, ko'nikma va malakalarini tashxis etishning an'anaviy mexanizmi

Bugungi kunda 2020-2021 o'quv yilidan boshlab mamlakatimizning umumiy o'rta ta'lim maktablarida TIMSS, PISA va STEAM xalqaro ta'lim dasturlari joriy etilmoqda [5]. Shu sababli mazkur dasturlar asosida umumiy o'rta ta'lim maktablari o'quvchilarining bilim, ko'nikma va malakalarini tashxis etish zaruriyat bo'lib turibdi.

Bizning yondashuvimizga ko‘ra, o‘quvchilarning bilim, ko‘nikma va malakalarini ushbu dasturlar asosida tashxis etish quyidagi imkoniyatlarni beradi:

a) o‘quvchilarning har bir fan bo‘yicha bilim darajasini va savodxonligini chuqurlashtirish;

b) o‘quvchilarning ko‘nikmasini amaliy faoliyat asosida rivojlantirib borish;

d) o‘quvchilarning malaka darajasini turli tadbirlar vositasida o‘stirib borish;

e) o‘quvchilarning bilim, ko‘nikma va malaka darajalarini tashxis etishda xalqaro ta‘lim dasturlarining talablariga asoslanish. Bularning barchasi o‘quvchilarning bilim, ko‘nikma va malakalarini tashxis etishning zaruriyatini belgilaydi.

Mazkur jarayonni amalga oshirish uchun maxsus guruh tuziladi. Guruhning tarkibida quyidagilar ishtirok etishi taqozo yetiladi:

- har bir o‘quv fanining o‘qituvchilari;

- sinf rahbarlari;

- taklif yetiladigan metodistlar va mutaxassislar;

- maktab jamoasining vakili;

- maktab psixologi.

Bu guruh o‘quvchilarning bilim, ko‘nikma va malakalarini tashxis etish rejasiga ega bo‘lishi maqsadga muvofiq hisoblanadi. Bizningcha, bunday reja choraklik muddatda tuzilishi kutilgan samarani beradi. Chunki tashxis etishning natijasiga ko‘ra, o‘quvchilarning bilim, ko‘nikma va malakasini yanada rivojlantirish tadbirlari ishlab chiqiladi.

Shunday qilib umumiy o‘rta ta‘limni rivojlantirishda o‘quvchilarning bilim, ko‘nikma va malakalarini tashxis etishda xalqaro ta‘lim dasturlaridan foydalanish muhim o‘rin tutadi.

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KOREYS TILINI O'RGANISH: SODDA VA MURAKKAB GAPLAR TUZILISHI

ANNOTATSIYA

Ushbu maqola hozirda ommalashib borayotgan koreys tilida sodda hamda murakkab gaplarning tuzilishi, bundan tashqari murakkab gaplarning turi haqida ma'lumot beradi.

Kalit so'zlar

Koreys tili, sodda gap (단문), murakkab gap (복잡한 문장), ega, kesim

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STUDYING KOREAN LANGUAGE: STRUCTURE OF SIMPLE AND COMPLEX SENTENCES

ABSTRACT

This article provides information on the structure of simple and complex sentences, as well as the type of complex sentences in the Korean language, which is popular at present.

Key words:

Korean language, simple sentence (단문), complex sentence (복잡한 문장), subject, predicate

KIRISH

Gapning tuzilishi turli tillarda har xil namoyon bo'lib, murakkablik jihati tomonidan farq qiladi. Hozirgi kunda ommalashib borayotgan koreys tili ham bundan mustasno emas. Gap o'zi nima? Gap — muayyan til qonuniyatiga ko'ra grammatik va intonatsiyaviy shakllangan nutq birligi. Fikr shakllanishi va ifodalanishining asosiy vositasi. Gap so'z, so'z birikmalariga qarama-qarshi qo'yiladigan sintaktik kategoriyadir.¹⁶ Har bir gap ohang jihatdan shakllangan bo'ladi. Gapning boshlanishi va tugallanishi uning ohangidan sezilib turadi. Gap oxirida ohang ham tugallanadi. Ko'pchilik tillarga xos bo'lgan ushbu xususiyatni

¹⁶<https://uz.wikipedia.org/wiki/Gap#:~:text=Gap%20%E2%80%94%20muayyan%20til%20qonuniyatiga%20ko%CA%BBra,qarama%2Dqarshi%20qo%CA%BBiladigan%20sintaktik%20kategoriyadir.>

o'zbek tilida ham uchratish mumkin. Chon Gi Chhol (정기철) unga quyidagicha ta'rif berad:

좋은 문장의 요건.

좋은 문장이란 일반적으로 정확한 어휘로 글쓰는 이의 동기와 목적에 맞도록 표현 –

전달된 글을 말한다. 좀 더 구체적으로 말한다면 좋은 문장의 성립 역시 “무엇을” 썼느냐

냐, “어떻게” 썼느냐의 문제라고 할 수 있다. 즉, 좋은 문장은 ‘무엇을’(내용)과 ‘어떻

게’(표현 방식)를 모두 갖추고 있어야 한다.

To'g'ri tuzilgan jumlaning ahamiyatli tarafi.

To'g'ri tuzilgan jumla, avvalam bor, aniq tanlangan so'zlarning sabab va maqsadiga to'g'ri keladigan ifodalarni o'zida yaqqol namoyish etishiga aytiladi. Ilmiyroq qilib aytadigan bo'lsak, to'g'ri tuzilgan jumlaning asosida “nimani?” “qanday?” yozish muammosi yotadi. Ya'ni, to'g'ri tuzilgan jumlaning asosida “nimani?”(mazmun) va “qanday?”(ifoda usuli) degan savollarni ifodalovchi mazmun yotishi kerak.¹⁷ Koreys tilida ham boshqa tillar singari gap bo'laklari, gap qurilishidagi vazifalariga ko'ra, ikki turga bo'linadi: bosh bo'laklar va ikkinchi darajali bo'laklar. Bosh bo'laklar, ya'ni, ega va kesim gapni tashkil etishda muhim ro'l o'ynab, gapni tashkil etuvchi asosiy sintaktik birliklar hisoblanadi. Gapda bosh bo'laklardan tashqari boshqa bo'laklar ham qatnashishi mumkin. Lekin ular gapni tuzishda asosiy ro'lni o'ynamaydi. Shuning uchun ham ular gapning ikkinchi darajali bo'laklari deb yuritiladi. Ikkinchi darajali bo'laklar bosh bo'laklarni ma'nosini aniqlashtirish, fikrni to'ldirish uchun xizmat qiladi. Ular o'z vazifalariga ko'ra, uch xil bo'ladi: aniqlovchi, to'ldiruvchi, hol.

SODDA GAPLARNING TUZILISHI

Sodda gap (단문)— o'z tarkibida birgina predikativ birlikka ega bo'lgan, ma'lum fikr ifodalay oladigan, grammatik va intonatsion jihatdan shakllangan sintaktik birlik.¹⁸ Masalan, 저는 집에 가요 (Men uyga ketyapman) gapini misol qilishimiz mumkin. Sodda gaplar, tarkibida bosh va ikkinchi darajali bo'laklarning qatnashishiga qarab, ikki xil bo'ladi: yig'iq gap **간결한 문장** [kangyol han munjang] va yoyiq gap **충실한 문장** [chhung shil han manjang].¹⁹ Sodda yig'iq gaplar faqatgina bosh bo'laklar iborat bo'ladi, ya'ni ega va kesimdan. Sodda yoyiq

¹⁷ 정기철. 문장의 기초. 서울. 도서출판 열락. 2004. 23 쪽. (Chon Gi Chhol, Gap asosi).

¹⁸https://uz.wikipedia.org/wiki/Sodda_gap#:~:text=Sodda%20gap%20%E2%80%94%20o%CA%BBz%20tarkibida%20birgina,bulutlar%20tushga%20borib%20quyuqlasha%20boshlaydi.

¹⁹ 남기심. 현대 국어 통사론. (Nam Gi Shim. Koreys tili sintaksisi) 서울. 2002 년, 67 쪽.

gaplar bosh hamda ikkinchi darajali bo'laklardan iborat bo'ladi. Gap tarkibida ega va kesimdan tashqari, aniqlovchi (관형어 –[kyujongo]) to'ldiruvchi va hol (부사어-[busaeo]). Misollar orqali ko'rib chiqamiz. 가을이 왔어요-Kuz keldi. Bu yerda "가을이" "Kuz" so'zi ega, "왔어요" "keldi" so'zi esa kesim vazifasida kelgan bo'lib, bu sodda yig'iq gapga misol bo'la oladi. "우리 나라에 가을이 왔어요"- Bizning yurtimizga kuz keldi. 우리 나라에 (bizning yurtimizga) hol, 가을이 (kuz) – ega, 왔어요 (keldi) – kesim. Bu gap esa sodda yoyiq gapga misol bo'la oladi.

MURAKKAB GAPLARNING TUZILISHI

Murakkab gaplar (복잡한 문장) ikki yoki undan ortiq mustaqil yoki ergash gaplar bog'langan holda ifodalanadigan gaplardir. Murakkab gaplar har xil usullarda bog'lanib, fikrni kengroq va to'liqroq ifodalashga yordam beradi. Murakkab gaplarda ikki va undan ortiq kesimdan iborat bo'ladi. Murakkab gap bu – sintaktik butunlikning eng yuqori cho'qqisidir.²⁰ Koreys tilida murakkab gaplarning ikki xil turi bor: ergashgan murakkab gaplar va bog'langan murakkab gaplar. Bog'langan qo'shma gaplar **고**(va), **~거나** (yoki), **~며** (bir vaqtning o'zida) **~지만** (ammo) kabi bog'lovchilar yordamida bo'lanadi. Masalan, 시간이 없지만 열심히 공부해요. Tarjimasi : Vaqtim yo'q, lekin astoydil o'qiyapman. Bu yerda **지만** orqali gap yasaldi. Yana misol qilib 주말에는 쉬거나 친구들과 파티에 갈 거예요. Tarjimasi : Hafta oxirida dam olaman yoki do'stlarim bilan bazmga boraman. Umumiy qilib yozadigan bo'lsak, koreys tilida murakkab gaplarning biritiruv , ayiruv, zidlov hamda inkor munosabatda bo'ladigan turlari mavjud. Ergashgan murakkab gaplarning koreys tilida bir necha turi mavjud. Bular : ega ergash gap, kesim ergash gap, to'ldiruvchi ergash gap, sabab ergash gap, taqqoslovchi ergash gap, o'lchov daraja ma'nosida ergash gap, to'siqsiz ergash gap, aniqlovchi ergash gap, ravish ergash gap, payt ergash gap, maqsad ergash gap va o'rin ergash gap. Ega ergashgan murakkab gapga 누구 거짓말을 많이 말하면 그 사람 사람들한테서 존경을 잃을 것이다 gapni misol qilishimiz mumkin. Tarjimasi: Kim yolg'onni ko'p gapirsa, u odamlar orasini o'z xurmatini yo'qotadi. Kesim ergashgan murakkab gapga : 지금은 제일 중요한 일이 나라의 안정과 발전이다. Tarjimasi: Hozirda eng muhim ish shuki, Vatan tinchligi va barqarorligidir. Ergashgan murakkab gapning har bir turida uning yasalishini shartlari bo'ladi. Masalan yuqorida misol keltirgan ikkita ega va kesim ergashgan murakkab gaplarni olaylik. Ega ergashgan murakkab gaplarni yasash uchun bosh

²⁰ 남기심. 국어문법론 강의. 공저. 학연사. 1999. 78 쪽. (Nam Gi Shim, Ona tili nazariy grammatikasidan ma'ruzalar).

gapda olmosh (ko'rsatish, so'roq) orqali ifodalanadi. Kesim ergashgan murakkab gapda esa bosh gapning kesimi faqat ot kesim bilan ifodalanishi kerakdir.²¹

XULOSA

Koreys tilida barcha tillarda bo'lganidek sodda va murakkab gaplar mavjud. Bundan tashqari, sodda gaplar qisqa fikrlarni ifodalashga samarali bo'lsa, ikki (yoki undan ortiq) sodda gapning yonma yon turishi, ularning murakkab gapni tashkil etdi degani emas. Ular o'zaro shunchaki ma'lum bir fikrni ifodalagan bo'ladi, xolos. Modomiki, murakkab gap tugal fikrni ifodalovchi ma'lum bir butunlikni talab etadi degan xulosaga kelishimiz mumkin.²²

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²¹ Koreys tilida murakkab gaplar sintagmatikasi. 2013. 52-bet Ashirbayeva Dilorom Ravshanovna

²² Lee Iksop and S.R.Ramsey. The Korean Language. New York: State University of New York

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ЯЗЫКОВЫЕ БАРЬЕРЫ И ИХ ВЛИЯНИЕ НА РАСШИРЕНИЕ МЕЖДУНАРОДНОГО БИЗНЕСА

Аннотация: Эта работа исследует значительное влияние языковых барьеров на расширение международного бизнеса. В условиях растущей глобализации эффективная коммуникация становится ключевым фактором успеха транснациональных компаний при выходе на новые рынки и взаимодействии с разнообразной аудиторией потребителей. В исследовании подчеркивается, как языковые барьеры могут препятствовать выходу на рынок, нарушать межкультурную коммуникацию и отрицательно сказываться на операциях, маркетинговых стратегиях и управлении отношениями с клиентами. В статье рассматриваются различные виды языковых барьеров, включая лексические различия, диалектные особенности и проблемы невербальной коммуникации, а также их роль в усугублении культурных недоразумений. Исследование также анализирует стратегии преодоления этих барьеров, такие как языковое обучение, набор многоязычных сотрудников, услуги перевода и культурная адаптация. Приводя примеры из реальной практики, работа демонстрирует важность преодоления языковых барьеров для компаний, стремящихся укрепить свое присутствие на международном рынке и повысить свою конкурентоспособность. В заключение, автор утверждает, что язык является не просто инструментом коммуникации, но и стратегическим активом, влияющим на принятие решений и успех бизнеса на глобальном рынке.

Ключевые слова: Языковые барьеры, Международный бизнес, Межкультурная коммуникация, Глобальное расширение, Локализация, Стратегии выхода на рынок

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LANGUAGE BARRIERS AND THEIR IMPACT ON INTERNATIONAL BUSINESS EXPANSION

Abstract: This paper explores the significant impact of language barriers on the expansion of international business. In the context of increasing globalization,

effective communication has become a key factor in the success of multinational companies as they enter new markets and interact with diverse consumer bases. The study highlights how language barriers can hinder market entry, disrupt cross-cultural communication, and negatively affect operations, marketing strategies, and customer relationship management. The paper discusses various types of language barriers, including linguistic differences, dialectal variations, and non-verbal communication issues, and emphasizes their role in exacerbating cultural misunderstandings. The research also examines strategies to mitigate these challenges, such as language training, multilingual staff recruitment, translation services, and cultural adaptation. By providing case studies and real-world examples, the study demonstrates the importance of overcoming language barriers for companies seeking to enhance their global presence and competitiveness. Ultimately, the paper suggests that language is not just a communication tool but a strategic asset that influences decision-making and business success in the global marketplace.

Keywords: *Language barriers, International business, Cross-cultural communication, Global expansion, Localization, Market entry strategies*

Introduction

In today's increasingly globalized world, language plays a pivotal role in the dynamics of international business. As businesses expand across borders, effective communication becomes a cornerstone of success in the global marketplace. Language, not only a tool for conveying information but also a cultural marker, facilitates or hinders the process of entering new markets, managing customer relations, and executing strategic business operations.[1] As companies pursue international expansion, the ability to navigate linguistic and cultural differences is critical. The rise of globalization has led to increased interaction between cultures, making cross-cultural communication more complex and challenging.[2] The necessity of understanding and adapting to local languages and customs has never been more pressing, as businesses seek to tailor their products, services, and marketing strategies to diverse consumer bases. However, despite the growing recognition of its importance, language barriers continue to pose significant challenges to businesses as they attempt to establish themselves in foreign markets.

This research explores the impact of language barriers on the effective expansion of international business. The core research question centers on how language barriers influence various facets of business operations in multinational enterprises and their ability to penetrate global markets. In particular, the study aims to examine how linguistic challenges impede market entry, disrupt cross-cultural communication, and affect key business processes such as marketing, customer relationship management, and organizational efficiency. The study also seeks to understand the broader implications of language barriers in shaping strategic decision-making within international business contexts. Understanding how language barriers hinder or facilitate international business expansion is crucial for

companies seeking to overcome these challenges and enhance their competitive edge in global markets.

The research objectives of this study are twofold. First, it seeks to analyze how language barriers obstruct the entry of companies into international markets and disrupt their business expansion strategies. This includes examining the role of language in market identification, brand positioning, and effective communication with local stakeholders. Second, the study investigates how linguistic challenges influence communication within multinational companies, particularly in areas of cross-cultural collaboration, customer engagement, and operational efficiency. By addressing these questions, the research aims to contribute to a deeper understanding of the role that language plays in the success or failure of international business ventures.

To achieve these objectives, this research will employ a combination of literature review, case analysis, and qualitative research methodologies. The literature review will provide a comprehensive overview of existing research on language barriers in international business, highlighting the key theories, frameworks, and findings that have shaped the current understanding of the issue. Case studies will be used to illustrate real-world examples of how language barriers have either facilitated or hindered business expansion in various regions and industries. Furthermore, qualitative interviews with international business professionals will offer insights into the practical challenges companies face when dealing with language-related issues in cross-border operations. By synthesizing these diverse sources of data, this study aims to provide a nuanced and practical analysis of the impact of language barriers on international business expansion.

In summary, the research will explore the multifaceted role of language in international business and the challenges that language barriers present to businesses operating in a globalized environment. Through a thorough examination of the literature, real-world case studies, and qualitative research, the study will provide valuable insights into how businesses can overcome linguistic obstacles and develop more effective strategies for global expansion.

Language Barriers: Definition and Classification

Language barriers refer to the challenges that arise when people or organizations cannot effectively communicate due to differences in language. These obstacles can range from simple misunderstandings to severe communication breakdowns, affecting both personal and business interactions.[3] The concept of language barriers is multifaceted, as they can manifest in various forms, from differences in vocabulary to more complex issues such as cultural nuances embedded within language use. At a basic level, language barriers can be understood as the difficulties faced when individuals or organizations attempt to communicate without a common language or with insufficient proficiency in a shared language.

The main types of language barriers include linguistic differences, dialectal variations, technical jargon, and non-verbal communication issues. Linguistic differences are the most obvious form, where distinct languages are involved, such as English versus Mandarin or Russian. These differences can create significant

challenges, particularly when businesses operate in regions where their native language is not spoken. Dialectal issues further complicate this challenge, as even within the same language, regional variations and accents may cause confusion or misinterpretation. Technical jargon, often used in professional or industry-specific settings, can pose a particular barrier, as specialized terms may not have direct equivalents in other languages. Finally, non-verbal communication, such as body language, gestures, and facial expressions, can differ dramatically across cultures and can lead to misunderstandings if not appropriately interpreted. These types of language barriers can intersect and exacerbate each other, leading to more complex challenges in cross-cultural communication.

Language barriers are closely related to cultural differences, and often, language itself is a reflection of deeper cultural distinctions. Language is not just a means of communication; it carries with it the values, norms, and worldviews of a particular culture. As such, linguistic differences often reflect and intensify cultural disparities, making it more difficult for individuals from different cultural backgrounds to understand each other fully. For instance, some cultures may place a high value on indirect communication and politeness, which can be misinterpreted by individuals from cultures that value directness and clarity. In international business, this can lead to misunderstandings or even conflicts. Therefore, overcoming language barriers is not only about learning new words or grammar rules but also about gaining cultural awareness and understanding the underlying social contexts that shape communication practices. In this sense, language barriers are both a communication issue and a cultural issue, with the potential to exacerbate cross-cultural challenges.

The Impact of Language Barriers on International Market Expansion

Language barriers present significant obstacles to companies seeking to expand into new international markets. One of the primary challenges is market entry, where language can directly affect a company's ability to position itself in a new region, adapt its marketing strategies, and effectively communicate with local customers. Language barriers can hinder a company's understanding of local consumer preferences, needs, and behaviors, which are crucial for tailoring products or services to the target market.[4] For example, if a company fails to adapt its marketing materials to the local language or cultural context, it may struggle to connect with potential customers. Moreover, failure to translate promotional content accurately can result in miscommunication or even damage the company's reputation. A case in point is the global expansion of companies like PepsiCo and McDonald's, which have faced challenges in localizing their marketing messages in foreign markets. In some instances, translations of slogans or product names have led to embarrassing situations, where the meaning of their messages was lost or misinterpreted, negatively affecting brand perception.

Similarly, customer relationship management is another area where language barriers can have a profound impact. In a multilingual and multicultural environment, providing high-quality customer service becomes more challenging. Customers may experience frustration when they cannot communicate effectively

with service representatives or when support is unavailable in their preferred language. This frustration can lead to a decline in customer loyalty, as consumers are less likely to remain loyal to brands that do not meet their linguistic or cultural expectations. Companies must invest in hiring multilingual staff, providing language training, and implementing multilingual customer support systems to mitigate these issues. Furthermore, adopting culturally sensitive communication strategies is essential to ensure that customers feel understood and valued, fostering stronger, long-term relationships.[5]

In terms of organizational communication and collaboration, language barriers within multinational corporations can impede team dynamics and decision-making processes. When teams from different countries are involved in cross-border projects, differences in language and communication styles can create misunderstandings, delays, and inefficiencies. For instance, a project team composed of members from different linguistic backgrounds may struggle to coordinate their efforts if there is no common language proficiency or if language barriers limit the exchange of ideas. In such cases, important information may be miscommunicated, leading to mistakes or delays. A notable example is the difficulties faced by multinational companies like Volkswagen, where language and communication challenges among international teams contributed to inefficiencies in decision-making and slowed down the implementation of global strategies. Effective communication strategies, including language training and the use of interpreters or translators, are essential to overcoming these challenges and ensuring that teams can collaborate smoothly.

Language barriers also affect brand communication and advertising efforts. In the global marketplace, a company's brand message must be carefully crafted and localized to resonate with diverse cultural and linguistic groups. Misinterpretations or poor translations of advertising content can severely damage a brand's image, as seen in several high-profile cases of failed advertisements. For instance, Coca-Cola's early marketing campaigns in China were initially problematic, as the brand's name was mistranslated to mean "bite the wax tadpole," which had no positive connotations in Chinese. Such cultural missteps can lead to significant reputational harm, making it crucial for companies to invest in professional translation services and culturally competent advertising strategies when entering new markets. A more recent example involves companies like Nike and H&M, which have occasionally faced backlash over cultural insensitivity in their marketing campaigns. This highlights the importance of linguistic and cultural expertise in ensuring that advertising messages are accurately conveyed and culturally appropriate.

In conclusion, language barriers present a range of challenges for businesses seeking to expand internationally. From market entry and customer relations to internal communication and brand messaging, language issues can significantly hinder a company's ability to operate effectively in foreign markets. Overcoming these barriers requires a multifaceted approach, including investing in language training, hiring multilingual staff, adopting culturally aware communication strategies, and leveraging technology to facilitate better cross-cultural

communication. By addressing language barriers head-on, businesses can enhance their ability to succeed in the global marketplace and build lasting relationships with customers across diverse linguistic and cultural backgrounds.

Strategies for Overcoming Language Barriers

To mitigate the impact of language barriers on international business, companies must adopt effective strategies that enhance cross-cultural communication and ensure smooth operations in foreign markets. One such strategy is language training and the recruitment of multilingual talent. By investing in language education, international companies can empower their employees to engage more effectively in global communication. Language training programs are crucial in developing employees' ability to interact with foreign clients, partners, and colleagues, enabling them to navigate different linguistic and cultural contexts with ease. For multinational companies, offering language courses to staff members, particularly those working in regions where language differences are significant, helps bridge communication gaps and fosters better collaboration within cross-cultural teams. Furthermore, employing multilingual personnel who are fluent in the languages of the markets in which the company operates can ensure more effective communication both internally and externally. Multilingual employees not only facilitate smoother communication but also bring valuable cultural insight, which is vital for tailoring business strategies to local contexts.

In addition to language training, companies can leverage modern technology to address language barriers, especially in real-time communication. The use of translation and language services, including machine translation tools, is becoming increasingly common in global businesses. With the advent of artificial intelligence (AI) and natural language processing technologies, tools like Google Translate, DeepL, and other advanced translation platforms offer instant and often accurate translations of text, speech, and documents. These tools can be particularly useful in streamlining communication between international teams or in customer service settings, where quick and effective translations are essential. However, while machine translation can help overcome immediate language barriers, companies should also ensure that they invest in professional human translators for more complex or sensitive communication, especially in legal, marketing, and technical areas. By combining technological tools with human expertise, businesses can create a robust communication strategy that reduces the risk of misinterpretation and fosters better understanding across linguistic divides.[6]

Another essential strategy for overcoming language barriers is localization and cultural adaptation. Localization goes beyond mere translation and involves adjusting business practices, products, and services to align with the cultural, social, and linguistic characteristics of local markets. In today's competitive global economy, companies must recognize that understanding and respecting local cultures is just as important as providing products in the local language. Localization includes adapting marketing campaigns, product names, user interfaces, and even customer service practices to suit local preferences, values, and customs. By doing so, companies not only ensure that their offerings resonate with

local audiences but also build trust and loyalty among consumers. For example, McDonald's is a prime example of successful localization. In India, where a large portion of the population follows a vegetarian diet, McDonald's adapted its menu to include vegetarian options, such as the McAloo Tikki burger, catering to local dietary preferences while maintaining the core elements of its global brand. Similarly, in Japan, McDonald's introduced unique items like the Teriyaki Burger, which aligns with local tastes and culinary traditions. These adaptations demonstrate how localization can strengthen a brand's connection with local customers, enhancing its competitive edge in the marketplace.

Moreover, cultural adaptation extends to brand messaging and communication. Brands must be sensitive to local customs and values when crafting advertisements and promotional materials. For instance, Coca-Cola's global marketing campaigns often feature localized messaging that appeals to the cultural nuances of each market. In China, for example, Coca-Cola's advertisements focus on family values and togetherness, aligning with traditional Chinese cultural themes, while in Western markets, the company emphasizes themes of individuality and freedom. This careful cultural adaptation has allowed Coca-Cola to maintain its global appeal while resonating with local sensibilities. Similarly, global companies like Nike and Starbucks invest heavily in understanding local cultures and customizing their marketing strategies accordingly, ensuring that their brand messages are culturally relevant and impactful.

In conclusion, addressing language barriers in international business requires a combination of strategies that integrate language training, multilingual talent, technology, and localization. By equipping employees with language skills and leveraging advanced translation tools, businesses can improve their ability to communicate effectively across borders. Additionally, localization and cultural adaptation play a crucial role in ensuring that products, services, and marketing strategies align with local customs and preferences, thereby enhancing a company's competitiveness in international markets. By adopting these strategies, businesses can overcome language barriers and strengthen their presence in the global marketplace, building lasting relationships with customers and partners worldwide.

Conclusion

Language barriers play a significant role in the expansion of international businesses, affecting multinational companies in numerous ways. As companies attempt to enter new markets, the challenges posed by language differences influence critical aspects such as decision-making, operations, and customer relationships. Language is more than just a tool for communication—it is a reflection of the cultural and social dynamics that shape consumer behavior, business practices, and market expectations. For multinational companies, understanding the role of language in cross-border operations is crucial for successful market penetration and brand positioning. When language barriers are not addressed, companies risk miscommunication, failed marketing efforts, and strained customer relationships, all of which can hinder their ability to succeed in global markets. Therefore, language must be seen not only as a means of

communication but as a strategic asset that directly impacts business growth and international expansion.

In light of these challenges, strategies to overcome language barriers have proven to be effective in facilitating smoother international business operations. Language training, the recruitment of multilingual staff, professional translation services, and localization efforts all contribute to reducing the impact of language differences. Through these strategies, companies can enhance their cross-cultural communication capabilities, improve customer service, and tailor their marketing messages to resonate with local audiences. Localization, in particular, plays a crucial role in adapting business models to the cultural nuances of different markets, ensuring that the company's products and services align with local needs and preferences. Technology, such as machine translation and digital communication tools, can further aid in overcoming language obstacles by providing immediate support for communication across languages. However, while these strategies offer significant benefits, it is essential to recognize the importance of cultural adaptation. In the global marketplace, cultural sensitivity and awareness are just as crucial as linguistic competence, and businesses must ensure that their messaging aligns with the values and expectations of local consumers.

While the strategies discussed above are effective, the current research has certain limitations that should be acknowledged. For instance, the study primarily focuses on the impact of language barriers from a general perspective, and the sample size of case studies and real-world examples may not fully represent the diversity of global business contexts. Furthermore, the complexity of cultural differences and the rapidly evolving nature of language technologies pose challenges in providing definitive solutions. Future research could explore more in-depth case studies of companies in specific regions or industries, offering a granular understanding of how language barriers manifest in particular contexts. Additionally, emerging language technologies such as AI-powered translation tools and real-time communication platforms offer new opportunities for businesses to overcome language barriers. Future studies could investigate how these technologies are transforming the international business landscape, particularly in terms of communication efficiency, cultural understanding, and market integration. Expanding research in these areas will provide valuable insights into the evolving dynamics of language and its role in the global economy.

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LIDERLIK XUSUSIYATLARINI SHAKLLANISHI PSIXOLOGIK- PEDAGOGIK TADQIQOTLARIDA SHAXS FAOLIYATINI RIVOJLANTIRISH G'UYALARI

Maqolada kichik maktab o'quvchilarining liderlik sifatlarini shakllanishida psixologik pedagogik tadqiqotlar davomida shaxs faoliyatini rivojlantirish g'oyalari, undan tashqari o'quvchilarning shaxs sifatida shakllanishida psixologik atamalar, liderlik xususiyatlarining tarkib topishi, lug'aviy ma'nosi, ontogenez haqida, liderning shaxslararo yo'nalganligi, ularning yutuq va kamchiliklari guruhdagi shaxslararo munosabatlar tizimida shakllanadigan ustunlik va bo'ysunish munosabatlari, ta'siri, lider harakatining faoliyatga yo'nalganligi, lider faoliyatining tashkilotchilik qobiliyatlari hamda lider tushunchasi ustuda ish olib brogan olimlar haqida yetarlicha ma'lumotlar keltirilgan.

***Kalit so'zlar:** lider, ontogenez, shaxs, perseptiv, operatsion, shaxslararo, pedagogi, psixologik,*

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IDEAS OF PERSONAL ACTIVITY DEVELOPMENT IN PSYCHOLOGICAL AND PEDAGOGICAL RESEARCH OF THE FORMATION OF LEADERSHIP CHARACTERISTICS

In the article, the ideas of personal activity development during psychological pedagogical researches in the formation of leadership qualities of junior high school students, as well as psychological terms in the formation of students as individuals, the composition of leadership characteristics, their dictionary meaning, about ontogenesis, interpersonal orientation of the leader, their achievements and disadvantages are the relationships of superiority and subordination formed in the system of interpersonal relations in the group, influence, orientation of the leader's actions to the activity, organizational skills of the leader's activities and enough information is given about the scientists who worked on the concept of leader.

Key words: leader, ontogenesis, personality, perceptive, operational, interpersonal, pedagogical, psychological

O'zbekiston Respublikasining 2020-yil 23-sentabrdagi O'RQ-637-sonli "Ta'lim to'g'risida"gi Qonuni, O'zbekiston Respublikasi Prezidentining 2022-yil 28-yanvardagi PF-60-sonli "2022-2026-yillarga mo'ljallangan Yangi O'zbekistonning taraqqiyot strategiyasi to'g'risida"gi, 2019 - yil 29 - apreldagi PF-5712-sonli "O'zbekiston Respublikasi xalq ta'limi tizimini 2030-yilgacha rivojlantirish konsepsiyasini tasdiqlash to'g'risida"gi Farmonlari, 2017-yil 20-

apreldagi PQ-2909-son “Oliy ta’lim tizimini yanada rivojlantirish chora-tadbirlari to’g’risida”gi, 2018-yil 5-iyundagi PQ-3775-sonli “Oliy ta’lim muassasalarida ta’lim sifatini oshirish va ularning mamlakatda amalga oshirilayotgan keng qamrovli islohotlarda faol ishtirokini ta’minlash bo’yicha qo’shimcha chora-tadbirlar to’g’risida”gi, 2021-yil 1-apreldagi PQ-5047-son “Ilm-fan sohasidagi davlat siyosati va innovatsion rivojlantirishdagi davlat boshqaruvini yanada takomillashtirish chora-tadbirlari to’g’risida”gi Qarorlari, Vazirlar Mahkamasining 2017-yil 6-apreldagi 187-sonli “Umumiy o’rta ta’limning davlat ta’lim standartini tasdiqlash to’g’risida”gi O‘zbekiston Respublikasi oliy ta’lim tizimini 2030-yilgacha rivojlantirish Konsepsiyasi hamda mazkur faoliyatga tegishli boshqa me’yoriy-huquqiy hujjatlarda belgilangan vazifalarni amalga oshirishga muayyan darajada xizmat qiladi.

I. V. Peskova tashkilotchilik qobiliyatlarining asosiy komponentlari sifatida “voqelikda yo‘nalishni oqilona topish” qobiliyatini, yetakchi komponentlar sifatida esa “topqirlik va zukkolikda, jasorat va qat’iyatda namoyon bo‘ladigan ijodiy tafakkur bilan birgalikda aqlning moslashuvchanligi” ajratib ko‘rsatadi [97].

Tadqiqotchi tomonidan tashkilotchining faoliyati uchun yanada o‘ziga xos xususiyat – “Harakatsizlik” alohida ajratib ko‘rsatilgan bo‘lib, u tomonidan “o‘rtoqlarga ta’sir qilish qobiliyati”, “bir vaqtning o‘zida ularning ruhiyatining turli tomonlariga – aqliga, tuyg‘ulariga, irodasiga ta’sir qilish qobiliyati” deb ta’riflagan va “bu tashkilotchining aqliy sifatleri, uning tabiati jihatlari, temperamenti bilan belgilanadi” [46].

Sh. Yuldashev fikriga ko‘ra, tashkilotchilik qobiliyatlarning markaziy “o‘zagi” bo‘lib boshqara olish, ya’ni boshqa faoliyat turlaridan farqli ravishda, tashkilotchilik ishi uchun zarur bo‘lgan murakkab xususiyat hisoblanadi.

Bir qator olimlar liderlikni hodisa sifatida o‘rganishning umumiy sxemasini bir necha analitik bloklar ko‘rinishida taklif etib, ular mohiyatiga ko‘ra liderlikning barcha muammolarini o‘z ichiga olishi mumkin. Ushbu sxema uchta asosiy bandni o‘z ichiga oladi:

tuzilish xususiyatlari (shaxs fazilatleri);
amalga oshirish mexanizmlari;
borishi dinamikasi [36].

Tadqiqotimiz nuqtayi nazaridan birinchi band ko‘proq qiziqish uyg‘otadi. Afsuski, mamlakatimizda lider shaxsiy fazilatlarini ko‘rib chiqish muammosiga yetarlicha e’tibor berilmagan.

Mazkur muammo psixologiya fanida: E. G‘oziyev, I. P. Volkov, V. A. Golneva, V. Karimova, Sh. Yuldoshev, Ye. M. Dubovskaya, A. S. Krikunov, R. L. Krichevskiy ishlarida kengroq aks ettirilgan.

Afsuski, shuni aytish mumkinki, mamlakatimiz olimlari tomonidan liderlik hodisasining o‘zi va liderlik fazilatleri, ayniqsa, muammoning pedagogik jihati, xususan, lider - bola shaxsining ijobiy fazilatlarini tarbiyalash masalalari yetarlicha o‘rganilmagan.

Ontogenezda lider shaxsining rivojlanish jarayonini nazariy va tajriba yo‘li bilan tadqiq qilish uchun ushbu jarayonga kiritilgan operatsion tushunchalarning

aniq differentsiatsiyasi muhim ahamiyatga ega.

Odatda guruh faoliyatini tashkil eta oladigan, amalda boshqalarni boshlab borgan holda guruhdagi munosabatlarni tartibga sola oladigan guruh a'zosini **lider** deb hisoblash qabul qilinadi. Lider boshqa guruh a'zolarining aksariyati kabi fazilatlarga ega, ammo uning harakatlari boshqalarning harakatlaridan sifat jihatidan farq qiladi hamda uning faoliyati darajasi qolganlarga qaraganda yuqori bo'ladi.

O'z tadqiqotimizda biz I. V. Peskova, M. G. Yaroshevskiy va boshqa tadqiqotchilarning fikriga qo'shilgan holda, *tengdoshlar guruhida birgalikdagi faoliyatni tashkil etishga va munosabatlarni tartibga solishga qodir bo'lgan faol bolani lider deb hisoblaymiz.*

Liderlikning namoyon bo'lishi ko'p jihatdan guruhning rivojlanish darajasiga bog'liq bo'ladi. I. V. Peskova ta'kidlashicha, guruh tuzilmasi guruh a'zolarining mavqei va maqomining o'ziga xos iyerarxiyasidan iborat. Ushbu zinapoyaning eng yuqori pog'onasini o'zining yuqori maqomi va mavqei bilan guruhning barcha a'zolari orasida ajralib turadigan va shuning uchun guruhning barcha a'zolariga tegishli bo'lgan eng mas'uliyatli qarorlarni qabul qilish huquqiga ega bo'lgan guruh lideri egallaydi

Ye. P. Ilin fikriga ko'ra, "lider" atamasi juda keng qo'llaniladi. Lider (leader) - inglizcha so'z bo'lib, "yetakchi, boshlovchi" deb tarjima qilinadi. Biroq, ijtimoiy psixologiyada u biroz boshqacha mazmun oldi. Shunday, lider deganda guruhdagi shaxslararo

(norasmiy yoki noformal) munosabatlarni tartibga soluvchi guruh a'zosi tushuniladi.

Lider – "bu birgalikdagi faoliyatni tashkil etishda va guruhdagi munosabatlarni tartibga solishda haqiqatan ham markaziy rol o'ynaydigan avtoritet shaxsdir va liderga xos bo'lgan ba'zi belgilar ajratib ko'rsatilishi lozim:

lider (avtoritet) vaziyatiga ko'tarilgan guruhga mansubligi;

o'z harakati bilan u guruh maqsadiga erishishga hissa qo'shadi. Mazkur belgi uch variantlidir:

o'z harakatlari bilan u boshqalarga qaraganda guruh maqsadiga erishishga ko'proq hissa qo'shadi (masalan, ko'proq gol urgan);

boshqa a'zolar tomonidan guruh maqsadiga erishishga hissa qo'shadi (darvozabon tomonidan muvaffaqiyatli qaytarilgan shayba butun jamoani ruhlantirishi mumkin);

guruh a'zosi o'zining rahbarligi bilan guruhning boshqa a'zolari tomonidan umumiy maqsadga erishishga hissa qo'shadi;

liderning tashabbuskorligi (qoidalar, umume'tirof etilgan me'yorlar, o'yin uchun amaliy ishlanmalarga rasmiy rioya qilish talab qilinganidan ko'ra, ixtiyoriy ravishda ancha kattaroq mas'uliyatni o'z zimmasiga oladi);

guruh a'zolarining unga bo'ysunishi istagi yoki ehtiyoji"[81].

Muallifning fikricha, haqiqiy amaliyotda lider roliga ko'tarilishning uchta holati mavjud:

1. Shaxs lider bo'lishni xohlaydi, lekin guruh uning liderligini qabul

qilmaydi.

2. Guruh shaxsni lider sifatida ilgari suradi, lekin uning o'zi liderlikka intilmaydi.

3. Shaxs lider bo'lishga intiladi va guruh uni qo'llab-quvvatlaydi (bu mavjud liderlik qobiliyatlaridan: tashkilotchilik, taktika va boshq. darak beradigan eng maqbul holat).

Bundan tashqari, o'ziga xos shaxsiy jihat sifatida liderlik kichik guruhda boradigan jarayonlar umumiy tuzilishining eng muhim komponenti bo'lib hisoblanadi. U guruh faoliyatining integratsiyasi, uning samaradorligi bilan bevosita bog'liq bo'lgan o'ziga xos "*psixologik hodisadir*". **Liderlikni biz guruh a'zosining (liderning) butun guruhga yetakchi ta'siri; guruhdagi shaxslararo munosabatlar tizimida shakllanadigan ustunlik va bo'ysunish munosabatlari, ta'sir sifatida tushunamiz [69].**

Lider – jamoaning (guruhning) birligi ramzi va xatti-harakatlarining namunasidir. Shu nuqtayi nazardan, bolalar guruhlarida liderlikni o'rganish alohida ahamiyat kasb etadi. Ammo, afsuski, ijtimoiy psixologiyada, undan ham ko'proq pedagogikada liderlikka ilgari surish mexanizmlari va uning boshlang'ich sinf o'quvchilari guruhi a'zolariga ta'siri to'g'risidagi masalalar yetarlicha o'rganilmagan, garchi pedagog uchun liderga ta'sir qilish yo'llari to'g'risidagi bilimlar zarur bo'lsa ham.

Kichik o'quvchilar guruhlarida liderlik muammosini tadqiq qilish XX asrning boshlarida, amerikalik psixologlar ularning liderligining namoyon bo'lishini o'rganish bo'yicha birinchi tajribalarni o'tkazishda boshlagan. Masalan, Santa-Barbara (AQSh) maktabgacha ta'lim muassasalarida o'yin birlashmalarini qayd etishda Burke shunday xulosaga keldi: 4-6 yoshli bolalar "haddan tashqari individualistlardir", garchi bu bolalarning 26% ikki yoki uch kishidan bo'lib o'ynasalar ham, 20% esa hatto "rahbar" ajralib turadigan katta guruhlarga birlashganlar

Kichik maktab o'quvchilarining guruhdagi liderlik, ijtimoiy faolligi muammolariga oid xorijiy tadqiqotlar juda kam. Ushbu tadqiqotlarning mavjud ma'lumotlari shuni ko'rsatadiki, guruh ichidagi muloqot va bolalarning birgalikdagi faoliyati kam o'rganilgan, qadriyatga yo'naltirilganlikka yetarlicha e'tibor berilmagan. Mualliflar guruh (yoki boshqalar) ustidan ustunlik qilishga yordam beradigan shaxsiy xususiyatlar tug'ma ekanligi to'g'risidagi g'oyani aytib o'tishgan. Mazkur g'oya J.Tompsonda eng yaqqol ifodalangan bo'lib, uning fikricha, aksariyat bolalarda ustunlik qilish yoki boshqa bolaning xatti-harakatlarini belgilash istagi mavjud. Mazkur g'oya muallifda hayvonot olamida mavjud bo'lgan tartibdan kelib chiqqan: "asalarilarda malika..., bo'rilarda to'da yetakchisi, odamlarda esa shohlar, prezidentlar, bosh vazirlar bo'ladi. Bolalarning ijtimoiy guruhlarida ham individual avtoritetning mazkur iyerarxiyasi aks etadi" [123].

O'sib borayotgan avlodning tashkilotchilik faoliyati muammosi psixologiya-pedagogika fani tomonidan XX asrning 20-30-yillardayoq faol hal qilib borilgan. Mazkur muammo bolalarning o'z - o'zini boshqarishini qurish yo'llarini ishlab chiqish nuqtayi nazaridan ko'rib chiqilgan.

Xulosa Boshlang'ich sinf o'quvchilarida liderlik sifatining belgisi uning faolligi hisoblanadi. Bu esa shaxs va uning faoliyatining tizimli sifati hisoblanadi. Shaxsga individual o'ziga xos xususiyatlar hayoti davomida paydo bo'ladigan hodisa sifatida qarash olimlarning tadqiqotlari orqali asoslangan. Liderlik muammosini talqin qilishda turli xil yondashuvlar mavjud: antropologik, sotsiologik, personalistik, faoliyatli.

Tadqiqot doirasida bolada liderlik sifatini tarkib toptirishning asosiylaridan biri sifatida, uning rivojlanishi uchun zaruriy shart bo'lgan shaxsiy xususiyatlar "ichki pozitsiya" (bolaning dunyoga alohida qarashi sifatida) hisoblanishi aniqlandi.

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ВОПРОСЫ СОВЕРШЕНСТВОВАНИЯ ТЕРРИТОРИАЛЬНОЙ СТРУКТУРЫ ПРОМЫШЛЕННОСТИ УЗБЕКИСТАНА В УСЛОВИЯХ РЫНОЧНЫХ ОТНОШЕНИЙ

***Аннотация:** В данной статье рассматриваются некоторые теоретические и практические вопросы размещения и размещения промышленности Узбекистана, влияние новых форм и факторов на формирование отраслевой и территориальной структуры промышленности в период условий рынка.*

***Ключевые слова:** Промышленность, формы организации производства, отраслевая структура промышленности, территориальная структура промышленности, модернизация, диверсификация, производственные кластеры.*

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ISSUES OF IMPROVEMENT OF THE TERRITORIAL STRUCTURE OF THE INDUSTRY OF UZBEKISTAN IN THE CONDITIONS OF MARKET RELATIONS

***Abstract:** This article examines some theoretical and practical issues of placement and location of industry in Uzbekistan, the influence of new forms and factors on the formation of the sectoral and territorial structure of industry in the period of market conditions.*

***Key words:** Industry, forms of production organization, sectoral structure of industry, territorial structure of industry, modernization, diversification, production clusters.*

Введение. Как известно промышленность является одним из ключевых отраслей национальной экономики, играющая ведущую роль в повышении уровня экономического развития общества, в формировании материальной основы индустриализации экономики и стабильного социального развития. При этом, в обеспечении территориальной сбалансированности национальной экономики Узбекистана, роль и место промышленности безусловно значительна.

В настоящее время на этапе социально-экономических преобразований в условиях рыночных отношений, создается необходимость изучения некоторых теоретических и практических вопросов в целях совершенствования территориальной структуры. В процессе перехода промышленности от плановой экономики в рыночные, для которого характерна либерализация экономики, создание различных форм собственности, конкуренция новых форм хозяйствования отражается на структуру, темпы, характер и уровень развития промышленного производства. Изучение теоретических и практических вопросов изменений отраслевой и территориальной структуры промышленности в современный период в развитие экономики Узбекистана имеет особую актуальность.

Цель и задачи работы. Целью данной научной статьи является анализ некоторых теоретических и практических вопросов, влияющих на тенденции развития промышленности Узбекистана на ее отраслевую и территориальную структуру.

Основная часть. Промышленность является стабилизирующим фактором экономического роста, эффективного использования производственного, природно-ресурсного и демографического фактора на современном этапе социально-экономического развития Узбекистана. В Стратегии «Узбекистан-2030», являющейся продолжением Стратегии действий Узбекистана на 2017–2021 годы, особая роль отводится обеспечению сбалансированности и устойчивости национальной экономики. Особая роль принадлежит вопросам, «эффективного использования местной сырьевой базы и развитие основанной на передовых технологиях промышленности. При этом, приоритетное значение уделяется в данной концепции на развитие «драйверных» отраслей промышленности для полное задействование промышленного потенциала регионов».²³

Изучение динамики роста промышленности Республики Узбекистан показывает, постепенное увеличение удельного веса ВВП в структуре экономики страны, за период 1990 – 2010 годы доля промышленности в ВВП увеличилась с 17,6% до 24,0%, а в 2022 году достигла 34,4%. Занятость населения в этом секторе в 1991 году составила 14,3%, в 2018 году – 13,5% и 2023 году – 33,5%.

²³ Указ Президента республики Узбекистан. О стратегии «Узбекистан-2030»: [УП-158-сон 11.09.2023. О Стратегии «Узбекистан — 2030»](#)

В условиях рыночной экономике актуальное значение приобретают острая необходимость в частичном рассмотрении теоретических вопросов территориального развития и размещения промышленности.

Формирование промышленности республики главным образом происходила в единой планируемой и управляемой хозяйственной системе, где особая роль уделялась добычи и обработке минерально-сырьевых ресурсов, производства техники для агропромышленного комплекса, химических удобрений истроительных материалов. Такая «специализация» промышленности унаследовала структурную диспропорцию как по отраслям, так и по территории страны.

Роста потребности производства и широкая применения форм организации производства как, концентрация, специализация и комбинирование обусловила развития ведущих отраслей промышленности Узбекистана топливной-энергетической, цветной и черной металлургия, промышленности строительных материалов и др. Крупные гиганты промышленных предприятия металлургии, электроэнергетики, в республики из-за технико-экономической специфики, как материалоёмкости и капиталоемкости производства, создавались под формой концентрации и комбинирования, которые имели районообразующую и градообразующую роль. В результате которого формировались Ангрено-Алмалыкский и Навоий-Зарафшанский горнопромышленные районы и десятки индустриальных городов как Ангрен, Алмалык, Бекабад, Чирчик, Учкудук, Зарафшан и др. тесно связанные с созданием крупных промышленных комбинатов в этих населенных пунктах.

Следовало бы отметить, концентрация промышленного производства и обуславливающие развитие других форм, приводит создания к высококапиталлаёмких «гигантоманий», а чрезмерная специализация к росту перевозок и увеличению транспортных затрат. В условиях рынка особое внимание уделяется на преодоление крупных производственных предприятий и созданию малых, средних предприятий и развития предпринимательской деятельности, для которых характерны мобильность, чуткоереагирование на спроса населения и низкая капиталоемкостьюю.

Машиностроение Узбекистана исключительно было создана на базе технологической специализации, с учётом потребительского фактора, было ориентированы на производство стадии технологической сборке на готовую продукцию. Отраслевая структура машиностроение в республики имела однобокий характер специализации, по производству техники и машин для базовой отрасли экономики хлопководства, для возделывании и первичной обработке хлопка-сырцы, а также текстильного машиностроения, самолетостроение и др. Как оказывает опыт, чрезмерная предметная специализация на основе технологических связей приводит к росту перевозок и увеличению транспортных затрат, а также в связи изменениями общественных-политических условий привело не только к завершению

производственной деятельности многих предприятий, а также целых отраслей машиностроения в Узбекистане.

Экономическая эффективность специализации в данное время обеспечивается сбалансированностью природных, энергетических, трудовых ресурсов регионов, внедрением современной технологии направленная не только для внутреннего, а также внешнего рынка, при это целесообразно развивать подетальную специализации на базе кооперации внутри и за пределами регионов для машиностроительных отраслей.

Созданные за годы независимости машиностроительные предприятие «GMUzbekistan», «Изуси», «МАН»«КаМАЗ» «IG» по производству автомобилей и бытовой техники постепенно сосредотачивает свою деятельность на предметной специализации, «предметная специализация определенным образом локализует производства». При этом, с целью дальнейшего развития промышленного развития была принято в республике «Программы Локализации производства», предусматривающая использования местного сырья, трудовых ресурсов территорий и с учетом потребительского фактора, производство комплектующих и деталей осуществляющимися разными производственными предприятиями, на основе кооперации, заводами смежниками и головным предприятием. В настоящее время производство компании автомобильного завода «GMUzbekistan» действуют в разных регионах республики в Андижанской, в городе Ташкенте, Хорезмском области.

Анализ изучения отраслевой структуры промышленности Узбекистана показывает, преобладание отраслей, добывающих над перерабатывающими и постепенное развитие машиностроение, нефтегазовой, нефтехимической, химической и текстильной отраслей за счёт модернизации и диверсификации производства. (Таблица 1)

Таблица 1.

Отраслевая структура промышленности Республики Узбекистан (в %)

Отрасли	2000г	2010г	2023г
Промышленность всего	100	100	100
Добывающие отрасли	51,8	60,3	57,2
Обрабатывающие отрасли	48,2	39,7	42,8
ТЭК	23,8	27,3	30,4
Электроэнергетика	8,5	9,4	8,9
Топливная	15,3	18,0	21,5
Черная металлургия	1,2	2,4	2,4
Цветная металлургия	10,2	15,8	11,7
Химическая промышленность	5,7	4,8	4,7
Машиностроение и металлообработка	9,8	15,0	16,2

ПСМ	5,4	5,3	4,7
Легкая	19,1	14,1	12,2
В том числе первичная переработка хлопка	9,5	8,9	8,0
Пищевая	20,1	12,2	14,4
Другие отрасли	4,6	3,0	2,7

Примечание: Таблица составлена автором на основе материалов Статистического Агентства при Президенте Республики Узбекистан

Результат структурных реформ в республике привёл к качественно новому уровню развития промышленности и специализации отраслей промышленности в целом.

В условиях рынка экономическая эффективность специализации в регионах определяется самообеспечением, которое способствует экономической независимости. Комплексная экономика должна за счёт имеющихся в регионе условий и ресурсов обеспечивать собственной продукцией наибольшую часть своих потребностей. Так, изучение территориальной структуры промышленности республики показывает, что в большинстве областей преобладают добывающие отрасли. Так, например, на долю Кашкадарьинской области приходится 32% топливной промышленности и 75% нефтяной и газовой промышленности страны, такая же картина наблюдается в Навоинской области, которая специализируется на цветную металлургию республики.

Изучения территориальной концентрации промышленности республики показывает, что в настоящее время 69,2% ВВП промышленности страны приходится на 6 регионов, это на город Ташкент, Ташкентскую область, Навоинская область, Андижанскую область, Кашкадарьинскую, и Ферганскую область.

Рисунок 2.

Удельный вес промышленного производства регионов в промышленности
Республики Узбекистан, % (2023 г.)

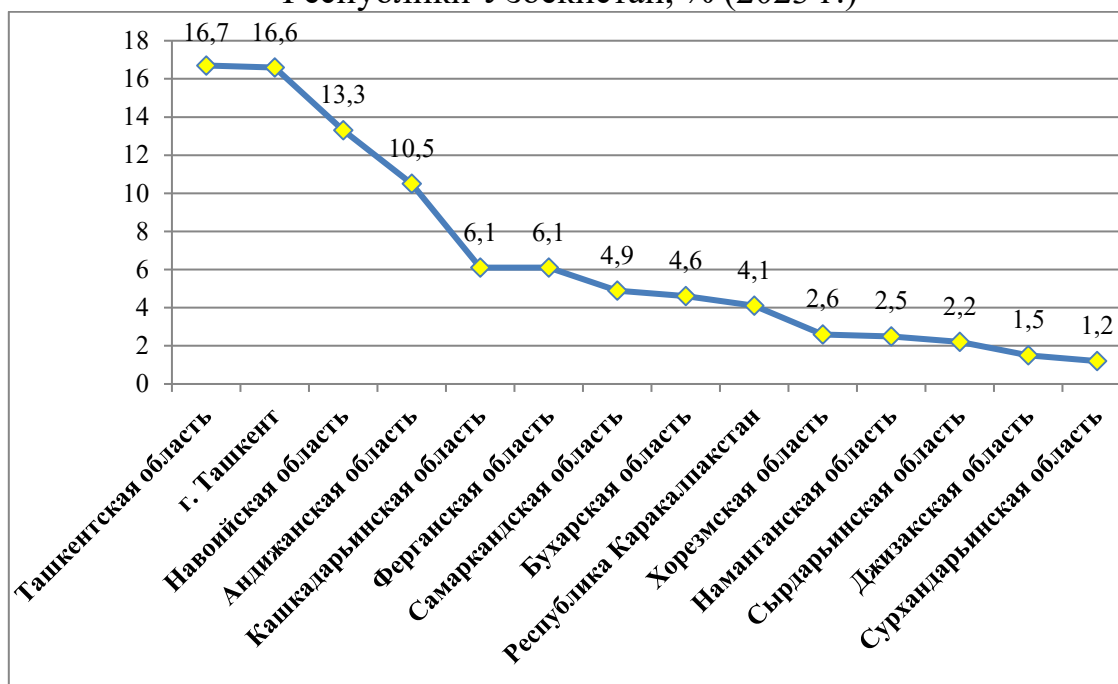


Рисунок составлен по материалам Агентства статистики при Президенте Республики Узбекистана.

Немаловажное значение для эффективной специализации регионов является использование техники и передовых технологий, благодаря которому возрастает конкурентоспособность во внешние и внутренние рынки.

Социально-экономическая стратегия развития страны непосредственно связана с привлечением инвестиций и её деятельностью, которая в свою очередь способствует решению территориально-экономических проблем, в том числе стимулирование промышленного производства.

Одной из основных особенностей экономического развития в сближающей перспективе является острая необходимость в том, чтобы ускоренными темпами совершенствовать разнообразные формы организации производства. Целью является объединение всех составных частей предприятия в единую структуру, которая обеспечит рациональное взаимодействие отдельных сегментов и повысит их социально-экономическую эффективность. В Узбекистане широкое развитие приобрело использование кластерной модели организации производства в условиях модернизации экономики. Производственная кластерная система способствует интеграции нескольких предприятий и фирм, относящихся к различным отраслям и сферам экономики - от выращивания сырья до выпуска готовой продукции, путем глубокой переработки. В республике интегрированный и инновационный подход кластеров широко начал применяться в хлопководстве. Следовательно, создание кластеров в регионах

является эффективным механизмом повышения конкурентоспособности региона и повышения темпов его экономического развития

Выводы. В целом, изучение некоторых теоретических вопросов размещения и развития промышленности Узбекистана в современный период показывает следующее:

1. В условиях рыночных отношениях происходит процесс преодоление крупных производственных предприятий и созданию малых, средних предприятий и развития предпринимательской деятельности, для которых характерны мобильность, чуткое реагирование на спрос населения и низкая капиталоемкость.

2. Экономическая эффективность специализации в данное время обеспечивается сбалансированностью природных, энергетических, трудовых ресурсов регионов, внедрением современной технологии направленной не только для внутреннего внешнего рынка.

3. Особое влияние на совершенствование отраслевой структуры будут оказывать разнообразные формы организации производства как свободные экономические зоны, промышленные кластеры, модернизация, диверсификации и инновационное развитие экономики.

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ГЕОГРАФИЧЕСКИЕ АСПЕКТЫ РАЗМЕЩЕНИЯ И РАЗВИТИЯ НАСЕЛЕННЫХ ПУНКТОВ СУРХАНДАРЬИНСКОЙ ОБЛАСТИ

Аннотация. В данной статье рассматривается развитие исследований населенных пунктов Узбекистана. Освещены вопросы формирования и развития поселений в Сурхандарьинской области, территориальный состав поселений, а также процессы урбанизации, связанные с ростом городского населения в регионе.

Ключевые слова: Население, жилые районы, агрогорода, процесс урбанизации.

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GEOGRAPHICAL ASPECTS OF LOCATION AND DEVELOPMENT OF SETTLEMENTS IN SURKHANDARYA REGION

Annotation. This article discusses the development of research into human settlements in Uzbekistan. The formation and development of settlements in the Surkhandarya region, the territorial composition of settlements, as well as urbanization processes associated with the growth of the urban population in the region are covered.

Key words: Population, residential areas, agricultural cities, urbanization process.

Города и поселения возникли в результате социального и территориального разделения труда в ходе длительного исторического развития человеческого общества. Городские и сельские поселения

различаются по уровню специализации жителей в отраслях экономики. В городах обычно компактно проживают люди, эти места отличаются широким распространением городского образа жизни, наличием высотной жилой застройки, развитием предприятий промышленного производства, транспорта и других современных инфраструктурных отраслей. Большая часть населения, проживающего в сельских поселениях, занимается сельским хозяйством.

Деревни являются территориальными, социальными и историческими единицами населения. Деревни — это поселения с более долгой историей по сравнению с городами. Говоря о сельской местности, подразумевают, что экономически развиты территории за пределами города. Известно, что в эпоху глобализации, когда современный научно-технический прогресс находится на высоком уровне, важно определить различия в социальном образе жизни деревень и городов. В частности, городская жизнь быстро впитывает инновации в области науки и техники. Здесь быстро развиваются наука и производство.

Села, издавна сохранившие культуру человеческой цивилизации, играют несравненную роль в передаче национального культурного наследия разных народов будущим поколениям. В этой связи не будет ошибкой сказать, что сельская местность является «музеем цивилизации, культуры и ценностей человечества» на нашей планете.

География сельской местности в нашей республике в годы независимости стала постепенно развиваться. Особенно в развитие этой области большой вклад внес известный географ и учёный профессор А. Солиев. Под руководством профессора А. Солиева многие ученые-исследователи защитили диссертации по географии сельской местности. Также изданы монографии и учебные пособия.

По мнению А.С. Солиева, села являются «неудачной» областью этой науки и менее изучены, чем города. В частности, в монографии «Сельские районы Узбекистана», написанной ученым совместно с М. Назаровым в 2009 году, посвященной «Году развития и благосостояния села», проанализировано географическое описание сельских поселений, расположенных в различных природно-экономических районах нашей республики. Среди них на научной основе изучены долинские села Андижанской области, села-оазисы Хорезмской области, пустынные села Бухарской области, горные села Сурхандарьинской области.

В южном регионе Республики Узбекистан, Сурхандарьинской области, важную роль в территориальном расположении населенных пунктов играют природные условия, в частности климат, рельеф и гидрологические бассейны. Территория района с трех сторон окружена горами разной высоты, только южная часть открыта реке Амударье, она поднимается от уровня моря с юго-запада (равнина) на северо-восток (гора). законы.

Более 70 процентов площади области составляют горные местности (следовательно, коэффициент «холмистости» равен 0,70). В области основные

населенные пункты плотно расположены в Сурхан-Шерабадской долине, которая с экономической точки зрения сильно эксплуатируется.

Большинство сельских населенных пунктов региона расположены на берегах рек Сурхан и Шерабад, а также вдоль автодороги Шерабад-Термиз-Денов, являющейся продолжением Великого Узбекского тракта, и железной дороги Термез-Денов. Кроме того, в 1950-60-х годах прошлого века с освоением новых земель в Шерабадском, Музработском, Ангорском, Кызырикском районах были созданы очень много новые сельские поселения. По состоянию на 1 января 2023 года в области насчитывается 859 сельских населенных пунктов, в том числе 724 сельских махалли. Это 75,1 процента от общего количества махалли области.

В состав районов области, впервые образованных в 1926 году, входят Деновский, Сариосийский, Термезский и Шерабадский районы.

Самыми последними районами области были Ангорский район, отделенный от Термизского района в 1979 году, Олтинсойский район, отделенный от Шурчинского района в 1981 году, Узунский район, отделенный от Сариосийского района в 1991 году, и Бандихонский район, отделенный от Кызырикского района в 1992 году. Бандихонский район был включен в состав Кызырикского района в 2011 году, а в 2020 году район был реорганизован. Крупнейшими по площади являются Байсунский, Сариосийский, Шерабадский, Кумкурганский районы, которые в совокупности занимают 12,6 тысяч квадратных километров или 62,6% площади региона. По состоянию на 1 января 2023 года численность населения этих сельских округов составляет 799,7 тыс. человек, или 28,4% населения региона.

По числу сельских районов области наибольшее количество сельских поселений сложилось в Сариосии 115, Деновском районе 106, Шерабадском районе 96. В среднем 61,3 сельских населенных пункта соответствуют существующим 14 сельским округам области.

По данным на 2023 год, в Сурхандарьинской области 8 городов и 112 поселков, из них только Термез имеет статус города областного подчинения. Остальные 7 городов находятся в подчинении района. В регионе 35,5 процента населения проживает в городах. Уровень урбанизации региона является низким показателем, и по этому показателю в нашей республике область опережает только Хорезмскую область (33,2%).

Уровень урбанизации региона был очень низким даже в прошлом веке. Для сравнения, доля городских жителей в общей численности населения региона была следующей. Например, в 1959 г. она составляла 15,4%, в 1970 г. - 16,0%, в 1979 г. - 19,3%, в 1989 г. - 19,5%. Этот показатель существенно изменился даже к началу 1990-х гг.

Уровень урбанизации составлял 19,3% в 1990 году, 19,1% в 1991 году, 18,9% в 1992 году и 20,2% в 1993 году. В 2008 году уровень урбанизации региона составил 19,1%.

По состоянию на 1 января 1994 года в области действовало 9 городов, 7 поселков городского типа, 109 сельских советов, 855 сельских поселений.

На основании решения Кабинета Министров Республики Узбекистан от 13 марта 2009 года № 68 на основании объявления 2009 года Годом «Развития и процветания села» в нашей стране многие сельские поселения в нашей стране были учтены статус городов.

107 сельских населенных пунктов Сурхандарьинской области присвоен статус городов, а их число достигло 114. Агророодки, специализирующиеся на аграрном секторе региона, расположены во всех сельских округах.

Если рассматривать расположение существующих городов по районам, то они распределяются следующим образом:

Алтынсойский (14), Деновский и Ангорский (по 11), Кумкурганский и Музработский (по 10), Термезский, Узунский, Шорчинский районы (9), Шерабадский (7), Бойсунский (5), Расположен в Джаркурганском районах. и Кызирик (4), Сариясия (по 3), Бандихон (по 1).

В 2022 году общая численность населения региона увеличилась в 13,8 раза по сравнению с анализируемыми предыдущими годами (1926 г.). При этом население города за исследуемые годы увеличилось в 61,2 раза. После 1959 года население города постепенно увеличивалось.

Население города увеличилось на 179,4 тыс. человек за почти 30 лет с 1959 по 1989 год. Именно в эти периоды были созданы новые поселения с освоением сухих серых земель Сурханско-Шерабадской долины, достройкой и вводом в эксплуатацию многих водохранилищ и гидротехнических сооружений. Также построены и введены в эксплуатацию предприятия легкой и пищевой промышленности по переработке сельскохозяйственной продукции. Примерами таких предприятий являются хлопкоочистительные, молочно-мясные, маслоэкстракционные, хлопко-молочные, хлопкоочистительные предприятия в Деновском районе, мукомольные, хлопкоочистительные предприятия в Шорчинском районе, хлопкоочистительные предприятия почти во всех других райцентрах, которые мы можем показать.

Таблица 1

Рост городского населения и уровень урбанизации в Сурхандарьинской области

	1989	1998	2009	2010	2015	2018	2022	в 2022 году в % к 1989 году
Общая численность населения области – тысяча человек.	1253,8	1687,9	2075,0	2175,1	2411,5	2569,0	2806,5	2,2
Из них: население города тысяча человек.	244,4	339,2	767,9	794,7	861,1	910,6	1016,8	4,1
Уровень урбанизации в процентах	19,5	20,9	37,0	36,5	35,7	35,4	36,2	1,8

Таблица составлена на основе информации официального сайта «Surxanstat.uz».

В 2022 году население региона увеличилось на 1552,7 тыс. человек по сравнению с 1989 годом, а по сравнению с отчетным годом увеличилось на 2,2%.

В 2022 году население областных городов увеличилось по сравнению с 1989 годом на 772,4 тыс. человек. В частности, в 2009 году, объявленном годом «Развития и процветания села», численность населения города увеличилась на 523,5 тысяч человек по сравнению с 1989 годом. За эти годы уровень урбанизации увеличился на 17,5%. В 2022 году количество жителей города увеличилось на 248,9 тыс. человек по сравнению с 2009 годом. Уровень урбанизации снизился на 0,8% (табл. 1).

Если сделать выводы, развитие населенных пунктов Сурхандарьинской области происходило на основе развития производительных сил в прошлом веке. В частности, на основе открытия новых рудников в регионе, освоения новых земель в Сурхан-Шерабадской долине сельскохозяйственного назначения, специализации региона в области сельского хозяйства, особенно в области выращивания хлопка, были созданы города и сельские поселения. Экономические реформы, проведенные за годы независимости, служат экономическому и социальному развитию поселений.

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МОРХЎР (CAPRA FALCONERI WAGNER, 1839) НИНГ БИОЛОГИЯСИ ВА ЭКОЛОГИЯСИ ДОИР МАЪЛУМОТЛАР

Аннотация. Изучена биология и экология винторогий козёл (*Capra falconeri* Wagner, 1839). В ходе исследований была собрана новая информация о питании, размножении и условиях жизни этого вида.

Ключевые слова: винторогий козёл, заповедник, экология, биология, растений.

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BIOLOGY AND ECOLOGY OF MARKHOR (CAPRA FALCONERI WAGNER, 1839)

Abstract: The biology and ecology of the markhor (*Capra falconeri* Wagner, 1839) were studied. During the research, new information was collected on the diet, reproduction and living conditions of this species.

Key words: Markhor, reserve, ecology, biology, plants.

Морхўр ёки бурама шохли эчки (*Capra falconeri* Wagner, 1839) Ер шари табиатидан бутунлай йўқ бўлиб кетиш арафасидаги тур сифатида муҳофаза қилинади. Табиат ва табиий ресурсларни муҳофаза қилиш халқаро Иттифоқи Қизил рўйхати (EN тоифали) ва Ўзбекистон Республикасининг Қизил Китобига (1CR тоифали) киритилган.

Бугунги кунда морхўр ёки бурама шохли эчки - *Capra talconeri* Wagner, 1839. ssp. Neptneri Zalkin, 1945 атамаси қабул қилинган. Мазкур ҳайвон жуфт туёқлилар туркумига кирувчи қовушшохлилар оиласининг тоғ эчкилари авлодига мансуб.

Морхўр бир мунча йирик жонивор бўлиб, тана узунлиги 150-175 см, елкасининг баландлиги 100-110 см, вазни 110 кг гача етади. Урғочилари эркакларига нисбатан майдароқ бўлади. Эркакларининг тана узунлиги 155-175 см, урғочилари 145-150 см, елка баландлиги 85-100 см, эркакларининг вазни 86-120 кг, урғочилари 32-45 кг, шохлари штопорсимон (пармасимон) буралган бўлиб, ўнг шохи ўнг томонга, чап шохи чап томонга буралган бўлади, эркакларининг шохининг узунлиги 43-73 смгача, ташки қирраси узунлиги 55-110 см, урғочиларда шох узунлиги 12-25 см ни ташкил қилади.

Эркак морхўрнинг ёшини шохларига қараб аниқлаш мумкин. Ҳар йили шохларида қалинлашган халқалар ҳосил бўлади.

Эркак морхўр шохлари ҳар 4 ёшда бир марта тўлиқ спирал ҳосил қилиб буралиши аниқланган. Бурама шохли эчкиларни маҳаллий аҳоли морхўр номи билан, балоғатга етган эркакларини - така, урғочиларини - эчки, 1 ёшгача бўлган индивидларини - улоқ, 2 ёшли индивидларини тувча, деб юритишади.

Тарқалиши ва яшаш жойлари. Кўҳитанг тоғининг Вандоб, Олтиқунлик, Зиралик, Кийикдара, Тошлиюртсой, Жингилдара, Етимтоғ, Палангдара, Қуруққулсой ҳудудларида кўп учрайди.

Морхўрлар тоғларнинг тош-қояли ва сийрак арчазорлари ёнбағирларида ҳаёт кечириб (д.с.б. 1500-2500 м), ёзда баланд тоғ (алп) ўтлоқларигача (д.с.б. 3000 м) кўтарилади. Ҳайвон қишда тоғларга қор тушиши билан Қуруққулсой, Етимтоғ, Палангдара, Тошлиюртсой, Бодомзор, Тангидевол участкаларида 1300-1800 метр баландликдаги ҳудудларга тушиб келади, асосан офтобрўй ён бағирларида учрайди. Қор эриши билан (апрель-май ойларида) 2300-2800 м баландликдаги жойларга кўтарилади, арчазорлар яқинида ҳаёт кечирилади, қалин қор тушган пайтларда улар асосан арчазорлар ичида учрайди.

Морхўрлар гуруҳ ёки пода бўлиб яшайди. Улар турли ойларда ҳар хил таркибли гуруҳларни ҳосил қилади. Морхўрларнинг қайд қилинган гуруҳлари январь -март ойларида асосан аралаш гуруҳлар бўлган бўлса, апрель ойидан эркак, урғочи ва аралаш гуруҳлар ажратилади, май-июнь ойида урғочи гуруҳлар энг кўп нисбатда учрайди. Июль-август ойларида бу таркиблар ўзгармайди. Сентябрь ойининг охиридан морхўрлар аралаш ёки урчиш гуруҳлари ҳосил қила бошлайди. Чунки, бу даврда урчиш учун эркак ва урғочи гуруҳлар аралашиб кетади. Лекин, урчиш гуруҳларига ёш эркак морхўрлар катта ёшли такалар тазийқи туфайли қўшилмасдан 50-200 метр масофада ушбу гуруҳларга эргашиб юради. Бу даврда гуруҳлардаги морхўрлар сони 40-70 бошга етади. Урчиш морхўрларда октябрь ойининг учинчи ўн кунлигидан бошланади ва декабрь ойигача давом этади.

Морхўрлар 2-3 ёшда жинсий жихатдан вояга етади. Урчиш даврида кучли эркак морхўрлар 5-10 бош урғочи морхўрни ўз атрофида сақлаб, ҳарам ҳосил қилади. Бу даврда эркак морхўрлар ўртасида шиддатли жанглар бўлиб ўтади, лекин жанглар ҳайвоннинг ўлими билан тугамайди.

Морхўр полигам ҳайвон ҳисобланиб, бирмунча кучли ва фаол морхўрлар ўз атрофида урғочиларини тўплаб гуруҳ ҳосил қилади. Сурдак даври бошларида кўпинча 2-3 та шундай гуруҳларнинг қўшилиши натижасида гала ҳосил қилади. Бу вақтда эркаклари ўртасида қаттиқ олишув бўлади. Жангларда нафақат кучли катта ёшдаги такалар, балки ёш такалар ҳам қатнашади. Одатда жанг олдида эркак морхўрлар бир-биридан масофани сақлаб юради.

Туёқлари билан ерни кавлаб, тупроқни чангитишади. Аста-секин улар ўртасидаги масофа қисқариб боради. 10-15 метр масофа қолганда бир-бирига шиддат билан ташланиб, шохлари ёрдамида рақибига кучли зарба беришади.

Бу зарбалар шунчалик кучлики, шовқинини 1-1,5 км масофадан эшитиш мумкин.

Овқатланиши. Морхўр асосан эфемер ўсимликлар, бута ва чалабуталарда, наъматак, учқат, тоғолча, дўлана, аччиқ бодом, заранг, ирғай, чаканда, зирк каби бута ва дарахт новдалари ҳамда барглари, ширач, ровоч, тоғ ялпиз, илоқ каби ўсимликлар билан овқатланади. Қишда шувоқлар, арча новдалари ва қуриб қолган ўт-ўланларни истемол қилади. Морхўрлар баҳорда пиёзлар (анзур пиёзи, ёввойи пиёз), оқ қаррак, ровоч, наъматак, туркистон заранги, учқат, арча (морхўрлар кўпроқ кекса арчаларнинг устига чиқиб, осилиб барг-новдаларини истеъмол қилгани кўп кузатилади), ёввойи арпа, ёввойи сули, ёввойи бодом, бодомча ва бошқа ўсимликларни истеъмол қилади. Баҳор охирларида асосан дарахт ва буталарнинг барг-новдаларини истеъмол қилаётгани кузатилди ҳамда асосан бодомча, заранг, учқат, арча, ёввойи бодом, наъматак каби дарахт ва буталарнинг баргли новдаларини ҳамда ғалладош ўсимликлар, пиёздошларни истеъмол қилиши кузатилади.

Морхўрлар қиш фаслида ғалладош ўсимликларнинг пичанлари, арчанинг барглари, шувоқ ва бошқа ўсимликларнинг қуриган таналари билан озиқланиб, қуриган ўт-ўлан истеъмол қилади, қор ва булоқ сувини ичади.

Морхўр сонини чекловчи омиллар. Морхўрлар сонининг камайиб кетишига ўтмишда уларнинг махсус овланиши ва яшаш ҳудудларига чорва молларнинг ҳайдалиши сабаб бўлган, ҳозирги кунда эса ноқонуний овчилик, яъни браконерлик ҳамда чорвачиликда яйловлардан кенг кўламда фойдаланиш, умуман олганда инсон ва унинг хўжалик фаолияти сабаб бўлмоқда.

Ноқонуний овчилик, морхўрнинг яшаш ҳудудига чорва молларини узлуксиз ҳайдаш, таъқиб қилиш ва бошқалар бурама шохли эчки популяцияси ҳамда ареалига салбий таъсир кўрсатган. Хуштаъм гўшти, нозик териси ва шохи учун уни кўплаб овлаганлар.

Кўпайтириш ва муҳофаза қилиш чоралари. Морхўр тутқунликда кўпая олади, шу сабабли уни вольтер ва парваришхоналарда кўпайтириш орқали йўқолиб кетган ҳудудларда морхўр сонини тиклаш мумкин. Бундан ташқари, морхўр Сурхондарё вилояти учун эндемик тур ҳисобланади.

Муҳофаза чоралари. Морхўрни овлаш таъқиқланган. Сурхон давлат қўриқхонасида, Бойсун ўрмон хўжалигида муҳофаза остига олинган. СИТЕСнинг 1-иловасига киритилган. Худудий муҳофазасини кучайтириш ва тутқунликда кўпайтириш учун Сурхон давлат қўриқхонасининг ҳудудини морхўр учрайдиган ҳудудлар (Кўлват, Панжоб, Зарвус массивлари) ҳисобига кенгайтириш ва қўриқхонада муҳофаза ишларини кучайтириш, Бойсун ўрмон хўжалигида уларнинг аниқ сонини ҳисоблаб боришни йўлга қўйиш, парваришхоналар ташкил этиш, Боботоғ тизмасида морхўрнинг учрашини аниқлаш мақсадида қайта тадқиқотлар ўтказиш.

Бўрилар томонидан морхўрларнинг бевосита истеъмол қилганлиги кузатилмаган бўлсада, бўрилар сонининг ошиб бораётганлиги, уларнинг экскрементларида морхўр жунлар учратила ётганлигини ҳисобга олган ҳолда

морхўрларнинг сонига ва популяциясига бўрилар томонидан салбий таъсирнинг ошиб бораётганлигини аниқлаш мумкин. Шу сабабли бўрилар сонининг камайтирилишига қаратилган тадбирларни амалга ошириш талаб қилинади.

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ХАРАКТЕР ВЫПАДЕНИЯ КОНДЕНСАТА ИЗ ГАЗОНАСЫЩЕННОГО ПЛАСТА ПОД СВОЙСТВОМ ВЛИЯНИЕ ФИЛЬТРАЦИОННЫХ-ЕМКОСТЕЙ

Аннотация. В статье рассмотрены условия влияния фильтрационно-емкостных свойств газонасыщенного пласта на характер выпадения конденсата и сравнение кривых распределения давления в пласте при значениях проницаемости, относительные фазовые проницаемости по газу и конденсату которые актуальны при проектировании разработки газоконденсатных месторождений.

Ключевые слова: фильтрационно-емкостные свойства пласта, дренирования, забой скважины, пористость, пласт, извлечения, конденсат, средневзвешенное пластовое давление, дренирования.

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THE NATURE OF CONDENSATE DROPOUT FROM A GAS-SATURATED FORMATION UNDER THE INFLUENCE OF FILTRATION CONTAINERS

Annotation. The article discusses the influence of the filtration-capacitive properties of a gas-saturated formation on the nature of condensate precipitation and a comparison of pressure distribution curves in the formation at permeability values, relative phase permeabilities for gas and condensate, which are relevant when designing the development of gas condensate fields.

Key words: filtration-capacitive properties of the formation, drainage, bottom hole, porosity, formation, recovery, condensate, weighted average reservoir pressure, drainage.

Введение. При проектировании разработки газоконденсатных месторождений, как правило принято рассматривать три варианта разработки. Из них, после проведения технико-экономического обоснования, выделяют вариант, обладающий лучшими экономическими показателями, такими как чисто дисконтированный доход (ЧДД), внутренняя норма рентабельности (ВНР), срок окупаемости, индекс доходности (ИД)[1]. При этом оценка

извлечения конденсата по годам по всем трем вариантам рассчитывается исходя из средневзвешенного пластового давления, рассчитанного на основе материального баланса без учета эпюры распределения пластового давления от контура дренирования до забоя скважины [2]. Характер распределения давления и выпадения конденсата в пласте на прямую зависит от фильтрационно-емкостных свойств пласта [3].

Основная часть. Для понимания сути данного влияния рассмотрим два предполагаемых газонасыщенных горизонта, которые при прочих равных условиях (давление в залежи, размеры залежи, состав, пористость пласта) отличаются друг от друга лишь значением проницаемости. При этом обусловимся, что проницаемость k_1 первого пласта намного больше проницаемости k_2 второго пласта. Распределение давления в пласте в случае радиального притока описывается следующей формулой [5]:

$$P(i) = \sqrt{P_k^2 - \frac{Q \cdot \mu}{2 \cdot \pi \cdot h \cdot k} \cdot \ln \frac{r_k}{r_i}}$$

(1)

где, P_i – давление на расстоянии r_i от забоя скважины, P_k – давление на контуре дренирования, r_r – радиус контура дренирования.

Согласно формуле 1 видно, что давление распределено в пласте по логарифмическому закону. Поэтому при значениях радиуса, близких к радиусу контура дренирования, давление снижается незначительно, но при приближении к скважине давление резко снижается, скорость потока при этом возрастает.

Имея полученную зависимость распределения давления от удаления от забоя скважины (формула 1), проиллюстрируем (рис. 1) характер распределения давления для двух ранее рассматриваемых пластов, для которых $k_1 \gg k_2$.

Для фильтрации газа к забою скважины необходимо понизить давление у забоя скважины. Возмущение от снижения пластового давления на забое скважины распространяется (радиально от забоя до контура дренирования) в высокопроницаемом пласте в большей степени по сравнению с низкопроницаемым пластом. В связи с этим скважина, находящаяся в низкопроницаемом пласте, будет иметь меньшее значение забойного давления по сравнению со скважиной в высокопроницаемом пласте для обеспечения одинаковых дебитов этих скважин. Данный фактор обуславливает более крутой профиль распределения давления в низкопроницаемом пласте по сравнению с высокопроницаемым пластом (рис. 1).

*Высокопроницаемый пласт
(равномерное истощение пласта)*



*Низкопроницаемый пласт
(истощение пласта с высоким
градиентом давления)*



Рис. 1. Сравнение кривых распределения давления в пласте при значениях проницаемости k_1 и k_2 , где $k_1 \gg k_2$.

На начальной стадии разработки, когда средневзвешенное пластовое давление выше давления начала выпадения конденсата, выпадение конденсата будет, в большей степени и на большем расстоянии от забоя скважины, наблюдаться в низкопроницаемом пласте, вследствие более крутого профиля падения давления. Далее, с течением времени, будет происходить естественное снижение пластового давления, как обычно бывает при разработке месторождения на истощении. Равномерное снижение пластового давления в высокопроницаемом пласте по сравнению с низкопроницаемым пластом, приведет к тому что, профиль распределения давления высокопроницаемого пласта от забоя до контура дренирования будет ниже давления начала выпадения конденсата, в отличие от низкопроницаемого пласта. Это и будет обуславливать равномерное выпадение конденсата по всему высокопроницаемому пласту. В низкопроницаемом же пласте, основная масса выпавшего конденсата будет скапливаться в призабойной зоне скважины. Данная тенденция распределения выпавшего конденсата будет распространяться вплоть до конца разработки месторождения, когда давление на контуре дренирования значительно меньше давления выпадения конденсата.

Для того чтобы понять в каком из пластов будет наблюдаться большее извлечение конденсата (КИК) при одинаковом извлечении газа (КИГ), необходимо изучить степень подвижности выпавшего конденсата для обоих случаев. Подвижность выпавшего конденсата напрямую зависит от степени его насыщенности в поровой структуре пласта. Чем большую долю порового пространства занимает выпавший конденсат, тем больше он становится подвижным, тем больше его значение относительной проницаемости. На рис. 2 представлена зависимость относительных фазовых проницаемостей для газа и конденсата от степени насыщенности поровым пространством выпавшим конденсатом. Имея данную зависимость можно проиллюстрировать как будут меняться относительные фазовые проницаемости по газу и конденсату, а

также степень насыщенности выпавшим конденсатом от забоя скважины до контура дренирования[7].

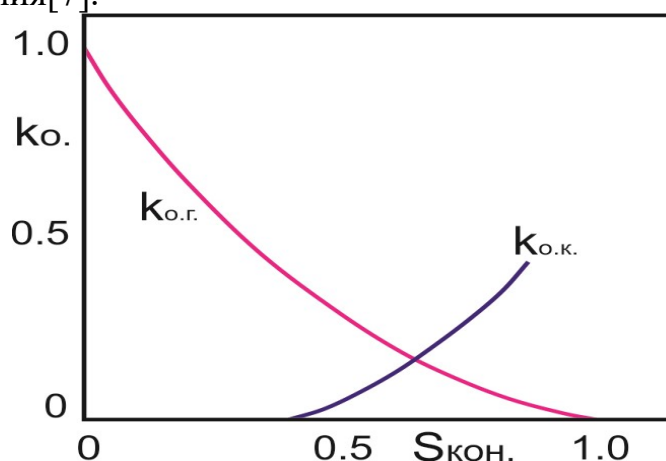


Рис.2. Относительные фазовые проницаемости по газу и конденсату.

Насыщенность конденсатом и относительная фазовая проницаемость по конденсату будут увеличиваться по мере приближения к забою скважины, тогда как относительная проницаемость по газу в это же время будет уменьшаться[8].

Учитывая выше сказанное, на начальной стадии разработки, пласт газоконденсатного месторождения можно разбить на три (рис. 3) характерных участка :1) зона с подвижным конденсатом 2) зона с неподвижным конденсатом и 3) чисто газовая зона без выпадения конденсата. По мере снижения пластового давления в процессе разработки газоконденсатного месторождения доля выпавшего конденсата в пласте с течением времени увеличивается и, согласно зависимости относительной фазовой проницаемости по конденсату от степени его насыщенности, должна увеличиваться и его подвижность.

Таким образом с течением времени зоны 1 и 2 расширяются, а условные границы этих зон будут перемещаться в сторону контура дренирования. При этом чисто газовая зона 3 будет уменьшаться (рис.3)

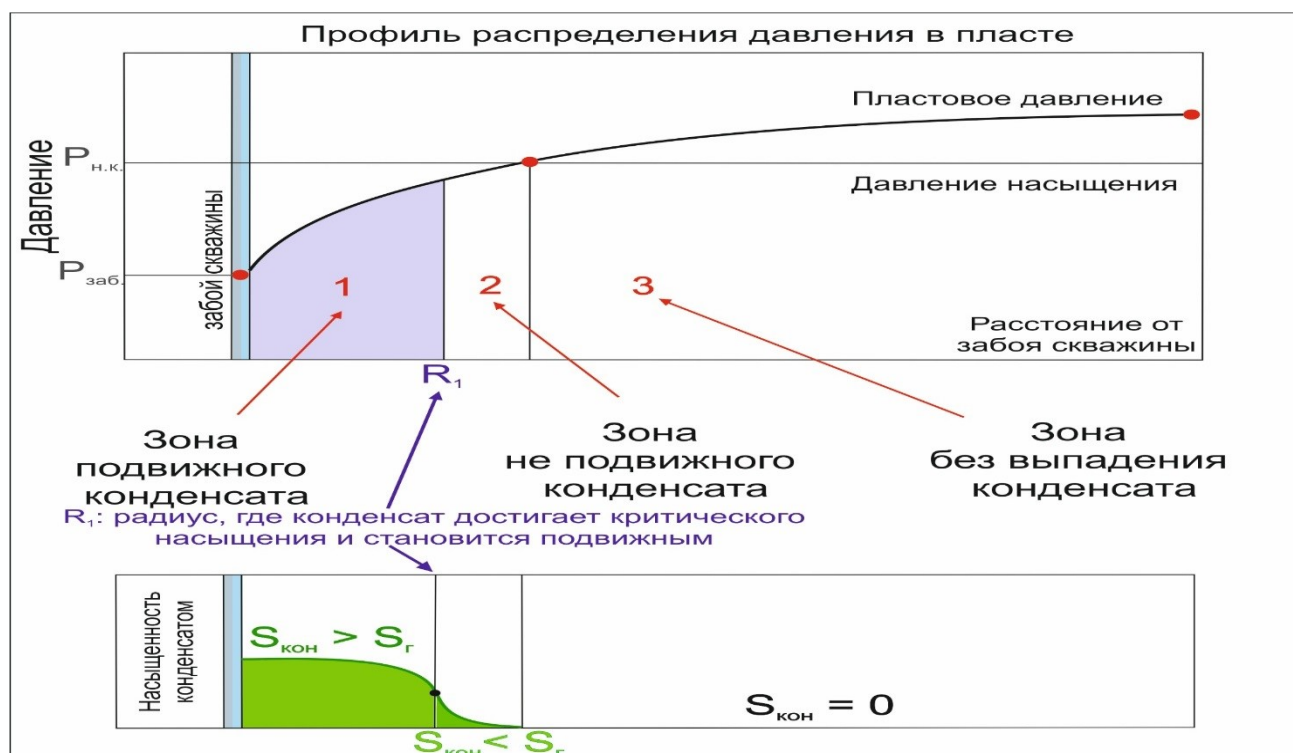


Рис. 3. Характер распределения и степень подвижности выпавшего конденсата в пласте.

Следует отметить, что в низкопроницаемом пласте вследствие концентрирования основной массы выпавшего конденсата преимущественно в призабойной зоне подвижность выпавшего конденсата будет больше, чем в высокопроницаемом пласте, для которого характерно более равномерное распределение выпавшего конденсата по пласту. Другими словами, зона 1 для низкопроницаемого пласта будет шире аналогичной зоны 1 для высокопроницаемого пласта, а зона 2 для низкопроницаемого пласта будет меньше аналогичной зоны 2 для высокопроницаемого пласта.

Вышеописанное явления выпадения конденсата в пласте по мере снижения пластового давления, наводит на мысль, что с течением времени доля выпавшего конденсата (насыщенность) увеличивается, он становится подвижным и начинает фильтроваться по направлению к забою скважины, при этом одновременно уменьшая долю выпавшего конденсата и, тем самым, в скором времени, опять становится неподвижным до того момента, пока вновь доля выпавшего конденсата в пласте не достигнет такого значения насыщенности, при котором конденсат становится подвижным. Говоря иначе, движение жидкой фазы выпадающего конденсата к забою скважины имеет пульсирующий характер. Очевидно, что рост подвижности выпавшего конденсата быстрее наблюдается в низкопроницаемом пласте по сравнению с высокопроницаемым пластом.

Вывод: Однако, рассматривая газоконденсатное месторождение на завершающем этапе разработки, подвижность выпавшего конденсата в большей мере наблюдается в призабойной зоне, тогда как равномерное выпадение конденсата в высокопроницаемом пласте обуславливает

примерное равенство по пласту параметра подвижности. Поэтому вопрос о том, в каком из пластов, высокопроницаемом или низкопроницаемом, степень извлечения конденсата (КИК) к концу разработки будет достигать больших значений, при одинаковом суммарном отборе газа (КИГ) остается открытым.

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ПРИОРИТЕТНЫЕ НАПРАВЛЕНИЯ ПЕРЕХОДА К «ЗЕЛЕННОЙ ЭКОНОМИКЕ» В УЗБЕКИСТАНЕ

***Аннотация.** В данной статье рассмотрены и проанализированы необходимость перехода к «зеленой экономике» в Узбекистане, также приоритетные направления Стратегии перехода Республики Узбекистан к «зеленой» экономике на 2019-2030 годы и факторы, негативно влияющих на развития сектора «зеленой экономики».*

***Ключевые слова:** «зеленая экономика», климатические изменения, кризис, экологические проблемы, развитие, экология.*

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PRIORITY DIRECTIONS OF TRANSITION TO A "GREEN ECONOMY" IN UZBEKISTAN

***Abstract.** This article examines and analyzes the need for a transition to a "green economy" in Uzbekistan, as well as the priority areas of the Strategy for the Transition of the Republic of Uzbekistan to a "green" economy for 2019-2030 and factors that negatively affect the development of the "green economy" sector.*

***Keywords:** «green economy», climate change, crisis, environmental problems, development, ecology.*

Введение. Глобальные проблемы, связанные с ограниченностью природных ресурсов, необходимости переработки, оказывают существенное влияние на экономическое развитие мировой экономики. Изучение этой научной проблемы начало приобретать актуальность в 60-70-х годах XX века. В результате реализации в экономическую политику принципов, выдвинутых на основе развития экономики окружающей среды и экономики экологии, началось формирование понятия «зеленая экономика». В отличие от экономики окружающей среды или экологической экономики, «зеленая экономика» носит более практический характер. Формирование и развитие концепции «зеленой экономики» будет решаться путем внедрения этих идей в практику обеспечения устойчивого развития. Под устойчивым развитием понимается развитие, основанное на том, чтобы не подвергать опасности возможности удовлетворения потребностей будущего поколения, рассматривая это как полное удовлетворение потребностей населения. Экономический подход в обеспечении устойчивого развития предполагает

рациональное использование ограниченных ресурсов. Социальный подход будет направлен на обеспечение социальной стабильности и культурного разнообразия в глобальном масштабе. Экологический подход должен способствовать обеспечению нормального функционирования экологических систем.

Обзор литературы. В экономической литературе нет единого общепринятого подхода к понятию «зеленая экономика». Если в некоторых источниках «зеленая экономика» описывается как новые отрасли экономики, способствующие улучшению охраны окружающей среды (Т.А.Акимова, А.Г. Банников, Р.А.Кулматов и др.), в других научных исследованиях отмечается, что «зеленая экономика» изучает новые технологии, экосистемы, которые оказывают содействие и приносят пользу природе (М.М. Бринчук, М.Н. Игнатьева, Ф.Т.Эгамбердиева и др.). Третья группа исследователей считает, что «зеленая экономика» означает переход на новый этап развития, направленный на создание экологически чистых продуктов (А.В. Вахабов, А.Г. Бездудная и др.).

Методологические исследования. Методологические основы исследования определяются взгляды академических научных школ, изучающих процессы эволюции и развития экономики окружающей среды, экологической экономики и экономики устойчивого развития. Широко использованы материалы ООН, Всемирного банка и других организаций в той или иной мере регламентирующие различные аспекты экологической экономики в контексте устойчивого развития.

В экономической литературе широко распространено понятие «зеленая экономика», разработанная специалистами Программы ООН по окружающей среде (UNEP) – «зеленая экономика» способствует «улучшению благосостояния и социального равенства людей, существенно снижает экологические риски и экологического дефицита»[1].

На наш взгляд, термин «зеленая экономика» не может заменить понятие устойчивое развитие и является важным условием, способствующим достижению устойчивого развития. Для «коричневой экономики», функционирующей в мире, характерны следующие признаки: нарушение экологии (изменение климата, потепление, потеря биоразнообразия), ограничение естественного капитала, рост уровня бедности населения, нехватка пресной воды, продовольствия, энергии, экономико-социальные отношения между людьми и странами. Согласно вышеперечисленным причинам, в мире, в том числе в Узбекистане, следует перейти от «коричневой экономики» к «зеленой экономике». Формирование «зеленой экономики» обеспечит «зеленый рост» и будет способствовать реализации стратегии устойчивого развития.

Необходимость перехода к «зеленой экономике» в Узбекистане объясняется тем, что большая часть потребляемой в национальной экономике энергии вырабатывается с использованием невозобновимых органических природных ресурсов, истощением ограниченных запасов ресурсов,

обострением экологических проблем, связанных с загрязнением окружающей среды, дефицитом воды, высыхание Аральского моря вследствие ускоренного развития промышленности. Устойчивое развитие экономики Узбекистана, разработка долгосрочной стратегии структурных преобразований требует учета внутренних и глобальных процессов и проблем.

По данным Всемирной метеорологической организации ООН, к настоящему времени средняя среднегодовая температура воздуха в мире превысила уровень 1880 года на 1 градус Цельсия. В Узбекистане за тот же период среднегодовая температура воздуха повысилась на 1,6 градуса Цельсия (с 13,2 до 14,8 градусов). Интенсивность потепления средних температур воздуха в нашей стране превышает средние темпы, наблюдаемые в глобальном масштабе. Климатическое потепление негативно сказывается на состоянии экосистем, что приводит к обострению экологической обстановки в Республике Каракалпакстан, Хорезмской, Бухарской, Навоиской, Кашкардарьинской, Самаркандской и Сурхандарьинской областях.

В результате глобального потепления климата в Центральной Азии за последние 50-60 лет площадь ледников сократилась примерно на 30%. Анализ показал, что при повышении температуры 2⁰С объем ледников уменьшится на 50%, а при потеплении 4⁰С - на 78%. По расчетам ученых, до 2050 года ожидается снижение водных ресурсов в бассейне Сырдарьи на 5%, в бассейне Амударьи - на 15%. Как показывают расчеты специалистов, общий дефицит воды в Узбекистане за период до 2015 года составил более 3 млрд. м³, к 2030 году может составить 7 млрд. м³ и к 2050 году - 15 млрд. м³.

Экономика Узбекистана входит в десятку стран мира по показателям энерго и углеродоемкости ВВП. Расход энергии на производство единицы ВВП в мире в 1990-2019 годах снизился с 0,170 кг н.э. до 0,110 кг н.э., этот показатель в Узбекистане уменьшился соответственно с 0,689 кг н.э. до 0,150 кг н.э. Следовательно, энергоемкость ВВП в Узбекистане по-прежнему остается выше среднемировых показателей. Этот показатель в два раза выше, чем уровень в Великобритании, Италии, Турции, Испании, Германии. Несмотря на то, что в Узбекистане резко снизилась углеродоемкость экономики, она в 1,5 раза выше, чем среднемировые показатели.

Как показывают исследования, в стране большинство электросетевых объектов эксплуатируются более 30 лет, в частности, 66% магистральных и распределительных сетей, 74% подстанций и более 50% трансформаторных подстанций находятся в эксплуатации более 30 лет. Это один из основных факторов, приводящих к увеличению уровня технологических потерь при распределении и поставке электроэнергии. В 2012-2020 годах спрос на электроэнергию не был полностью удовлетворен, при этом производство электроэнергии за этот период увеличивалось в среднем на 2,6% в год. По некоторым оценкам, в 2020 году дефицит между спросом и предложением электроэнергии составил 9,4%

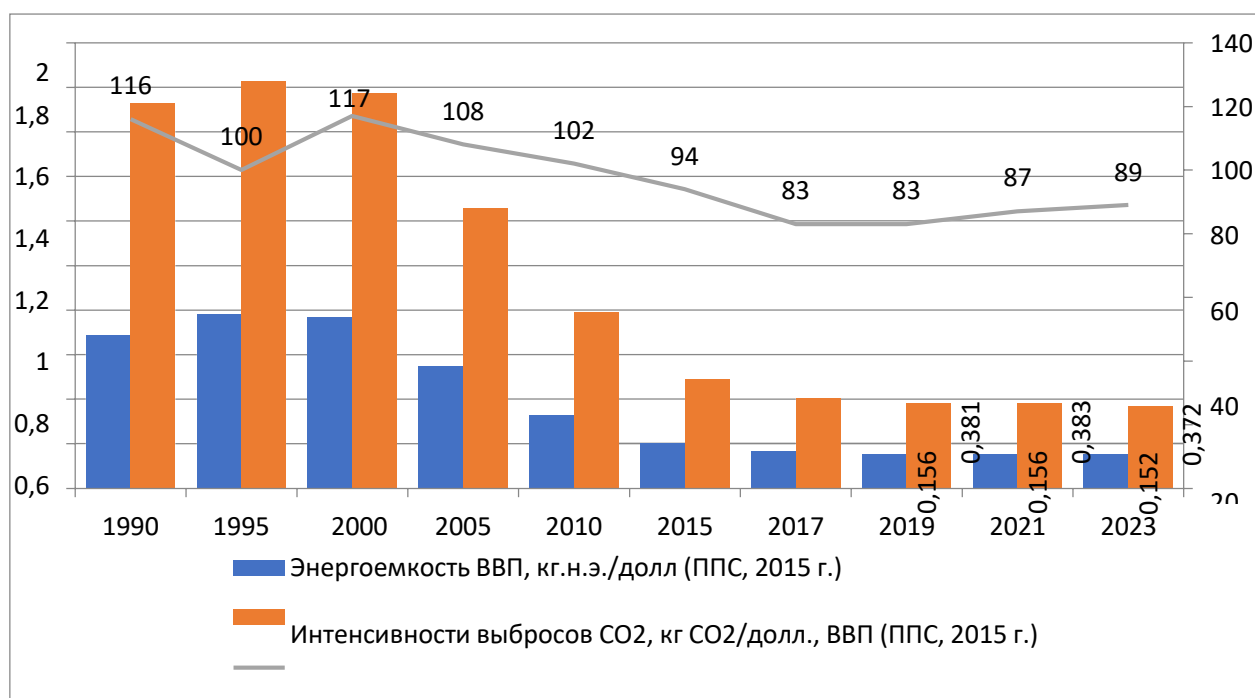


Рис. 1. Показатели энергоэффективности экономики Узбекистана[2]

Низкий уровень энергоэффективности национальной экономики, низкий уровень использования природных ресурсов, медленные темпы технологической инновации, пассивное участие малого бизнеса во внедрении инновационных решений для развития «зеленой экономики» препятствуют достижению целей устойчивого развития. На наш взгляд, отсутствие долгосрочной стратегии в этой сфере не позволяло обеспечить внедрение «зеленых технологий» и системных мер по переходу к «зеленой экономике».

В целях выполнения обязательств Парижского соглашения от 4 октября 2019 года Президент Республики Узбекистан принял Постановление № ПП-4477 «Об утверждении Стратегии перехода Республики Узбекистан к «зеленой» экономике на 2019-2030 годы».

Целью Стратегии является достижение устойчивого экономического прогресса, который способствует социальному развитию, снижению уровня выбросов парниковых газов, климатической и экологической устойчивости, посредством интеграции принципов «зеленой экономики» в реализуемые структурные реформы.

Анализ и результаты. В Узбекистане в долгосрочной перспективе переход на «зеленую экономику» должен основываться на следующих принципах: соответствие Национальным целям и задачам в области устойчивого развития; рациональное использование ресурсов, устойчивое потребление и производство; включение экологических и социальных критериев в систему экономического учета; приоритетность применения «зеленых» инструментов и подходов для достижения целей социально-экономического развития; достижение существующих макроэкономических

целей посредством повышения конкурентоспособности и темпов роста показателей в ключевых секторах, создания «зеленых» рабочих мест, повышения благосостояния населения; обеспечение инвестиционной привлекательности мероприятий по эффективному использованию экономических ресурсов.

По первому приоритетному направлению, установленному Стратегией, поставлена задача повысить энергоэффективность в базовых отраслях экономики в 2 раза к 2030 году. В частности, для этой цели планируется повышение энергоэффективности за счет модернизации инфраструктуры промышленных предприятий, дальнейшего использования чистых и экологически безопасных технологий и промышленных процессов на величину не менее 20%, энергоэффективность и экологическое улучшение производства моторного топлива и автотранспортных средств, развитие электротранспорта (таблица 1).

Второе приоритетное направление - диверсификация потребления энергоресурсов и развитие использования возобновляемых источников энергии при переходе к "зеленой" экономике в стране.

Третье приоритетное направление включает в себя проблемы адаптации и смягчения последствий изменения климата, повышения эффективности использования природных ресурсов и сохранения природных экосистем.

Четвертое направление стратегии направлено на разработку экономических механизмов поддержки «зеленой экономики», развитие институциональных основ внедрения «зеленых технологий», совершенствование нормативно-правовой базы в сфере «зеленой экономики», механизмов регулирования и контроля энергоэффективности, интеграция принципов «зеленой экономики» в образование и науку, повышения производственного потенциала и создание благоприятной среды для перехода к «зеленой экономике».

В Узбекистане имеются большие запасы возобновляемых источников энергии. В структуре этих источников преобладающая часть приходится на долю солнечной и ветровой энергетики. Вместе с этим, одной из причин, препятствующих развитию данной отрасли, является зависимость альтернативных источников энергии от изменения погодных условий.

Ветрогенераторы производятся только при скорости ветра выше 5-6 м/с и дают энергию в среднем в течение 3200-4300 часов в год в районах Узбекистана с высоким ветровым потенциалом (продолжительность года 8760 час).

Таблица 1

**Целевые показатели реализации стратегии перехода Республики
Узбекистан к “зеленой экономике” на 2019-2030 годы [3]**

Целевые показатели	Ожидаемые результаты
снижение удельного выброса парниковых газов на единицу валового внутреннего продукта	Снижение на 10 % от уровня 2010 года
повышение энергоэффективности и снижение углеродоемкости валового внутреннего продукта;	В двукратном размере
дальнейшее развитие возобновляемых источников энергии	доведение их доли до 25 % от общего объема генерации электрической энергии
обеспечение доступа к современному, недорогому и надежному энергоснабжению населения и отраслей экономики	до 100 %
модернизация инфраструктуры промышленных предприятий, обеспечение их устойчивости за счет повышения энергоэффективности и более широкого использования чистых, экологически безопасных технологий и промышленных процессов	не менее на 20 %
существенное повышение эффективности водопользования во всех секторах экономики	внедрение технологий капельного орошения на площади до 1 млн гектаров и повышение урожайности на выращиваемых на них культур на 20 — 40 %
производство основных видов продовольственной сельскохозяйственной продукции.	повышение средней продуктивности до 20 — 25 %

Солнечные фотоэлектрические Общий потенциал Узбекистана по возобновляемым источникам энергии составляет 117 984 млн. т.н.э., его технический потенциал равен 179,3 млн. т.н.э. Существенная часть альтернативной энергетики приходится на долю солнечной энергии, общий потенциал которой составляет 51 млрд. т.н.э., а технический потенциал приравнивается к 177 млн. т.н.э. Технический потенциал солнечной энергии в четыре раза превышает потребление первичной энергии в стране. Благоприятные климатические и географические условия в Узбекистане позволяют использовать солнечную энергию на промышленном уровне. Общий потенциал ветровой энергии составляет 2,2 млн. т.н.э. Как показывают расчеты, существует возможность технического освоения ее на 19%. Общий потенциал геотермальной энергии больше, чем потенциал солнечной энергии, и составляет 67 млрд. т.н.э. Из-за неразвитости простых и экономически эффективных технологий возможность технического освоения данного вида энергии составляет около 0,3 млн. т.н.э.

Вывод. В Узбекистане имеются ряд факторов, негативно влияющих на развития сектора «зеленой экономики»:

– высокая стоимость производства возобновляемых источников энергии и их низкая мощность, по сравнению с традиционными источниками энергии, чем в других странах. На начало XXI века в странах с формирующейся рыночной экономикой стоимость производства электроэнергии на основе возобновляемых источников энергии остается высокой. Узбекистан лидирует в группе стран по поставке населению дешевой электроэнергии. По данным Global Petrol Prices стоимость кВт-часов электроэнергии в нашей стране в 2020 году составила в среднем 2,8 центов, тогда как в Казахстане она составила 4,0 цента, России – 6,0 цента, Беларуси – 7,2 цента; в развитых странах: в Норвегии – 10 цента, во Франции – 21,6 цента, Великобритании – 26,1 цента, Германии – 36,6 цента.

– отсутствуют экономические механизмы финансовой поддержки, стимулирующие использование возобновляемых источников энергии. Правовая-институциональная база для функционирования экономических механизмов, использования возобновляемых источников энергии является недостаточной;

– недостаточная информированность населения о «зеленой экономике», современных видах «зеленой энергетики», в частности о возобновляемых источниках энергии;

– одним из факторов, препятствующих влиянию на масштабы использования возобновляемых источников энергии является развитие атомной энергетики. Как свидетельствует исследование, издержки производства экологически чистой энергии из возобновляемых источников энергии примерно в 20 раз дороже, чем на атомных электростанциях. По оценкам экспертов, мировых запасов угля хватит на 270 лет, нефти – на 50 лет, газа – на 70 лет. Запасы урана, используемые на АЭС, составляют 5 718 400 тонн. Рассчитано, что его хватит на 2500 лет. В некоторых странах доля АЭС в общем объеме производства электроэнергии относительно высокая, в частности во Франции – 70,6 %, в Словакии и на Украине – 53,9 %, Венгрии - 49,2%, Бельгии – 47,6 % электроэнергии производится на АЭС [4];

– в Узбекистане существует органическое сельское хозяйство;

Однако, научные критерии для классификации органических продуктов, производимых данным способом неразработаны. Несмотря на то, что существуют продукты органического земледелия, не существует норм и стандартов, подтверждающих, что они действительно являются экологически чистыми. Исходя из мировой практики, необходимо разработать правовую базу для внедрения стандартов на экологически чистые продукты, их регулирования и системы сертификации.

Приоритетными направлениями разработки финансовых и нефинансовых механизмов развития «зеленой экономики» в Узбекистане в долгосрочной перспективе являются:

- развитие институциональных основ внедрения «зеленых технологий». В частности, необходимо оценить технологические потребности, определить приоритетные задачи и выбрать наиболее высокие технологии, оказывающие содействие в их разработке. Для развития экономического механизма коммерциализации «зеленых технологий», поддержки инновационной деятельности необходимо создание организационных структур - агентств по поставке технологий, технологических бизнес-инкубаторов, технопарков, кластеров;
- совершенствование нормативно-правовой базы развития «зеленой экономики», в частности следует разработать предложения по инвентаризации, совершенствованию нормативно-правовой базы, охватывающей приоритетные направления Стратегии и внедрить в практику национальную систему показателей оценки «зеленой экономики»;
- развитие механизмов регулирования и контроля энергоэффективности. В частности, следует ввести тариф по гарантированной закупке электрической энергии предприятиями территориальных электрических сетей от вновь вводимых солнечных, ветровых и биогазовых электростанций, микро- и малых гидроэлектростанций установленной мощностью до 1 МВт. Определение потенциальных инвесторов для реализации проектов в сфере возобновляемых источников энергии (кроме ГЭС) промышленного масштаба (1 МВт и более) осуществляется посредством прозрачных аукционных (конкурсных) торгов;
- интеграция принципов «зеленой экономики» в образование и науку;
- повышение потенциала и создание благоприятной среды для перехода к «зеленой экономике», создание системы мониторинга, учета и верификации выделений парниковых газов с учетом национальных условий для непрерывного отслеживания выполнения их количественных обязательств по Парижскому соглашению, обеспечение отчетности по выпуску парниковых газов; развитие потенциала государственно-частного партнерства для внедрения «зеленых технологий»;
- содействие частным инвесторам в внедрении «зеленых инноваций»; разработка механизмов стимулирования государственных «зеленых закупок» с внедрением системы сертификации энергоресурсной эффективности товаров; учет основ «зеленой экономики» при разработке государственных образовательных программ подготовки и переподготовки кадров; развитие исследований в сферах, связанных с вопросами смягчения и адаптации последствий изменения климата; укрепление сотрудничества национальных и зарубежных научных организаций в области создания «зеленых технологий»;
- поддержка «зеленых инвестиций»: «зеленого кредитования», внедрение системы венчурного финансирования; создание «зеленых» фондов, специальных фондов энергосбережения и других аналогичных механизмов; активизация частного сектора в финансировании проектов по переходу на «зеленую экономику», поддержка устойчивого роста «зеленой экономики» государством на основе фискальной политики.

Реализация, предполагаемых мер позволит повысить конкурентоспособность национальной экономики, поспособствует переходу на устойчивый путь развития на основе «зеленой экономики».

«Озеленение» национальной экономики будет способствовать росту потенциала экспорта продукции с высокой добавленной стоимостью путем глубокой переработки природных ресурсов, диверсификации ее структуры и повышения конкурентоспособности национальных компаний на мировых рынках.

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ЎЗБЕКИСТОНДА ОРГАНИК ҚИШЛОҚ ХЎЖАЛИГИ МАҲСУЛОТЛАРИ ИШЛАБ ЧИҚАРИШНИНГ ТАҲЛИЛИЙ- ИҚТИСОДИЙ ЖИҲАТЛАРИ

Аннотация. Мақолада Ўзбекистонда органик қишлоқ хўжалиги маҳсулотларини ишлаб чиқаришнинг иқтисодий ва таҳлилий жиҳатлари муҳокама қилинган. Органик қишлоқ хўжалигини жорий этишнинг асосий афзалликлари ва муаммолари, унинг қишлоқ хўжалик сектори ва мамлакатнинг экспорт салоҳиятига таъсири кўриб чиқилган. Самарадорликни ошириш учун замонавий технологиялар ва инновацион ёндашувлардан фойдаланиш бўйича тавсиялар келтирилган.

Калим сўзлар: органик қишлоқ хўжалиги, барқарор ривожланиш, экспорт, Ўзбекистон, инновациялар, технологиялар.

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ANALYTICAL AND ECONOMIC ASPECTS OF ORGANIC AGRICULTURAL PRODUCTION IN UZBEKISTAN

Abstract. The article analyzes the economic and analytical aspects of organic agricultural production in Uzbekistan. It examines the key advantages and challenges of introducing organic farming, its impact on the sustainable development of the agricultural sector, and the country's export potential. Recommendations are provided to enhance production efficiency through modern technologies and innovative approaches.

Keywords: organic agriculture, sustainable development, export, Uzbekistan, innovations, technologies.

Инсоният жамияти ривожланишининг замонавий шароитида атроф-муҳитга антропоген таъсир тобора кучайиб бормоқда. Мутахассисларнинг фикрига кўра, инсоннинг саломатлиги ва умр кўриш давомийлигининг 10 % соғлиқни сақлашга, 20 % шахснинг ирсий хусусиятларига, - 50 % инсоннинг турмуш тарзига ва 50 % атроф-муҳит ҳолатига боғлиқ бўлар экан. Демак, тоза сув, ҳаво ва тупроқ, сифатли озиқ-овқат, соғлом турмуш тарзи бутун жамият, қолаверса инсон саломатлигининг ҳал қилувчи омилдир.

Инсоният тараққиётини тўхтатиш мумкин эмас, балки, инсоннинг яшаши, жамиятнинг барқарор ривожланишини таъминлашда моддий

неъматлар ишлаб чиқарувчиларнинг манфаатларини атроф-муҳитга ҳурмат билан уйғунлаштириш долзарб масала ҳисобланади. Айниқса қишлоқ хўжалиги ишлаб чиқаришида экинларни этиштиришда интенсив технологиялардан фойдаланиш ва кенг миқёсдаги кимёвий воситалардан фойдаланиш атроф-муҳитни муҳофазасига сальбий таъсир этмоқда.

Шунинг учун ҳам қишлоқ хўжалиги яшил иқтисодиётга ўтишда муҳим ўрин тутлади. Органик қишлоқ хўжалиги амалиёти ва технологиялари яшил иш ўринларини яратиш орқали бир вақтнинг ўзида атроф-муҳитни мусаффолигини ва тупроқ деградациясини бартараф этишга ҳамда кашшоқликни камайтиришга ёрдам беради.

Тадқиқотчи М.С.Юсупов “2019 йилда жаҳон бўйлаб органик қишлоқ хўжалиги жорий этилган майдонлар жами қишлоқ хўжалиги ерларининг 1.5 %ига тенг бўлса, Ўзбекистонда бу кўрсаткич 0,004 %га тенг ёки жаҳон кўрсаткичидан 375 марта паст. Ўзбекистон Республикасининг жаҳон органик қишлоқ ер майдонидаги улуши эса 0,001 %га тенг бўлган” деб қайд этади [1].

Мамлакатда расман “Органик қишлоқ хўжалиги”га ўтиш Ўзбекистон Республикаси Президентининг 2020 йил 18 майдаги ПФ-5995-сонли фармони билан тасдиқланган “Органик қишлоқ хўжалиги ва органик озиқ-овқат маҳсулотлари ишлаб чиқаришни ривожлантириш концепцияси”ни қабул қилиш билан бошланди.

Ушбу концепцияда “Органик қишлоқ хўжалиги тадқиқотлари институти (ФиБЛ) ва Органик қишлоқ хўжалиги ҳаракати бўйича Халқаро Федерацияси (ИФОАМ)нинг Жаҳон органик қишлоқ хўжалиги статистикаси бўйича 2019 йилдаги нашрида Ўзбекистон Республикаси мева етиштириш бўйича қулай шароитга эга бўлган дунёдаги 10 та давлат қаторига киритилган ва республикамиз органик мева ишлаб чиқариш учун қулай ер майдонларига эга эканлиги қайд этилган” [2].

Шунингдек, органик қишлоқ хўжалиги маҳсулотларини етиштиришда юзага келадиган муносабатларни тартибга солиш мақсадида “Органик маҳсулотлар тўғрисида”ги Ўзбекистон Республикасининг ЎРҚ-766-сонли қонунини қабул қилиниши бу соҳани янги бир босқичга кўтарилишига сабаб бўлди.

Замонавий шароитда мамлакатда Organic ва Global G.A.P. халқаро стандартлари талабларига мувофиқ маҳсулот ишлаб чиқариш, тартибга солиш ва мувофиқлаштириш тизимларини ривожлантириш, қишлоқ ва ўрмон хўжалиги маҳсулотларининг сифат ва хавфсизлик кўрсаткичларини яхшилаш, экспорт географиясини кенгайтириш муҳим вазифа саналади. Бунинг учун жаҳон мамлакатлари стандартларини қабул қилишга импортёр давлатларнинг талабларини инобатга олиш зарур.

Ҳозирда аграр тармоққа тегишли 1300 дан ортиқ стандарт амалга киритилган бўлиб, буларнинг 309 таси халқаро ва 6 таси хорижий давлатларнинг стандартларидан иборатдир. Шунингдек, қишлоқ хўжалиги маҳсулотларига тегишли етмишга яқин БМТнинг стандартлари қабул қилинди.

Қишлоқ хўжалиги ва озиқ-овқат маҳсулотларининг қўшимча қиймат занжирини ташкил этишда иштирок этувчи барча корхона ва ташкилотлар фаолиятларида бажариладиган жараёнларга ISO 28000 серийасига кирувчи 10 та халқаро стандартни жорий этилмоқда. Экспортёр корхоналарга «Global G.A.P.» ва «Organic» стандартларини жорий этиш ва сертификатлаштириш бўйича ишлар жадал олиб борилмоқда.

Органик (экологик, биологик) қишлоқ хўжалиги - бу қишлоқ хўжалигида хўжалик юритишнинг усули бўлиб, унда синтетик ўғитлар, пеститсидлар, ўсимликларнинг ўсишини регуляторлари ва озуқа қўшимчаларидан фойдаланиш онгли равишда минималлаштирилади [3].

“Органик қишлоқ хўжалиги” бу агроэкологик саломатлигини, жумладан, биологик хилма-хиллик, биологик тсикллар ва тупроқ биологик фаоллигини қўллаб-қувватловчи ва рағбатлантирадиган яхлит ишлаб чиқаришни бошқариш тизимидир.

Органик қишлоқ хўжалигининг уч хил ҳаракатлантирувчи кучи мавжуд:

- истеъмол ва бозорга ёъналтирилган органик қишлоқ хўжалиги, бунда маҳсулотларни органик эканлиги аниқ белгиланган ҳамда тегишли сертификатланган ва этикеткаланган бўлади. Бу ҳолда истеъмолчи органик ишлаб чиқаришга ўз таъсирига эга бўлади;
- хизматга ёъналтирилган органик қишлоқ хўжалиги. Кўпгина Европа Иттифоқи мамлакатлари эр ости сувларининг ифлосланишига қарши курашиш ёки биологик хилма-хил табиий ландшафтларни яратиш каби экологик маҳсулотлар ва хизматларни ишлаб чиқарадиган органик қишлоқ хўжалигини субсидиялаш учун маблағлар ташкил қилмоқда.
- фермерга ёъналтирилган органик қишлоқ хўжалиги. Баъзи фермерлар анъанавий деҳқончилик усулларини беқарор ва зарарли деб ҳисоблайдилар ва оила саломатлигини, фермер хўжаликларининг иқтисодий барқарорлигини ва ёки ўзига ишончни яхшилаш учун ўзларининг муқобил усулларини ишлаб чиқадиладар.

Ўзбекистон Республикасида “Органик қишлоқ хўжалиги”ни самарали ташкил этишнинг “SWOT” таҳлилининг ўтказиш қуйидаги натижаларни кўрсатмоқда.

1-жадвал

Ўзбекистонда “органик қишлоқ хўжалиги” маҳсулотлари ишлаб ишлаб чиқаришнинг “SWOT” таҳлили²⁴

Strengths (кучли томонлари)

Миллий қишлоқ хўжалигида дастлабки анъанавий ишлаб чиқаришнинг органик ишлаб чиқаришга асосланганлиги
Мамлакатда органик қишлоқ хўжалиги ишлаб чиқариши учун қулай табиий иқлим шароитларининг мавжудлиги
Мамлакатда турли гербицид ва химикатлар билан зарарланмаган катта микдордаги ер майдонларининг мавжудлиги

²⁴ Мантикий фикрлаш асосида муаллиф томонидан ишлаб чиқилди.

Ҳозирги пайтда ҳам қишлоқ хўжалиги ишлаб чиқаришининг майда товар хўжалиги (деҳқон хўжаликлари, томорқа хўжаликлари)да органик маҳсулот ишлаб чиқарилаётганлиги

Халқнинг менталитетида, қадриятларида органик қишлоқ хўжалиги маҳсулотлари ишлаб чиқариш бўйича билим ва тушунчаларнинг мавжудлиги

Weaknesses (кучсиз томонлари)

Органик қишлоқ хўжалиги маҳсулотларини экспорт қилиш тўғридан тўғри денгизга чиқиш имкониятларининг йўқлиги

Органик қишлоқ хўжалиги маҳсулотлари истеъмол бозорларининг аниқланмагани ва фьючерс шартномаларини тузилмаганлиги

Органик қишлоқ хўжалиги маҳсулотларини сақлаш омборхоналарининг мавжуд эмаслиги ёки камлиги

Органик қишлоқ хўжалиги маҳсулотлари савдосини амалга ошириш бўйича логистика марказларининг ташкил этилмаганлиги

Қишлоқ хўжалигида йирик товар ишлаб чиқарувчиларнинг “органик қишлоқ хўжалиги” бўйича агро ва зоотехнологик ҳамда иқтисодий-ҳуқуқий билимларининг етарли эмаслиги

Олий таълим муассасаларида “Органик қишлоқ хўжалиги” маҳсулотларини етиштириш, сақлаш, ташиш ва истемолчига етказиб бериш бўйича етук мутахассис кадрлар тайёрлаш тизимининг йўлга қўйилмаганлиги

Opportunities (имкониятлар)

Органик қишлоқ хўжалиги маҳсулотларини ишлаб чиқариш орқали мамлакат, корхона ва аҳолининг даромадлар даражасини ошириш

Қишлоқ ҳудудларидаги аҳолини иш билан бандлигини ошириш

Атроф муҳитни муҳофаза қилиш, табиий ресурс (тупроқ, сув, ҳаво, инсон, ўсимлик, ҳайвон) ларни турли антропоген таъсирлардан ҳимоялаш

БМТнинг “Барқарор ривожланиш” дастури талабларидан келиб чиққан ҳолда келажак авлодга экологик тоза муҳитни қолдириш

Threas (таҳдидлар)

Органик қишлоқ хўжалиги маҳсулоти ишлаб чиқарувчиларнинг рақобатбардошлик даражасининг пастлиги

Жаҳон бозорида органик қишлоқ хўжалиги маҳсулотларига қўйилган сифат ва хавфсизлик талабларининг тобора кучайиб бориши

Юқоридаги 1-жадвал маълумотлари Ўзбекистонда “Органик қишлоқ хўжалиги” маҳсулотлари ишлаб чиқариш учун катта имкониятларнинг мавжудлигини ва ижтимоий-иқтисодий самарадорликни таъминлашни кўрсатмоқда.

Ўзбекистонда Органик қишлоқ хўжалиги фаолиятининг объектлари қуйидагилар ҳисобланади:

-атроф муҳитни ўраб турган органик олам;

- органик деҳқончилик ва озиқ овқат хавсизлиги омиллари;
- органик деҳқончилик ва озиқ овқат хавсизлигини таъминлашда инновацион технологиялар;
- тупроқ ҳаёти ва биологияси;
- органик деҳқончилик қилинадиган тупроқлар;
- органик деҳқончилик тизимлари ва алмашлаб экиш;
- қишлоқ хўжалик экинлари ва навларини иқлим тупроқ шароитлари бўйича жойлаштириш;
- органик ва сидерат ўғитлар;
- турли хилдаги агрорудалар;
- компост ва ҳар хил органик аралашмалар;
- биологик ва микробиологик асосда яратилган ўғитлар;
- органик деҳқончиликда ресурстежамкор-технологиялар;
- ўсимликларни биологик ҳимоя қилиш;
- ўсимлик касаллик ва зараркунадаларига қарши биологик кураш;
- томчилатиб суғориш технологияси;
- ўсимликларни илдиздан ташқари озиқлантириш;
- ўсимликларни озиқлантиришда вермикультура маҳсулотлари;
- суғориш сувларининг сифат назорати;
- атроф муҳит ҳимояси;
- ўсимликлар селекцияси ва уруғчилигини ташкил этиш;
- тупроқ, сув ва маҳсулотлар сифатини назорат қилиш;
- екотизимнинг биологик хилма-хиллигини ва- экологик барқарорлик;
- қишлоқ хўжалигида тупроқ унумдорлигини бошқариш, тупроққа ишлов бериш, алмашлаб экиш, зарарли организмлардан ўсимликларни ҳимоя қилиш усуллари ва уларда кимёвий воситалардан ҳамда ген-модификацияланган организмлардан фойдаланишни тақиқлаш;
- ўсимликлар селекцияси ва уруғчилигини ташкил этиш;
- қишлоқ хўжалигини ривожлантириш учун фермер хўжалигининг ишлаб чиқариш ҳолати, тупроқ, сув ва маҳсулотлар сифатини назорат қилиш, етиштириш агротехнологияси, ердан фойдаланиш ва тупроқларнинг тарихини ўрганиш мақсадида комплекс ва кўчма лабораторияларни ташкил этиш;
- қишлоқ хўжалигида ўғитлаш, қишлоқ хўжалик экинларини ёввойий ўтлар, касаллик ва зараркунадалардан ҳимоя қилиш, органик қишлоқ хўжалигида алмашлаб экишни ташкил этиш;
- қишлоқ хўжалигида селекция ва уруғчилик бошқариш;
- маҳсулотларга дастлабки ишлов бериш ва чуқур қайта ишлашни бошқариш;
- ишлаб чиқариш бўйича қонунчилик ва давлат стандартларини ишлаб чиқиш;
- қишлоқ хўжалиги соҳасига мутахассислар тайёрлаш, фермер ва бошқа ишлаб чиқарувчилар учун жойларда семинарлар ва ўқув курсларини ташкил этиш;
- қишлоқ хўжалигида органик деҳқончиликни жорий қилиш натижасида атроф муҳитнинг барқарорлигини таъминлаш, инсоният ва ҳайвонот олами соғлигини мустаҳкамлаш ва бошқалар.

Хулоса қилиб айтганда қишлоқ хўжалигида юқорида қайд этилган объектлар бўйича Organic ва Global G.A.P. халқаро стандартлари талабларига мувофиқ маҳсулот ишлаб чиқариш, тартибга солиш ва мувофиқлаштириш тизимларини тадбиқ этиш, тармоқнинг ижтимоий-иқтисодий самарадорлигини таъминлайди.

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ЎЗБЕКИСТОНДА ЗАМОНАВИЙ ПУЛЛИ МАГИСТРАЛЬ АВТОМОБИЛЬ ЙЎЛЛАРИНИ ҚУРИШ ВА МОДЕРНИЗАЦИЯ ҚИЛИШ

Аннотация: Ушбу мақолада Ўзбекистонда замонавий пуллик йўлларининг жорий этилиши ҳамда ривожланган мамлакатларнинг пуллик магистраль автомобиль йўлларининг статистикаси келтирилган.

Калит сўзлар: Замонавий йўл, пуллик йўл, магистраль автомобиль йўллар, модернизация.

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CONSTRUCTION AND MODERNIZATION OF MODERN TOLL ROADS IN UZBEKISTAN

Abstract: This article presents the introduction of modern toll roads in Uzbekistan, as well as statistics on toll highways in developed countries.

Keywords: modern road, toll road, highways, modernization.

Замонавий йўл хўжалиги турли хил иқлим шароитида йўлларни жадал қуриш, сақлаш ва таъмирлашни таъминлайдиган тизимлардан ва машиналар мажмуаларидан фойдаланишга асосланган.

Пуллик йўллар. Айрим участкаларда қў шимча тўловлар муаммоси бўйича иккита асосий фикр мавжуд: бир томон буни адолатсиз деб ҳисоблайди. Бошқалар буни мутлақо нормал ҳодиса деб билишади.

Австралиянинг Бюджет Директ суғурта компанияси дунёдаги энг қиммат пуллик йўллар рейтингини эълон қилди. Рейтингга кўра, дунёда энг қиммат пуллик йўл АҚШдаги Пенсилвания магистрალი (И-76, Интерстате 76) ҳисобланади. Қайд этилишича, Пенсилвания магистралида йўл юриш нархи 112,91 долларни ташкил этади. Магистраль узунлиги 580 километрга тенг бўлиб, у Пенсилвания штатини кесиб ўтади.

Австриядаги Гроссглокнер йўли энг қиммат пуллик йўллар рўйхатида иккинчи ўринга жойлашди – йўл ҳақи 45 доллар. Пуллик йўлларнинг ўртача нархи бўйича мамлакатлар рўйхатини эса Швейсария бошқармоқда - 26,5 доллар.

Швейсария дунё мамлакатлари орасида пуллик йўлларнинг ўртача нархи рўйхатида 26,5 доллар (тахминан 278 197 сўм) билан етакчилик қиляпти. Иккинчи ўринни 16,29 доллар (тахминан 171 012,42 сўм) кўрсаткич билан Австрия банд қилган, ундан кейин 16,28 доллар (тахминан 170 907,44 сўм) билан Фарер ороллари пуллик йўллари фаолият кўрсатмоқда.

Ўзбекистонда ҳам пулли йўллар қурилиши жорий йилда бошланади.

Президентнинг жорий йил 30 августдаги ПҚ-308-сон қарори билан 2024–2026 йилларда устувор давлат-хусусий шериклик лойиҳаларини амалга ошириш бўйича чора-тадбирлар ҳамда 2024–2030 йилларда давлат-хусусий шериклик асосида амалга ошириладиган лойиҳалар дастури тасдиқланди.

Хужжатда давлат-хусусий шериклик асосида иккита пулли йўл қурилиши ҳақида сўз боради.

Тошкент–Самарқанд пулли автомобиль йўли қурилиши 2024 йилда, Тошкент–Андижон йўли 2026 йилда бошланади. Ушбу лойиҳалар шаҳарлар ўртасида тезкор ва қулай алоқа учун қўшимча шароитлар яратиши кутилмоқда.

Шунингдек, қарор билан камида 1 000 км замонавий пулли магистраль автомобиль йўлларини қуриш ва модернизация қилиш тасдиқланди.

Бундан ташқари, электр энергиясини тақсимлаш тармоқларини 2027 йил 1 июлгача ва табиий газни тақсимлаш тармоқларини 2027 йил якунига қадар хусусий операторларга бериш ва йиллик энергия йўқотишларини камида икки барабар қисқартириш режалаштирилган.

Ҳар йили қўшимча 30 фоизгача электр энергиясини тежаш мақсадида 2028 йилгача барча маънан эскирган ирригация насос станцияларини модернизация қилиш бўйича келишувларга эришиш режалаштирилган.

2028 йил якунига қадар ҳар бир вилоятда сув таъминоти ва канализация тармоқларини модернизация қилиш ва бошқариш учун аҳолини тоза ва узлуксиз ичимлик суви билан қамраб олишни 87% гача, марказлаштирилган канализация таъминотини 30% гача таъминлашни ҳисобга олган ҳолда хусусий компанияларни жалб қилишмоқчи. 2026 йилдан бошлаб ҳар йили камида 100 та мактаб ва 100 та боғча ДХШ асосида қурилади.

Барча лойиҳалар учун давлат муассасаси шаклидаги «Давлат-хусусий шериклик лойиҳалари маркази» лойиҳа офиси ташкил этилади. У мунтазам равишда ДХШ соҳасидаги мутахассисларни қайта тайёрлаш ва малакасини ошириш бўйича давра суҳбатлари ва бошқа тадбирларни ташкил этади, уларни чет элда амалиётга юборади, шунингдек, халқаро сертификатларни олишни ташкил этади.

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ИЗУЧЕНИЯ ПРЕИМУЩЕСТВА НЕГОРМОНАЛЬНОЙ ТЕРАПИИ В ЛЕЧЕНИИ ЮВЕНИЛЬНОЙ ДИСМЕНОРЕИ

***Аннотация.** Первичная дисменорея (ПД) – это не «безобидный» дискомфорт, а патологическое состояние, требующее серьезного и комплексного подхода к лечению. Длительный болевой симптом может повлечь за собой серьезные нарушения здоровья девушки в виде расстройств центральной нервной системы и развития психопатологических состояний, вплоть до астении и депрессии, а также глубоких дисгормональных нарушений.*

***Ключевые слова:** дисменорея, магний цитрат, менархе.*

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STUDY OF THE ADVANTAGES OF NON-HORMONAL THERAPY IN THE TREATMENT OF JUVENILE DYSMENORRHEA

***Key words:** dysmenorrhea, magnesium citrate, menarche.*

***Annotation.** Primary dysmenorrhea (PD) is not a “harmless” discomfort, but a pathological condition that requires a serious and comprehensive approach to treatment. A prolonged pain symptom can lead to serious problems with a girl’s health in the form of disorders of the central nervous system and the development of psychopathological conditions, including asthenia and depression, as well as deep dishormonal disorders.*

Введение

В результате комплексного обследования девушек в республике Узбекистан было обнаружено, что одно из ведущих мест среди гинекологической патологии занимает нарушение менструальной функции, первое место занимает дисменорея, составляя 21% [2]. Дисменорея – самое частое гинекологическое страдание у женщин независимо от возраста или национальности. Проблема дисменореи в настоящее время приобрела особую значимость в связи с распространенностью, как медицинской, так и социальной значимостью. Частота дисменореи у женщин в возрасте 14–44 лет составляет 43–90%, из них – 10% нетрудоспособны от нескольких часов до 1–4 дней а по данным других авторов 31,3–69,6% [3,4,5]. Первичная дисменорея занимает лидирующее положение в структуре подростковой гинекологической патологии. В пубертатном возрасте частота этого

заболевания колеблется в пределах 0,2-20% [6]. Дисменорея у девушек приводит не только к потере трудоспособности, но и к изменению психосоматического статуса [2,9]. Первичная дисменорея возникает в период возрастной морфофункциональной перестройки репродуктивной системы, во время становления менструальной функции у девочек и считается самостоятельной нозологической формой (N 94.4 по МКБ-Х), поскольку не связана с каким-либо органическим заболеванием половых органов (специфические гинекологические воспалительные заболевания, эндометриоз, опухоли яичников и матки и др.). ПД возникает в результате воздействия на развивающийся организм ребенка и подростка многочисленных этиологических факторов. К их числу можно отнести осложнения перинатального периода, острые и хронические инфекционные заболевания детского и подросткового возраста, хроническую соматическую патологию, нарушение обмена веществ, психогении и др. [1,5].

В исследованиях, посвященных этиопатогенезу первичной дисменореи, рассматриваются несколько аспектов: гормональные нарушения, повышение уровня простагландинов в менструальном эндометрии. Полагают что первичная дисменорея обусловлена дисфункцией гипоталамо - гипофизарно-яичниковой системы, корково- подкорковых взаимоотношений и сопровождается нарушением синтеза эстрогенов, прогестерона, нейротрансмиттеров и др. биологически активных веществ [3].

Целью данного исследования явилось: определение наиболее значимых факторов риска развития первичной дисменореи у девушек на основании комплексного обследования девушек и их матерей.

Материалы и методы исследования: Проведен анализ 140 анкет, заполненных девушками с дисменореей и их матерей. Первичная дисменорея установлена после выяснения жалоб и проведения дифференциальной пробы с нестероидным противовоспалительным препаратом – нимесил. Результаты опроса сравнивали аналогично у 50 женщин, дочери которых в возрасте от 13 до 18 лет были здоровы (контрольная группа). Вопросы анкеты были разбиты на несколько блоков: а) социально-экономические условия жизни, б) состояние репродуктивной функции женщины в) наличие у неё экстрагенитальной патологии, г) течение беременности и родов данным ребёнком д) его развитие в первый год жизни. Блок социально-экономических вопросов регистрировал условия жизни за последние 5-10 лет, где отражались условия и экономическое состояние семьи. Был собран анамнез девушек, проведен осмотр вторичных половых признаков. Статистическая обработка и проверка результатов была основана на определении равенства математических ожиданий случайных величин посредством оценки критерия Стьюдента и критерии однородности χ^2 , а также вычисления относительного риска (ОР) влияния каждого фактора при доверительном интервале 95%. Средние величины представлены в виде $M \pm \sigma$, где M – среднее арифметическое значение, σ – стандартное отклонение. После обработки полученных результатов малоинформативные признаки, т.е. не имеющие

достоверных различий по частоте определения были исключены. Анализ частоты оставшихся признаков позволил выявить наиболее значимые факторы риска развития первичной дисменореи. **Результаты:** Анализ социально – экономических условий жизни девушек показал, что фактором, повышающим риск формирования первичной дисменореи у подростка, является проживание девушки в сельской местности, что составило 56,4%, у здоровых девушек этот показатель составил 38% (OR=1,48; $p < 0,05$). В семьях, где материальнобытовые условия были неудовлетворительными, у 62,8% девушек менструации были болезненными, а в группе здоровых у 42% (OR=1,5; $p < 0,05$). Фактором, приводящим к формированию дисменореи у девушек, признан возраст матери к моменту рождения 56 дочери. Несмотря на то, что средний возраст матерей в обеих группах при рождении детей находился в пределах 24-25 лет, роды старше 30 лет и позже среди матерей больных девушек наблюдались в 29,2% случаев, среди матерей здоровых – в 14 % (OR=2,09; $p < 0,001$). При этом удельный вес первородящих позднего возраста в обеих группах не имел существенного различия. Уровень образования матери серьезно влиял на развитие дисменореи у подростков. Образование в объеме средней школы имели 35% матерей девушек основной группы и 4 % матерей контрольной (OR=8,75; $p < 0,001$). Наличие среднего специального образования у матери ослабляло риск данной патологии у дочери более чем в 3 раза (OR= 2,90). Особенности трудовой деятельности матери также сказывались на риске развития первичной дисменореи их дочерей. Так, женщины основной группы полный рабочий день были заняты на производстве в 49,2% случаев, в контрольной – в 24 % ($p < 0,01$; OR=2,05). Ежедневное пребывание матери на работе менее 5-6 ч сокращало риск формирования дисменореи у дочери более чем в 12 раза (OR=0,16). Напротив, наличие ночных дежурств в трудовом распорядке матери усиливало риск появления данной патологии у девушек - подростков (OR= 1,43). Среди значимых факторов риска дисменореи присутствовал и низкий уровень материального обеспечения семьи. Материальный доход, не превышающий одного прожиточного минимума на человека в месяц, где девочка страдает дисменореей, был зафиксирован гораздо чаще, чем в контрольной группе, соответственно в 57,78 и 23,33% случаев, OR=6,90 ($p < 0,001$). При повышении материального обеспечения в пределах двух величин прожиточного минимума на человека в месяц соотношении рисков менялось на диаметрально противоположное (частота данного фактора составила 41,11 и 63,33%, OR=1,88). При совокупном доходе более двух прожиточных минимумов на человека в месяц различия в обеих группах были несущественными. Самым неблагоприятным образом на формирование первичной дисменореи у девушки сказывалось курение матери (OR=2,55).

На формирование дисменореи у девушек оказало влияние количество родов у матери: в 5,55% случаев данная патология встречалась у детей, рожденных в результате третьих и четвертых родов. Подобный вывод можно сделать и в отношении перинатального поражения центральной нервной

системы новорожденных. Это осложнение в основной группе присутствовало в 14,44% случаев, в контрольной не диагностировалось ни разу. Таким образом, неудовлетворительные материально-бытовые условия в семье, различные психические и физические нагрузки и конфликты в семье и по месту учёбы способствуют развитию ювенильной дисменореи. Большинство обследованных 80,3% имело в анамнезе различные перенесенные заболевания, особенно хронический тонзиллит и детские инфекции. Оценка полового развития девушек по параметрам вторичных половых признаков показала, что у 31,8 % обследованных девушек имеется задержка полового развития.

Выводы

Таким образом, данные исследования указывают на то, что у матерей каждой третьей девушки с дисменореей имелись следующие факторы риска: образование не более объёма средней школы, низкий уровень социального обеспечения, продолжительность рабочего дня более 8-9 ч, занятость на работе в ночное время суток, наличие первичной дисменореи, наличие анемии до наступления наблюдаемой беременности, возраст при рождении ребёнка 30 лет и старше, высокая частота родов в прошлом, пассивное курение, продолжительность лактации менее полугода. У каждой второй девушки с первичной дисменореей наблюдалось: позднее наступление менархе, дополнительные занятия вне школы, наличие признаков дисплазии соединительной ткани. Надо полагать, что всё вышесказанное отразилось на становлении и регуляции репродуктивной функции.

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БИОЛОГИЧЕСКИЕ ОСОБЕННОСТИ ПОЧВЕННЫХ НАСЕКОМЫХ COLEOPTERA ПУСТЫНИ КЫЗЫЛКУМ

Аннотация

Статья «Биологические особенности почвенных насекомых Coleoptera пустыни Кызылкум» посвящена изучению экологических и адаптационных характеристик жуков, обитающих в экстремальных условиях пустынных экосистем. Автор проводит детальный анализ видового разнообразия, структурных и поведенческих адаптаций, позволяющих Coleoptera успешно заселять и выживать в суровой среде Кызылкума.

Ключевые слова: адаптация, пустыня, сапрофаг, экосистема, цикл, механизм.

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BIOLOGICAL CHARACTERISTICS OF SOIL INSECTS COLEOPTERA OF THE KYZYL KUM DESERT

Abstract

The article "Biological characteristics of soil insects Coleoptera of the Kyzylkum desert" is devoted to the study of the ecological and adaptive characteristics of beetles living in extreme conditions of desert ecosystems. The author conducts a detailed analysis of species diversity, structural and behavioral adaptations that allow Coleoptera to successfully populate and survive in the harsh environment of Kyzylkum.

Keywords: adaptation, desert, saprophage, ecosystem, cycle, mechanism.

Биологические особенности почвенных насекомых порядка Coleoptera проявляются в их уникальных адаптациях, позволяющих успешно обитать в разнообразных почвенных экосистемах. Эти насекомые, более известные как жуки, составляют одну из наиболее крупных групп как в классе насекомых,

так и во всем животном мире. Особое внимание стоит уделить их морфологической, физиологической и поведенческой пластичности, обеспечивающей выживание в почвенных условиях.

Первые и самые заметные адаптации касаются строения тела жуков. У многих видов разработаны специфические формы экзоскелета, которые защищают от механических повреждений и колебаний влажности. К примеру, у жуков из семейства Carabidae нередко можно заметить сильно скульптурированные надкрылья, которые функционируют как дополнительный защитный слой. Эти жуки проявляют поразительную устойчивость к неблагоприятным почвенным условиям, таким как недостаток кислорода и высокая концентрация углекислого газа.

Питание почвенных жуков варьируется от полностью сапрофагического до хищного. Многие виды являются детритофагами, что делает их важными участниками процессов разложения органического вещества и минерального питания почвы. Одним из ярких примеров является жук-навозник, представители которого играют критическую роль в переработке органических остатков, увеличивая плодородие почвы.

Физиология почвенных Coleoptera также адаптирована к жизни под землей. Особые дыхательные системы позволяют этим насекомым эффективно использовать кислород, доступный в почвенной среде. Кроме того, развитию яиц и личинок способствует поведение многих видов, заключающееся в их закопке в почву на оптимальные глубины, что позволяет поддерживать необходимый микроклимат и защиту от хищников.

В поведенческом плане почвенные жуки демонстрируют сложные стратегии терморегуляции и поиска пищи. Многие виды обладают способностью к ночной активности, что снижает риск встречи с хищниками и обеспечивает более стабильные температурные условия. Поведение некоторых видов связано с сезонными миграциями вглубь или вверх по профилю почвы в поисках оптимальной среды обитания.

Способность чередовать фазы погружения в диапаузу также является важной адаптивной чертой почвенных Coleoptera. В это время жизненные процессы замедляются, позволяя пережить неблагоприятные периоды, такие как засуха или сильный холод. Диапауза способствует синхронизации с сезонными изменениями, важными для воспроизводства и развития.

Коллекции зоологов зоогеографических обследований пустынь Центральной Азии, и в частности пустыни Кызылкум, предоставляют уникальную информацию о разнообразии и адаптациях почвенных насекомых, таких как Coleoptera. Особенности фауны пустынных жуков в основном обусловлены экстремальными условиями мест обитания: высокий уровень инсоляции, значительные колебания температур, дефицит влаги и скудность растительности. Для выживания в таких условиях различные виды Coleoptera выработали специфические биологические и морфологические особенности.

Один из примеров адаптации - это наличие у некоторых видов Coleoptera прочного наружного скелета и воскового покрытия на надкрыльях, которые препятствуют испарению влаги и защищают тело от перегрева. Это особенно важно для обитателей открытых песчаных участков, где температура поверхности почвы может достигать экстремальных значений. Делая зарывания в глубокие песчаные слои, жуки могут избегать жару и находить более стабильные условия микроклимата.

Питание и репродукция также изменены вследствие аридных условий. Многие пустынные жуки всеядны и становятся активными преимущественно в ночные часы, чтобы избежать жаркого дневного солнца. В условиях дефицита пищи некоторые виды развили способность питаться детритом или даже другими насекомыми, включая личинки и яйца. Репродуктивные циклы часто коррелированы с редкими осадками, вызывающими всплеск биоразнообразия в пустынных оазисах, временных водоемах и растительных сообществах.

Биолокация также играют важную роль в адаптации жуков. Способность находить и использовать микрзоны с различными условиями влажности, температуры и доступностью пищи, позволяет этим насекомым выживать даже в самых жестоких условиях. Многие виды Coleoptera проявляют сложное поведение в выборе мест кладки яиц, тщательно отбирая почву с оптимальными условиями для развития потомства.

Таким образом, жуки Coleoptera, обитающие в почве, демонстрируют обширный набор адаптационных механизмов, обеспечивающих их устойчивость и успех в эволюции. Их биологические особенности не только формируют динамику и структуру почвенных экосистем, но и оказывают значительное влияние на агроэкологические процессы, предоставляя основу для устойчивого использования почвенных ресурсов.

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Бекбутаева Л.Ш.
Советник по развитию программ по защите детей
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РОЛЬ МЕЖДУНАРОДНОГО ПРАВА В ЗАЩИТЕ ДЕТЕЙ ОТ НАСИЛИЯ

Аннотация:

Статья посвящена анализу международных правовых стандартов и национальных мер по защите детей от насилия. Рассматриваются ключевые международные документы, включая Конвенцию ООН о правах ребенка и ее Факультативные протоколы, а также специализированные соглашения, такие как Конвенция МОТ №182 и Стамбульская конвенция, которые играют важную роль в борьбе с различными формами насилия и эксплуатации детей. Анализируются правовые вызовы и практические трудности, с которыми сталкиваются страны при имплементации этих стандартов. В статье подчеркивается важность комплексного подхода, включающего межведомственную координацию, ресурсы и учет культурных особенностей для эффективной защиты детей. Также рассматривается опыт Узбекистана, который принимает активные меры по адаптации национального законодательства в соответствии с международными обязательствами, и выделяются направления для дальнейшего совершенствования правовой и институциональной базы защиты детей.

Ключевые слова:

защита детей, международное право, Конвенция ООН о правах ребенка, насилие в отношении детей, правовая система, межведомственная координация, национальное законодательство, культурные барьеры, правозащитные организации.

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THE ROLE OF INTERNATIONAL LAW IN PROTECTING CHILDREN FROM VIOLENCE

Annotation:

This article is dedicated to analyzing international legal standards and national measures for the protection of children from violence. It examines key international documents, including the UN Convention on the Rights of the Child and its Optional Protocols, as well as specialized agreements such as ILO Convention No. 182 and the Istanbul Convention, which play a crucial role in combating various forms of violence and exploitation of children. The article

analyzes the legal challenges and practical difficulties countries face in implementing these standards. It emphasizes the importance of a comprehensive approach, including interagency coordination, resources, and consideration of cultural specifics for effective child protection. The article also reviews Uzbekistan's experience in actively adapting its national legislation in line with international obligations and identifies areas for further improvement in the legal and institutional framework for child protection.

Keywords:

child protection, international law, UN Convention on the Rights of the Child, violence against children, legal system, interagency coordination, national legislation, cultural barriers, human rights organizations.

Защита прав детей от насилия является одной из наиболее актуальных и глобальных задач современного международного права. Насилие в отношении детей принимает различные формы — от физического и сексуального до эмоционального насилия, что оказывает разрушительное воздействие на их здоровье и развитие. Согласно имеющимся данным, насилию ежегодно подвергается до 1,5 млрд детей по всему миру. Насилие совершается повсеместно, в том числе там, где дети, казалось бы, должны чувствовать себя в полной безопасности, — в детских учреждениях, школах и семьях²⁵. В ответ на эти вызовы мировое сообщество выработало ряд правовых инструментов, которые призваны обеспечивать защиту детей от насилия и жестокого обращения.

Одним из важнейших документов, регламентирующих права ребенка на международном уровне, является Конвенция ООН о правах ребенка (1989). Она закрепляет основополагающие права детей и обязывает государства принимать необходимые меры для их защиты, в том числе от насилия. Статья 19 Конвенции требует от государств-участников принятия всех возможных мер для защиты детей от насилия, как в семьях, так и в иных обстоятельствах²⁶. Эта статья является основой для множества национальных законов, направленных на защиту детей от насилия и эксплуатации.

Подписав и ратифицировав Конвенция ООН о правах ребенка, государства обязаны внедрять соответствующие положения в свои правовые системы, что влечет за собой принятие законов, направленных на предотвращение насилия в семье, образовательных учреждениях и других структурах. В странах, где соблюдаются эти обязательства, были разработаны программы раннего вмешательства, профилактические меры, центры для реабилитации и поддержки детей, ставших жертвами насилия. На практике это привело к активному расширению социальных служб и созданию

²⁵ Защита детей от насилия как один из императивов в области прав человека [Статья](#). Специальный представитель Генерального секретаря по вопросу о насилии в отношении детей

²⁶ [Конвенция](#) ООН о правах ребенка 1989

специализированных подразделений полиции и правозащитных организаций, что существенно усилило защиту детей²⁷.

Особое внимание в международной практике уделяется Факультативным протоколам к Конвенции, таким как Протокол о продаже детей, детской порнографии и детской проституции (2000), который фокусируется на предотвращении сексуальной эксплуатации детей²⁸. Эти протоколы служат важным инструментом для правозащитных организаций и государства в борьбе с наиболее жестокими формами насилия в отношении детей.

Важным международным документом является также Конвенция №182 Международной организации труда (МОТ), принятая в 1999 году. Она направлена на искоренение самых опасных форм детского труда, включая сексуальную эксплуатацию и насилие²⁹. Этот документ является частью глобальной борьбы с эксплуатацией детей, что также следует рассматривать как одну из форм насилия. Следующий документ на уровне Европы Стамбульская конвенция (2011), хотя и в первую очередь направлена на борьбу с насилием в отношении женщин, также включает положения, касающиеся защиты детей от насилия в семьях. Этот международный договор обязывает государства-участники принимать меры для защиты детей, ставших жертвами насилия в семье, и гарантировать им доступ к правосудию и социальной помощи³⁰.

Несмотря на широкий круг международных документов, направленных на защиту детей реализация этих норм встречает ряд препятствий. Важно отметить, что одной из главных проблем остается неравномерность реализации международных стандартов в разных странах. В ряде государств, несмотря на ратификацию международных соглашений, не хватает ресурсов или политической воли для реализации всех мер защиты. Также возникают трудности в странах с двойной правовой системой, где традиционные или религиозные нормы могут конфликтовать с положениями КПР, что может приводить к ослаблению защиты детей в этих регионах.

Многие страны, особенно с низким уровнем дохода, испытывают серьезные трудности в реализации международных обязательств из-за недостатка финансовых и человеческих ресурсов. Это приводит к отсутствию специализированных служб и программ, необходимых для защиты детей от насилия³¹. В статье, опубликованной в *International Journal of Human Rights*, подчеркивается, что отсутствие ресурсов ограничивает способность стран

²⁷ Хабарова А.Ю.. "Защита прав ребенка в международном праве" Ученые записки Орловского государственного университета. Серия: Гуманитарные и социальные науки, no. 2, 2015, pp. 239-244.

²⁸ Факультативный протокол к Конвенции о правах ребенка, касающийся торговли детьми, детской проституции и детской порнографии

²⁹ **КОНВЕНЦИЯ О ЗАПРЕЩЕНИИ И НЕМЕДЛЕННЫХ МЕРАХ ПО ИСКОРЕНЕНИЮ НАИХУДШИХ ФОРМ ДЕТСКОГО ТРУДА [КОНВЕНЦИЯ 182]**

³⁰ Конвенция Совета Европы о предотвращении и борьбе с насилием в отношении женщин и домашним насилием (Стамбульская конвенция) 2011

³¹ Khanpur K. International Framework For The Protection Of Child Abuse: An Analysis.

эффективно выполнять нормы Конвенции о правах ребенка (CRC) и развивать инфраструктуру для поддержания долгосрочной защиты детей³².

В ряде стран двойная правовая система (обычное право и традиционные нормы) создает правовые барьеры, которые могут противоречить международным стандартам защиты детей. Например, в странах с практиками, основанными на религиозных или культурных традициях, такие обычаи иногда могут нарушать права детей, что препятствует принятию и соблюдению международных стандартов. Это препятствие описывается в исследовании, опубликованном в *Сборнике по защите детей*, где анализируются сложности гармонизации международных и местных норм в странах Африки и Ближнего Востока³³.

По мнению автора, эффективная защита детей требует тесного взаимодействия между различными государственными и общественными структурами — от полиции и социальных служб до образовательных учреждений. Однако отсутствие координации между этими органами нередко приводит к неэффективному реагированию на случаи насилия в отношении детей, что снижает защитные механизмы. На это указывают исследования в *UNICEF Office of Research Working Papers*, где отмечается, что отсутствие согласованных межведомственных подходов затрудняет предоставление своевременной помощи детям и их семьям³⁴.

Республика Узбекистан, присоединилась к Конвенции о правах ребенка 9 декабря 1992 года, также активно развивает свою правовую систему в направлении защиты прав детей от насилия. Конституция Республики Узбекистан в своем разделе о правах и свободах граждан гарантирует детям защиту от насилия³⁵. Одним из значимых документов является Закон Республики Узбекистан «О гарантиях прав ребенка³⁶», который устанавливает общие принципы защиты прав детей, включая их защиту от насилия в семье и обществе. Также стоит отметить недавнее принятие Закона «О защите детей от всех форм насилия», который содержит меры, направленные на профилактику и предотвращение насилия в отношении детей³⁷. Принятие этого Закона стало значимым шагом Узбекистана к дальнейшему соблюдению международных стандартов в области прав человека и защиты детей.

Вместе с тем, несмотря на наличие законодательных актов, проблемы защиты детей от насилия в Узбекистане сохраняются. Одной из важных мер, направленных на усиление борьбы с семейным насилием, стало внесение изменений в Уголовный кодекс Республики Узбекистан и Кодекс Республики

³² Villanueva Sainz-Pardo, P. Women and children versus domestic violence. Legal reflections, needs and challenges in Spain today. *The International Journal of Human Rights*, 18(6), 660–713. 2014.

³³ Child Protection A *handbook* for Parliamentarians, INTER - PARLIAMENTARY UNION, Edition – 2004.

³⁴ Working at the Intersections of Violence Against Children and Violence Against Women | *Innocenti* Global Office of Research and Foresight 2024

³⁵ Конституция Республики Узбекистан

³⁶ Закон Республики Узбекистан О гарантиях прав ребенка № ЗРУ-139 от 07.01.2008 г.

³⁷ Закон Республики Узбекистан О защите детей от всех форм насилия № ЗРУ-996 от 14.11.2024 г.

Узбекистан об административной ответственности. Эти изменения включили детей в список жертв бытового насилия, что предусматривает соответственно санкцию для этих деяний³⁸. Данные дополнения имеют важное значение для обеспечения эффективного правового реагирования на насилие в семье и предупреждения данного правонарушения в обществе.

В заключение, можно отметить, что защита детей от насилия в международном праве является многогранной задачей, требующей комплексного подхода, включающего принятие эффективных правовых инструментов, таких как Конвенция ООН о правах ребенка и ее Факультативные протоколы, а также специализированных международных соглашений, направленных на искоренение насилия, детской эксплуатации и жестокого обращения. Страны, ратифицировавшие эти документы, обязаны адаптировать свое национальное законодательство в соответствии с международными стандартами и создавать системы защиты детей от насилия.

Тем не менее, несмотря на значительные достижения в сфере правового регулирования, проблема насилия в отношении детей остается актуальной. Это обусловлено рядом факторов, таких как недостаточная координация между государственными и общественными институтами, отсутствие ресурсов для реализации эффективных программ защиты, а также культурные и правовые барьеры, существующие в некоторых странах. Важнейший вызов заключается в том, чтобы обеспечить реальную и эффективную реализацию международных норм на практике.

В случае Узбекистана, несмотря на значительные усилия в направлении улучшения правового обеспечения защиты детей, дальнейшее совершенствование межведомственного взаимодействия и обеспечение достаточных ресурсов для эффективного применения законодательных инициатив являются ключевыми направлениями для повышения уровня защиты детей от насилия. Только комплексный подход, включающий законодательные меры, межведомственную координацию и активное участие общества, способен обеспечить детям реальную защиту и помочь избежать насилия. Таким образом, эффективная защита прав детей требует не только международных обязательств, но и реальных шагов на национальном уровне, направленных на практическую реализацию этих норм.

Международные документы:

1. Конвенция ООН о правах ребенка
2. Факультативный протокол к Конвенции о правах ребенка, касающийся торговли детьми, детской проституции и детской порнографии
3. Конвенция Совета Европы о предотвращении и борьбе с насилием в отношении женщин и домашним насилием (Стамбульская конвенция) 2011

³⁸ Закон Республики Узбекистан О внесении изменений и дополнения в некоторые законодательные акты Республики Узбекистан в связи с усилением мер защиты от семейного (бытового) насилия № ЗРУ-978 от 21.10.2024 г.

4. Конвенция о запрещении и немедленных мерах по искоренению наихудших форм детского труда [Конвенция 182]

Нормативно-правовые акты Республики Узбекистан:

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4. Working at the Intersections of Violence Against Children and Violence Against Women | Innocenti Global Office of Research and Foresight <https://www.unicef.org/innocenti/reports/working-intersections-violence-against-children-and-violence-against-women>
5. Защита детей от насилия как один из императивов в области прав человека - Специальный представитель Генерального секретаря по вопросу о насилии в отношении детей <https://violenceagainstchildren.un.org/ru/news/protecting-children-violence-human-rights-imperative>

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ВВЗА ФОТОФИЗИК ПОТЕНЦИАЛИНИ ОШИРИШДА КВЧАТ ҚАЛИНЛИГИ ВА ЧИЛПИШ УСУЛЛАРИНИНГ АХАМИЯТИ

Аннотация. Ушбу мақолада Сурхондарё вилояти шароитида ўрта ва ингичка толали гўза навларининг фотофизик маҳсулдорлиги ўрганилган. Кўчат қалинлиги ва чилпиш усулларининг гўза ривожланиш босқичларига таъсири таҳлил қилинган. Тадқиқот натижаларига кўра, чилпиш ўтказилмаган шароитда барқарор юқори маҳсулдорликка эришилган. Олинган натижалар кўрсатдики, кўчат қалинлигини ва чилпиш усулларини мақбул даражада танлаш гўзанинг ҳосилдорлигини ошириш учун муҳимдир.

Калим сўзлар: Гўза, фотофизик маҳсулдорлик, чилпиш, кўчат қалинлиги, ҳосил.

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THE IMPORTANCE OF PLANTING DENSITY AND TOPPING METHODS IN ENHANCING COTTON PHOTOPHYSICAL POTENTIAL

Abstract. This article investigates the photosynthetic productivity of medium and fine-fiber cotton varieties in the conditions of Surkhandarya region. The effects of planting density and topping methods on the growth stages of cotton were analyzed. The results revealed that the highest productivity was achieved without topping. Optimal selection of planting density and topping methods is crucial for increasing cotton yields.

Keywords: Cotton, photosynthetic productivity, topping, planting density, yield.

Всимликларда фотосинтез фаолиятининг асосий кўрсаткичларидан бири фотосинтез маҳсулдорлигидир. Фотосинтезнинг соф маҳсулдорлиги эса ўсимлик курук массасининг унинг барглари юзаси ҳисобига бир кеча-кундуз давомидаги микдорий ортиши тушунилади. Кўпчилик ҳолларда ушбу кўрсаткич 5-12 г/м² кунга яқин бўлади. Тадқиқотларда гўзанинг фотосинтетик маҳсулдорлиги ва фотосинтез соф маҳсулдорликларига кўчат қалинлиги ва чилпиш усулларини таъсири гўза ривожланишининг шоналаш-гуллаш ва гуллаш-пишиш даврларида ўрганилди.

Фотосинтетик маҳсулдорлик баргларнинг иш фаолиятини умумлаштирилган кўрсаткичи бўлиб, олинган маълумотларга кўра, *гўзанинг* фотосинтетик маҳсулдорлиги (ФМ) шоналаш-гуллаш даврида вариантлар бўйича ўрта толалиларда 36525,0-41328,0 м²/га ва ингичка толалиларда 36486,0-38584,5 м²/га бўлиб, юқори кўрсаткич ҳар иккала гўза навларида ҳам барг сатҳи билан тўғри пропорционал бўлган ҳолда барг сатҳи юқори бўлган вариантларда юқори натижага эришилди.

Гўзани ҳосил тўплаш - пишиш давларида жадал ўсиши кузатилиб кўпроқ барг тўплаб фотосинтетик маҳсулдорлиги бу даврларда ҳам барг сони ошиши ҳисобига *ўрта толали гўза навида* 54265,0-65413,7 м²/га ва ингичка толали гўза навида 50105,0-56856,2 м²/га ни ташкил этган (1.4.1 - жадвал).

Гўзанинг фотосинтетик маҳсулдорлигига кўчат қалинлигини таъсири ўрганилганда ўрта толали “Бухоро-102” гўза навида фотосинтетик маҳсулдорлик ҳосил тўплаш - пишиш даврида гектарига 90-100 минг туп кўчат бўлганда 61586,2-65413,7 м²/га бўлса, гектарига 110-120 минг кўчат қалинлигида эса 54265,0-57357,5 м²/га бўлиб, кўчат сони гектарига 10-20 минг тупга оширилганда фотосинтетик маҳсулдорлик 7321,2-8056,2 м²/га гача камайиб бориши кузатилди. Чунки, кўчат сони ошиши билан бир туп ўсимликдаги барглар сони камайиши натижасида барг сатҳи майдони шунингдек, фотосинтез маҳсулдорлиги ҳам камайиб боради.

Ингичка толали гўза навларида ҳам юқоридаги қонуният такрорланиб, ингичка толали “Сурхон-103” гўза навида фотосинтетик маҳсулдорлик гуллаш-пишиш даврида гектарига 120-130 минг туп кўчат бўлганда 52310,0-56856,2 м²/га бўлса, гектарига 140-150 минг кўчат қалинлигида эса 50105,0-53016,0 м²/га бўлиб, кўчат сони гектарига 10-20 минг тупга оширилганда фотосинтетик маҳсулдорлик 2305,0-3840,0 м²/га гача камайиб борган.

Фотосинтетик маҳсулдорлигини ўзгаришига кўчат қалинлиги билан бир қаторда чилпиш усуллари ҳам таъсири аниқланди. Ўрта толали гўза навида кўчат қалинлиги 90-100 минг туп/га бўлганда фотосинтетик маҳсулдорлик 61586,2-65413,7 м²/га бўлиб, чилпиш ўтказилмаган назорат вариантыда юқори (65413,7 м²/га)

бўлган. Чунки бу вариантда барглар сони чилпиш ўтказилмаган вариантлардан кўпроқ бўлган.

Ингичка толали “Сурхон-103” гўза навида ҳам худди шундай чилпиш усуллари қўлланилган бўлиб, бу навда ҳам юқори натижа чилпиш ўтказилмаган вариантда 56856,2 м²/га бўлиб, чилпиш ўтказилган вариантларга нисбатан 4203,7-4546,2 м²/га га ортиқ бўлган. Фотосинтетик маҳсулдорлик ингичка толали гўза навида нисбатан ўрта толали гўза навида кўпроқ бўлган.

Олиб борилган тадқиқотларда *гўзани* фотосинтез маҳсулдорлигидан келиб чиққан ҳолда фотосинтез соф маҳсулдорлиги аниқланди. Фотосинтез маҳсулдорлиги 1 м² барг юзаси ҳисобига 1 соат давомида ўзлаштирилган СО₂ ёки ҳосил бўлган органик модда миқдори билан белгиланади. Фотосинтезнинг соф маҳсулдорлиги эса ўсимлик қуруқ массасининг унинг

барглари юзаси ҳисобига бир кеча-кундуз давомидаги миқдорий ортиши тушунилади.

Ўрта толали ғўза навида фотосинтез соф маҳсулдорлик вариантлар бўйича шоналаш-гуллаш даврида 8,9-9,9 г/м² кун ва ҳосил тўплаш - пишиш даврида эса 5,9-6,8 г/м² кун бўлса, ингичка толалиларда эса шоналаш-гуллаш даврида 8,4-9,6 г/м² кун ва ҳосил тўплаш - пишиш даврида эса 6,3-7,4 г/м² кун га тенг бўлганлиги кузатилди.

Фотосинтез соф маҳсулдорлик кўчат сони ортиши билан бир кунда ўрта ва ингичка толалиларда 0,3-0,7 г/м² гача ортганлиги аниқланди.

Хулоса қилиб айтадиган бўлсак, Сурхондарё вилоятининг тақир ўтлоқи тупроқлари шароитида ўрта ва ингичка толали ғўза навларидан мўл ҳосил олиш учун ғўзага чилпиш ўтказиш муҳим тадбир ҳисобланиб, натижада ғўзада фотосинтетик маҳсулдорликнинг ошиши натижасида кўпроқ органик модда тўпланади, пахта ҳосили ошади.

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КЎЧАТ ҚАЛИНЛИГИ ВА ЧИЛПИШ УСУЛЛАРИНИНГ ЎСИМЛИКХЎР ҚАНДАЛАЛАР СОНИГА ТАЪСИРИ

***Аннотация.** Ушбу тадқиқотда ўсимликхўр қандалалар сонига кўчат қалинлиги ва чилпиш усуллариининг таъсири ўрганилди. Ғўзанинг турли навлари ва кўчат қалинликлари шароитида қандалалар сони ҳамда уларнинг зарарланиш даражаси баҳоланди. Олинган натижаларга кўра, кўчат қалинлиги ошиб бориши билан қандалалар сони ҳам ошган. Чилпиш усуллариининг қўлланилиши қандалалар сонини камайтиришида самарали бўлган. Энг кам қандала кимёвий чилпишда қайд этилди.*

***Калим сўзлар:** қандала, кўчат қалинлиги, чилпиш, гўза, ҳашоратлар, зарарланиш*

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EFFECT OF SEEDLING DENSITY AND PRUNING METHODS ON THE NUMBER OF PLANT-EATING BUGS

***Abstract.** This study investigates the impact of planting density and pinching methods on the population of phytophagous bugs. The number of bugs and the extent of their damage were evaluated in various cotton varieties under different planting densities. Results indicate that increasing planting density led to a rise in the bug population. The application of pinching methods was effective in reducing bug numbers, with the lowest population observed in chemically pinched variants.*

***Keywords:** bugs, planting density, pinching, cotton, insects, damage.*

Ўсимликхўр қандалалар қирқдан ошиқ ҳар хил оилага мансуб бўлган ўсимликларни зарарлайди. Қандала сўрувчи ҳашоратлар гуруҳига мансуб бўлиб, ўсимликларни санчиб сўради ва кучли зарарлайди. Қандаланинг сони ўсимликлар турига, ҳаво ва тупроқ намлиги ҳамда ҳаво ҳароратига, ўсимликнинг ёшига ва қўлланилган агротехник тадбирларга боғлиқ бўлади.

Олиб борилган тадқиқот натижаларига кўра, агротехник тадбирлардан кўчат қалинлиги ва чилпиш усуллари ўсимликхўр қандалаларнинг сонига ва кўпайишига ҳар-хил таъсир кўрсатиши кузатилди. Қандалаларнинг сонини аниқлашда ҳар бир вариантнинг қайтариқларида 100 дона ўсимликда аниқланди.

Олиб борилган тажрибаларда шоналаш даврида қандалалар сонига чилпишни таъсири бўлмаганлиги учун фақатгина кўчат қалинлигини таъсири аниқланди. Бунда назорат сифатида 90 минг кўчат қалинлигида экилган “Бухоро-102” ва 120 минг кўчат экилган “Сурхон-103” ғўза навлари олинган.

Дастлабки кузатишда ўсимликлар ривожини паст бўлганлиги сабабли унчалик фарқ катта бўлмади. Лекин ўсимликнинг ривожини суғориш ва озиклантиришлар, тупроққа ишлов бериш туфайли жадаллашиши билан қандала сони ҳам ошиб борган.

Ўзанинг шоналаш даврида турли кўчат қалинликларида қандалалар сони ва зарарланган ҳосил элементлари сони аниқланганда ўрта толали “Бухоро-102” ғўза навида қандалалар сони 11-15 донагача ва гуллаш-ҳосил тўплаш даврида 16-20 донагача бўлиб, кўчат қалинликлари ошиб бориши билан қандалалар сони ҳам 2-4 донага ошиб борган. Зарарланган ҳосил элементлари сони шоналашда 2,0-2,6 ва гуллаш-ҳосил тўплашда 2,2-2,8 донагача бўлиб, бунда ҳам кўчат қалинликлари ошиб бориши билан ҳосил элементларини зарарланиши ортиб борган.

Ингичка толали ғўза навида ўрта толали ғўза нави нисбатан қандалалар сони бирмунча камроқ учраб, шоналаш даврида 10-14 дона ва гуллаш-ҳосил тўплаш даврида эса 14-18 донагача бўлиб, 10-20 минг тупга ошириб бориши билан қандалалар сони ҳам 1-4 донагача ошиб борган. Қандалалар сони ошиб бориши билан эса зарарланган ҳосил элементлари сони ҳам ортиб борган.

Тажрибада ўрта толали ғўза нави учун олинган 90-100 минг туп кўчат қалинлиги билан ишлаб чиқаришдаги 90 минг кўчат қалинлигидаги маълумотлар ўртасида сезиларли фарқ кузатилмади. Ингичка толалиларда ҳам шу қонуният такрорланди.

Тажрибада кўчат қалинликлари билан биргаликда чилпиш усулларини ҳам таъсири кузатилиб, қандаланинг сонини аниқлаш бўйича ўтказилган кузатишлар 2020 йилда 20 июль, 1 август ва 11 август муддатларида ўтказилди. Кузатув натижаларига кўра нисбатан қандалалар жорий йилнинг август-сентябр ойларида июль ойига нисбатан кўпроқ кузатилди.

Олинган натижаларга кўра, ўрта толали ғўза навида қандалалар сони 20 июлда 2-13 дона; 1 августда 5-18 дона ҳамда 11 августда 7-24 донагача бўлганлиги кузатилиб, қандалалар сонига кўчат қалинлигини таъсири ўрганилди. Ўрта толали “Бухоро-102” ғўза нави икки хил кўчат қалинлигида парваришланганда сентябр ойи ҳолатида қандалалар сони 7-24 донагача аниқланиб, ўсимлик гектарига 90-100 минг туп кўчат экилганда 7-22 донагача қандала аниқланди. Ўсимлик гектарига 110-120 минг туп кўчат бўлганда қандалалар сони 10-24 донагача бўлиб, кўчат сони ошиши билан 2-3 донага кўпайганлиги кузатилди.

Қандалалар сонига кўчат қалинлиги билан бир қаторда чилпиш усулларининг ҳам таъсири ўрганилганда ўзанинг ўрта толали “Бухоро-102” нави гектарига 90-100 минг туп қалинликда экилган фонда турли чилпиш усулларида парваришланганда сентябр ойи ҳолатида қандалалар сони 7-22

дона бўлиб, энг кўп қандала чилпиш ўтказилмаган назорат вариантыда 22 дона борлиги аниқланди. Қўлда чилпиш ўтказилганда қандала сони бироз камайиб, 15 донани ташкил этди. Энг кам қандала энтожеан препарати ёрдамида кимёвий чилпиш ўтказилган вариантда 7 дона аниқланиб, назоратга нисбатан 15 донагача кам қандала учради.

Ингичка толали ғўза навида ўрта толали ғўза навида нисбатан қандалалар сони бирмунча камроқ учради. Ингичка толали ғўза навида кўчат қалинлиги гектарига 120-130 минг туп бўлганда қандалалар сони 5-19 дона ва кўчат сони гектарига 10-20 минг тупга оширилганда 9-23 донагача бўлиб, 3-4 донага кўп учради.

Чилпиш усуллари қандалалар сонига таъсири ингичка толали ғўза навларида ҳам ўрганилди. Ингичка толали “Сурхон-103” ғўза нави гектарига 120-130 минг туп кўчат қалинлигида турли чилпиш усулларида парваришланганда қандалалар сони 5-19 дона бўлиб, энтожеан препарати ёрдамида кимёвий чилпиш ўтказилган вариантда қандалалар сони кам учради. Ушбу вариантдаги қандалалар сони чилпиш ўтказилмаган назорат вариантдан 14 дона; қўлда чилпиш ўтказилган вариантдан 6 дона кам бўлганлиги кузатилди.

Тажриба даласида қандалалар сони йиллар бўйича таҳлил қилинганда ҳар иккала навда ҳам 2018 йилда нисбатан кўпроқ бўлиб, ўрта толали ғўза нави парваришланган далада 15-31 дона ва ингичка толали ғўза нави парваришланган майдонларда 11-28 дона; 2019 йилда 10-28 ва 8-26 дона бўлганлиги кузатилган бўлса, 2020 йилга келиб қандалар сони 5-6 донага камайиб борган. Яъни, ўрта толалиларда 7-24 дона ҳамда ингичка толалиларда 5-23 дона қандала борлиги аниқланган.

Демак, ўрта ва ингичка толали ғўза навлари парваришланаётган майдонларда қандалалар сонини камайтириш учун ўрта толали навларни 90-100 минг туп/га ва ингичка толали навларни 120-130 минг туп/га кўчат қалинлигида парваришлаб Энтожеан препарати ёрдамида кимёвий чилпиш ўтказиш мўл пахта ҳосили олишга замин яратади.

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ОЦЕНКА СТОИМОСТИ ОРГАНИЗАЦИИ

Аннотация. В данной статье рассматриваются цели оценки бизнеса и основные виды стоимости, применяемые в процессе оценки организации. Оценка стоимости является одним из актуальных направлений оценочной деятельности. Она включает в себя не просто оценку совокупной стоимости активов предприятия, но и определение стоимости активов предприятия, отдельных направлений работы, оценку его ликвидности и анализ возможности реализации инновационных проектов, требующих привлечения внешних инвестиций.

Ключевые слова: оценка стоимости, организация, эффективное управление, доходность.

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VALUATION OF THE ORGANIZATION

Annotation. This article discusses the objectives of business valuation and the main types of value used in the process of evaluating an organization. Valuation is one of the most relevant areas of valuation activity. It includes not only an assessment of the total value of the company's assets, but also the determination of the value of the company's assets, individual areas of work, an assessment of its liquidity and an analysis of the possibility of implementing innovative projects requiring external investment.

Key words: cost estimation, organization, effective management, profitability.

Оценка бизнеса является одним из актуальных направлений оценочной деятельности. Она включает в себя не просто оценку совокупной стоимости активов предприятия, но и определение стоимости активов предприятия, отдельных направлений работы предприятия, оценку его ликвидности и анализ возможности реализации инновационных проектов, требующих привлечения внешних инвестиций.

Оценка стоимости бизнеса представляет собой целенаправленный упорядоченный процесс исчисления величины стоимости объекта, в денежном выражении, с учетом влияющих на нее факторов в конкретный момент времени в условиях конкретного рынка.

Цель оценки состоит в определении какого-либо вида оценочной стоимости, необходимой клиенту для принятия инвестиционного решения, заключения сделки, обоснование вариантов санации предприятий банкротов, подготовка к продаже приватизируемых предприятий, внесения изменений в финансовую отчетность и т.п. [1]

Оценку бизнеса проводят в целях:

1. повышения эффективности текущего управления предприятием
2. определения стоимости ценных бумаг в случае купли-продажи акций предприятий на фондовом рынке
3. определения стоимости предприятия в случае его купли-продажи целиком или по частям
4. реструктуризации предприятия (ликвидация, слияния, поглощения либо выделения самостоятельных предприятий из состава холдинга)
5. разработки стратегического плана развития предприятия
6. определения кредитоспособности предприятия и стоимости залога при кредитовании
7. страхования, в процессе которого возникает необходимость определения стоимости активов в преддверии потерь
8. решение имущественных споров
9. принятия обоснованных управленческих решений.
10. осуществления инвестиционного проекта развития бизнеса
11. управление финансами предприятия: оценка кредитоспособности, определение стоимости доли предприятия как залога при кредитовании
12. антикризисное управление, осуществление процедуры банкротства
13. определение величины арендной платы при сдаче бизнеса в аренду
14. обжалование судебного решения об изъятии собственности, когда возмещение от изъятия бизнеса необоснованно занижено.

Рассмотрим основные виды стоимости, применяемые в процессе оценки предприятия в таблице 1. [2]

Таблица 1

ОСНОВНЫЕ ВИДЫ СТОИМОСТИ

Название	Определение
Инвестиционная стоимость	предполагает оценку стоимости предприятия для конкретного инвестора или группы инвесторов. Инвестиционная стоимость определяется на основе индивидуальных требований к инвестициям
Рыночная стоимость	наиболее вероятная цена, по которой данный объект может быть отчужден на открытом рынке в условиях конкуренции, если стороны действуют разумно, располагая всей необходимой информацией, и при условии, что на величине сделки не отражаются какие-либо чрезвычайные обстоятельства
Ликвидационная стоимость	это денежная сумма, которая реально может быть получена от продажи собственности в сроки, слишком короткие для проведения адекватного маркетинга в соответствии с определением рыночной стоимости
Стоимость воспроизводства	это затраты на воспроизводство точной копии предприятия или другого актива, даже если есть более экономичные аналоги
Стоимость замещения	это затраты на создание предприятия, имеющего с оцениваемым эквивалентную полезность, но построенного в новом архитектурном стиле, с использованием современных и прогрессивных материалов, конструкций, оборудования
Залоговая стоимость	оценка предприятия по рыночной стоимости для целей ипотечного кредитования
Разделительная стоимость	это стоимость реализации активов предприятия, состоящего из нескольких подразделений при отдельной продаже этих подразделений
Восстановительная стоимость	это стоимость воспроизводства ранее созданных основных средств в современных условиях; определяется в процессе переоценки основных фондов

Таким образом, знание основ оценки стоимости организации (бизнеса) и управления ею, умение применять на практике результаты такой оценки – залог принятия эффективных управленческих решений, достижения требуемой доходности предприятия. В процессе функционирования практически каждого предприятия необходима независимая оценка для управления финансами.

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ЭФФЕКТИВНОСТЬ ИСПОЛЬЗОВАНИЯ СОВРЕМЕННЫХ ТЕХНОЛОГИЙ В СТРОИТЕЛЬСТВЕ: ЭКОНОМИЧЕСКИЙ АНАЛИЗ

Аннотация. В данной статье рассматривается вопрос эффективности использования современных технологий в строительстве и проводится экономический анализ их применения. Авторы исследуют, какие технологии позволяют улучшить процессы строительства, сократить сроки выполнения работ и снизить затраты на проекты.

Ключевые слова: снижение затрат, современные технологии, затраты, оптимизация.

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OPTIMIZATION OF LOGISTICS OF CONSTRUCTION ENTERPRISES

Abstract. This article examines modern approaches and methods for optimizing logistics in construction companies aimed at reducing time costs, reducing expenses and improving the quality of work. Such tools as warehouse management systems (WMS), transport management systems (TMS), supply chain management systems (SCM), and order management systems (OMS) are discussed.

Keywords: logistics, construction company, costs, optimization, management.

Современные технологии — это набор различных инновационных методов, процессов и инструментов, которые используются для создания, развития и оптимизации продуктов, услуг и процессов. Технологии связаны с многими областями, например в информационных аспектах, биотехнологии, робототехники, искусственном интеллекте, нанотехнологиях, кибербезопасности и многом другом. А также играют значительную роль в повышении эффективности и удобства нашего повседневного существования.

Эффективность использования современных технологий в строительстве представляет собой важный аспект, который оказывает значительное влияние на экономические показатели отрасли. В строительстве нашего времени применяются различные инновационные решения, включая автоматизацию процессов, использование новых материалов, 3D-печать, BIM-технологии (Building Information Modeling), а также цифровизацию управления проектами. Рассмотрим 6 основных экономических аспектов и преимущества этих технологий.

1. Сокращение временных затрат. Современные технологии, такие как 3D-печать зданий или модульное строительство, позволяют значительно уменьшить время и затраты, необходимые для возведения объектов. Также использование роботов для выполнения определенных задач позволит снизить временные затраты на трудоемкие операции за счёт сокращения количества рабочей силы.

2. Снижение затрат на материалы. Использование новых строительных средств и технологий, таких как тепловая изоляция и энергосберегающие системы, поможет сократить расходы на эксплуатацию зданий. Применение BIM-технологий. Платформа объединяет в себе возможности для управления проектом, обменом информацией и координации работы. Она позволяет создавать 3D-модели зданий и сооружений, проводить анализы и оптимизировать процессы строительства, сокращая количество отходов и, как следствие, снижает затраты.

3. Повышение качества строительства. Современные технологии могут обеспечить более высокое качество, создавая конструкции, устойчивые к воздействиям окружающей среды, уменьшив вероятность разрушений. Кроме того, цифровые двойники и системы мониторинга в реальном времени позволяют отслеживать параметры качества, состояние зданий и проводить профилактическое обслуживание, что дополнительно увеличивает их долговечность. Такие технологии обладают сбором данных о температуре, влажности, прочности материалов и других ключевых показателях, что способствует оперативному реагированию на проблемы

4. Улучшение безопасности труда. Интеграция современных технологий, таких как ИИ и машинное обучение, помогает анализировать данные и предсказывать потенциальные риски, что в свою очередь позволяет своевременно принимать меры для их предотвращения. Это достигается благодаря тому, что машины и роботы берут на себя самые рискованные операции, такие как работа в условиях высоких температур, воздействие

токсичных веществ или выполнение тяжелых физически нагружающих задач. Кроме того, современные технологии позволяют контролировать условия работы, что способствует созданию более безопасной рабочей среды.

Аналитические инструменты и программное обеспечение дают возможность проводить глубокий анализ собранной информации, позволяя предприятиям адаптировать рабочие процессы и улучшать условия труда. Применение систем оповещения предупреждает работников о неблагоприятных изменениях в среде, что способствует быстрому реагированию.

5. Повышение конкурентоспособности. Внедрения инноваций в компании, могут предоставить более привлекательные услуги и предложения, что способствует привлечению клиентов. Использование передовых технологий, таких как искусственный интеллект, машинное обучение и автоматизация процессов, позволяет улучшать качество обслуживания и повышать скорость реакции на запросы клиентов.

Кроме того, цифровые платформы и мобильные приложения обеспечивают удобный доступ к услугам, что улучшает пользовательский опыт. Инновационные решения, такие как персонализированные предложения и адаптивные системы, помогают удовлетворять уникальные потребности клиентов.

6. Инвестиционная привлекательность. Начальные затраты на внедрение новых технологий могут быть высокими, но в долгосрочной перспективе они могут привести к значительной экономии с увеличением эффективности производства, снижением эксплуатационных расходов и улучшением качества продукции. Кроме того, новые технологии могут открыть доступ к новым рынкам и увеличить конкурентоспособность компании, что в итоге способствует росту доходов и повышению доли рынка.

Кроме того, внедрение смарт-технологий, таких как системы автоматизации управления освещением и климатом, оптимизируют использования ресурсов и обеспечивают экономию на счетах за коммунальные услуги. Качественные материалы и решения для изоляции также влияют на долговечность зданий, снижая необходимость в частом ремонте. Инвестирование в устойчивую архитектуру повышает стоимость объекта и привлекает арендаторов и покупателей, заинтересованных в эко-сознательных подходах.

Таким образом, внедрение современных технологий в строительном секторе положительно сказывается на экономической эффективности, что чётко проявляется в снижении затрат, сокращении времени, повышении качества и безопасности. Для достижения максимальной эффективности важно постоянно анализировать технику и адаптировать её к конкретным условиям и задачам. Это включает в себя регулярное обучение персонала, обновление оборудования и внедрение новых подходов к организации рабочих процессов. В свою очередь, применение цифровых инструментов и систем управления проектами поможет оптимизировать ресурсы и повысить

степень контроля за выполнением работ. Такой комплексный подход позволит не только улучшить текущие показатели, но и подготовить компанию к будущим вызовам и изменениям на рынке.

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НАЦИОНАЛЬНЫЕ СТИЛИ ПЕНИЯ И ИХ ОСОБЕННОСТИ

***Аннотация:** В данной статье анализируются особенности узбекских национальных певческих стилей, исторические этапы развития и техника их исполнения. Показаны особенности шашмакома, макома, фольклорных песен и лирических песен, их созвучие с музыкальными инструментами и их место в нашей национальной культуре. В статье также высказано мнение о том, как искусство узбекского пения влияет на культурное воспитание молодежи и о необходимости повышения его социальной значимости. Представлены важные практические рекомендации по развитию национальных стилей пения и выработке эффективных подходов к воспитанию молодежи.*

***Ключевые слова:** национальное пение, шашмаком, статус, фольклорные песни, лирические песни, вокальные техники, культурное образование, молодежь, музыкальные инструменты, техника исполнения, узбекская музыка.*

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NATIONAL SINGING STYLES AND THEIR FEATURES

***Abstract:** This article analyzes the features of Uzbek national singing styles, historical stages of development and performance techniques. It shows the features of shashmaqam, maqam, folk songs and lyrical songs, their consonance with musical instruments and their place in our national culture. The article also expresses an opinion on how the art of Uzbek singing influences the cultural education of youth and the need to increase its social significance. Important practical recommendations for the development of national singing styles and the development of effective approaches to the education of youth are presented.*

***Keywords:** national singing, shashmaqam, status, folk songs, lyrical songs, vocal techniques, cultural education, youth, musical instruments, performance technique, Uzbek music.*

Узбекская музыка занимает особое место в мировой музыке благодаря своему историческому богатству, неповторимым стилям и технике исполнения. Национальные стили пения в основном состоят из шашмакама, макама, фольклорных и лирических песен, каждая из которых имеет свои традиционные музыкальные и вокальные особенности. Целью данной статьи

является анализ уникальных особенностей национальных стилей пения, вокальных техник и стилей исполнения.

Узбекская музыка занимает особое место в мировой музыке благодаря своему историческому богатству, неповторимым стилям и технике исполнения. Национальные стили пения в основном состоят из шашмакама, макама, фольклорных и лирических песен, каждая из которых имеет свои традиционные музыкальные и вокальные особенности. Целью данной статьи является анализ уникальных особенностей национальных стилей пения, вокальных техник и стилей исполнения.

Изменения вокальной техники: изменения и новшества, связанные с техникой исполнения в национальном пении, особенно в стилях исполнения макама и шашмакама, используются более совершенные приемы.

Практические рекомендации:

1. В целях дальнейшего развития и сохранения национальных певческих стилей необходимо создать четкие методические пособия для исполнителей и педагогов.

2. Важно организовать во всех регионах Узбекистана национальные певческие семинары и музыкальные программы, приобщить молодежь к певческому искусству.

3. Для того чтобы национальная музыка получила широкое распространение среди молодежи, необходимо эффективно использовать современные технологии, например, интернет-ресурсы и социальные сети. Проводится ряд мероприятий по популяризации узбекской национальной музыки среди молодежи. Например:

1. Национальная музыка в системе образования:

- Национальная музыка преподается в школах и высших учебных заведениях.

- В музыкальных школах и школах искусств организованы курсы игры на национальных музыкальных инструментах: макоме, дуторе, рубобе.

- Через «Молодежных лидеров» организуются культурные мероприятия и пробуждается интерес к национальным песням и статусному искусству.

2. Культурные проекты:

- Поощрение молодых артистов посредством фестиваля «Новый Узбекистан» и республиканских музыкальных конкурсов.

- В целях популяризации статусного искусства среди молодежи расширена деятельность Узбекского национального центра статусного искусства.

- Современные технологии, такие как социальные сети, музыкальные платформы и цифровые студии, широко используются для популяризации национальных музыкальных произведений.

3. Международные отношения:

- Молодые таланты привлекаются на зарубежные фестивали для продвижения узбекской национальной музыки на международном уровне.

- Национальная музыка продвигается через совместные проекты с зарубежными странами.

4. Социальные и культурные инициативы:

- В микрорайонах организуются национальные музыкальные клубы для молодежи.

- Увеличилось количество национальных музыкальных программ на телевидении и радио.

- Национальная музыка продвигается через блоггеров и знаменитостей.

Теперь возникает вопрос. Каков уровень эффективности вышеперечисленных работ?

Положительные результаты:

- Наблюдается повышение статуса и интереса к национальным музыкальным инструментам среди молодежи.

- Увеличилось количество молодых людей, участвующих в конкурсах.

- Национальные песни воспроизводятся в современных обработках и представлены широкой публике.

Существующие проблемы:

- Отсутствие баланса между национальной музыкой и современными жанрами.

- В некоторых регионах мероприятия, связанные с национальной музыкой, проводятся недостаточно.

- Поп-музыка и зарубежная музыка привлекают все больше внимания молодежи.

Предложения:

1. Гармонизация национальной музыки с современными жанрами и усиление продвижения посредством технологий.

2. Открыть в регионах больше школ и клубов национальной музыки.

3. Развитие цифровых платформ, продвигающих национальную музыку и усиление промо-работы на международном уровне.

Системный подход к популяризации узбекской национальной музыки среди молодежи является важным фактором повышения эффективности.

В заключение можно сказать, что предпринимаются важные шаги по популяризации национальной музыки Узбекистана среди молодежи. Повышение интереса к национальной музыке достигается за счет образования, культурных мероприятий, социальных инициатив и использования современных технологий. Но в этом направлении еще есть некоторые проблемы, и для их решения необходимо обратить внимание на следующие вопросы:

1. Учет потребностей молодежи: необходимо повысить привлекательность национальной музыки путем объединения ее с современной молодежной культурой.

2. Обеспечение регионального равенства: необходимо обеспечить адекватную организацию национального музыкального образования и мероприятий в сельской местности.

3. Международная реклама. Гордость молодежи можно повысить путем продвижения национальной музыки на международном уровне.

Популяризация национальной музыки важна не только для сохранения культурного наследия, но и для укрепления духовной зрелости и национальной самобытности молодого поколения. Поэтому в этом плане на каждом этапе необходим системный и инновационный подход. Их исполнительская техника, вокальные характеристики и культурная роль имеют большое значение в развитии национальных узбекских певческих стилей. Шашмаком, маком, фольклорные и лирические песни играют особую роль в сохранении самобытности национальной музыки и духовном развитии молодежи. Развитие этих методов и обучение молодежи с их помощью будут иметь важное значение для общества.

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МУЗЫКА И ПОЗНАВАТЕЛЬНОЕ РАЗВИТИЕ: ЗНАЧЕНИЕ ОБУЧЕНИЯ МУЗЫКЕ В РАЗВИТИИ ПСИХИЧЕСКОЙ ДЕЯТЕЛЬНОСТИ МОЛОДЕЖИ

***Аннотация:** В статье анализируется влияние музыкального образования на познавательное развитие молодежи. Музыкальное образование играет важную роль в развитии умственных способностей, в частности, оно эффективно для улучшения когнитивных навыков, таких как память, концентрация, логическое мышление, изучение языка и решение проблем. В частности, подчеркивается роль обучения музыке в развитии математических и научных способностей, а также в снижении стресса и улучшении эмоционального состояния молодых людей. Научные исследования доказали положительное влияние музыки на когнитивное развитие, подчеркнув важность музыки в улучшении навыков чтения, аудирования и разговорной речи у детей и молодых людей. Исследования и зарубежный опыт дают важную информацию о роли музыки в когнитивном и эмоциональном развитии.*

***Ключевые слова:** Музыкальное образование, когнитивное развитие, память, концентрация внимания, логическое мышление, методы обучения, музыкальная терапия, музыкальный вкус в юности, снижение стресса.*

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MUSIC AND COGNITIVE DEVELOPMENT: THE IMPORTANCE OF MUSIC TEACHING IN THE DEVELOPMENT OF MENTAL ACTIVITIES OF YOUTH

***Abstract:** The article analyzes the impact of music education on the cognitive development of young people. Music education plays an important role in the development of mental abilities, in particular, it is effective in improving cognitive skills such as memory, concentration, logical thinking, language learning and problem solving. In particular, the role of music education in the development of mathematical and scientific abilities, as well as in reducing stress and improving the emotional state of young people is emphasized. Scientific research has proven the positive impact of music on cognitive development, emphasizing the importance of music in improving reading, listening and speaking skills in children and young people. Research and foreign experience provide important information on the role of music in cognitive and emotional development.*

Key words: Music education, cognitive development, memory, concentration, logical thinking, teaching methods, music therapy, musical taste in adolescence, stress reduction.

Музыкальное образование играет важную роль в когнитивном развитии человека. Музыка – это не только эстетическое переживание, но и важный инструмент поддержки умственного и эмоционального развития в процессе обучения детей и молодежи. Посредством музыкального образования молодые люди развивают различные когнитивные навыки, включая память, логическое мышление, решение проблем и изучение языка. Целью данной статьи является анализ того, как музыкальное образование влияет на процесс обучения молодежи.

Что такое музыкальное образование и когнитивное развитие?

Музыкальное образование оказывает эффективное влияние на познавательное развитие молодежи. Музыкальные занятия особенно полезны для развития математики и изучения языка. Музыка не только развивает творческое мышление, но и укрепляет навыки логического и аналитического мышления. Исследования показывают, что обучение и исполнение музыки приводит к эффективному развитию памяти, концентрации и когнитивных навыков у молодых людей.

Например, «Дивергентное мышление» показывает роль музыки в развитии логического и творческого мышления. С помощью музыки молодым людям удастся развивать новые идеи и находить решения различных ситуаций. Рабочая память развивается в процессе изучения музыки, что укрепляет способность молодых людей быстро запоминать и размышлять.

Связь музыки и памяти требует особого внимания. Во время занятий музыкой активизируются разные области мозга, что улучшает память. В процессе музицирования, например, запоминания нот, запоминания ритма и мелодической структуры музыки, это помогает в развитии памяти у молодых людей. Исследования показывают, что изучение музыки является эффективным инструментом улучшения кратковременной и долговременной памяти среди молодых людей.

Музыкальное образование укрепляет способность концентрироваться и долго смотреть на одно место. В процессе обучения музыке молодые люди более успешно концентрируют свое внимание, изучая и работая с различными музыкальными инструментами. Этот процесс помогает молодым людям уделять больше внимания учебе и другой интеллектуальной деятельности. Благодаря музыке увеличивается способность концентрироваться и концентрироваться.

Обобщение знаний, полученных в ходе изучения зарубежных исследований и опыта. Исследования, проведенные за рубежом, доказывают влияние музыки на когнитивное развитие. Например, согласно исследованию Кирка (2017), обучение музыке играет важную роль в развитии логических и математических навыков у детей и молодежи. Кроме того, Дженсен (2018)

провел серию психологических экспериментов, показывающих влияние музыкального образования на когнитивное развитие, и определил роль обучения музыке в укреплении нейронных связей в мозге.

Музыкальное образование также положительно влияет на академические успехи молодежи. Изучение музыки улучшает математические и языковые навыки. Исследования показали, в частности, влияние совместного изучения музыки и математики на академические достижения молодых людей. Исследование Бэти (2019) доказало, что академические успехи учащихся значительно возрастают благодаря изучению музыки.

Музыкальное образование играет важную роль в познавательном развитии молодежи. Когнитивные навыки, такие как память, концентрация, логическое мышление и решение проблем, развиваются посредством музыкального образования. Расширение музыкального образования в системе образования и усиление его влияния на общественную жизнь помогут подготовить молодежь не только к академическим успехам, но и к успеху в жизни. Необходимы дополнительные исследования влияния музыкального образования и распространения музыкального образования на всю молодежь.

На основе зарубежного опыта можно проанализировать, как музыкальное образование развивается в мировом масштабе и какое место оно занимает в образовательной системе Узбекистана. Во многих развитых странах музыкальное образование принято в качестве основного образовательного предмета для детей и молодежи. Например, программы музыкального образования в Финляндии предлагают студентам не только изучение теории музыки, но и развитие творческих способностей и работы в команде. Хотя музыкальному образованию в системе образования Узбекистана уделяется особое внимание, необходимо внедрять больше подходов в этой области. Для повышения качества музыкального образования в Узбекистане необходимо внедрять инновационные методы, разрабатывать музыкальные программы и повышать квалификацию преподавателей. На основании статьи хотелось бы сделать следующие предложения.

1. Влияние музыкального образования на эмоционально-психическое развитие. Роль обучения музыке в эмоциональном развитии основана на обширных исследованиях. Музыка формирует эмоциональное состояние человека и повышает психологическую устойчивость. Исследования показывают, что прослушивание или воспроизведение музыки может снизить стресс, облегчить чувство депрессии и тревоги и улучшить настроение. Психологическое значение музыки влияет на успехи учащихся в самосознании и управлении своими эмоциями. Изучение музыки может помочь укрепить уверенность в себе, особенно у детей и молодых людей. Развитие эмоционального интеллекта и способности управлять стрессом – один из важных результатов музыкального образования.

2. Нейропсихологические основы музыкального образования.

Связь между музыкой и деятельностью мозга установлена многими нейропсихологическими исследованиями. Изучение музыки, особенно игра на музыкальном инструменте или выполнение вокальных упражнений, активирует несколько областей мозга. Воспроизведение музыки укрепляет мозговые связи, улучшает память и внимание. Исследования показывают, что изучение музыки улучшает когнитивные навыки, такие как логическое мышление, изучение языка и творческие способности. Благоприятное воздействие музыки на мозг также помогает повысить мотивацию, что напрямую влияет на общую успеваемость учащихся.

3. Музыка и многоплановое обучение: влияние обучения музыке на другие области образования.

Музыкальное образование также влияет на когнитивное и эмоциональное развитие в других областях, таких как спорт, творческая деятельность и социальное взаимодействие. Есть сходство между изучением музыки и занятиями спортом, поскольку оба вида деятельности требуют физической и умственной дисциплины. Исследования показывают, что изучение музыки может помочь спортсменам и артистам лучше сосредоточиться и более эффективно управлять своими способностями. Кроме того, изучение музыки повышает социальную активность молодых людей, поскольку они учатся работать в группах, общаться и ладить с другими. Развитие познавательных и эмоциональных навыков посредством музыкального образования положительно влияет на общее развитие молодых людей. Научные исследования показывают влияние изучения музыки на академические успехи. Измеряя, как музыкальное образование влияет на результаты тестов и успеваемость учащихся, можно надежно оценить эффективность музыкального образования. Влияние музыки на развитие математического и логического мышления повышает общий уровень знаний учащихся, особенно на начальных этапах обучения. С помощью этих измерений можно показать, как музыкальное образование положительно влияет на общее интеллектуальное развитие учащихся.

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ВЫПОЛНЕНИЕ ЗНАКОВ ДЕЛЕНИЯ В НЕКОТОРЫХ СИСТЕМАХ СЧИСЛЕНИЯ

Данная статья посвящена признакам деления чисел в некоторых системах счисления: в ней приводится признак деления на 2 в системах счисления с основанием 3, 4, 5, 6, на 3 в системах счисления с основанием 4, 5, 6 и на четыре в шестеричной системе счисления.

Ключевые слова: методика, метод, число, цифра, система счисления, признаки деления.

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IMPLEMENTATION OF DIVISION SIGNS IN SOME NUMBER SYSTEMS

This article is devoted to the criteria for divisibility of numbers: by 2 in number systems with a base of 3,4,5,6. , by 3 in base 5, 6 and by 4 in base 6.

Key words: methodology, method, number, digit, number system, signs of division.

На курсах бакалавриата высших учебных заведений тема систематических чисел преподается студентам 3 курса. При решении задач и примеров по математике студенты знакомятся с систематическими числами, позиционными и непозиционными системами счисления с выполнением на них арифметических действий. Но о признаках деления в систематических числах они не информированы. В данной статье рассматриваются признаки деления в некоторых системах счисления.

В многовековом развитии разные народы использовали резко отличающиеся друг от друга системы счисления. Десятичная система счисления, используемая в нашей повседневной жизни, спустя несколько столетий приобрела нынешний облик.

Например, очень широко использовалась 12-десятичная система счисления. В его происхождении, безусловно, большое значение имеет естественный вычислительный инструмент – наша рука. В отличии от большого пальца, остальные четыре пальца, имеют по 3 сустава каждый, то

есть всего 12 суставов. Следы этой системы счисления сохранились до сих пор.

Например, у англичан единица измерения длины: 1 фут = 12 дюймов = 30 см, денежная единица: 1 шиллинг = 12 пенсов.

В основном мы используем десятичную систему счисления. Но, в системах счисления, отличных от десятичной системы счисления для обозначения чисел используются арабские цифровые символы. Например, в пятеричной системе счисления используются цифры 0, 1, 2, 3, 4, а в семеричной системе счисления цифры 0, 1, 2, 3, 4, 5, 6.

В вычислительной технике и программировании используются системы счисления с основанием, равным 2, 8 и 16.

Система счисления – это удобный способ записи чисел для чтения и выполнения арифметических операций.

За основу системы счисления можно взять не только 10 и 60, но и произвольное натуральное число p больше единицы.

Организация систем счисления практически идентична. Принимая за основу p – систему счисления, произвольное число N представляется в виде:

$$N = a_n p^n + a_{n-1} p^{n-1} + \dots + a_1 p^1 + a_0 p^0 + a_{-1} p^{-1} + \dots + a_{-m} p^{-m}$$

Число, выраженное в виде многочлена также можно записать как

$$(a_n a_{n-1} \dots a_1 a_0 a_{-1} \dots a_{-m})_p$$

(n и m – количество разрядов целой и дробной части числа).

В таком представлении числа каждое числовое значение отличается в зависимости от его положения. Например, в десятичной системе счисления числа 98327 цифра 7 – представляет единичную, цифра 2 – десятичную, цифра 3 – сотую, цифра 8 – тысячную, цифра 9 – десяти тысячную (этот случай только в десятичной системе счисления).

$$98327 = 9 \cdot 10^4 + 8 \cdot 10^3 + 3 \cdot 10^2 + 2 \cdot 10^1 + 7 \cdot 10^0$$

В другой системе счисления на основе p цифры $a_0, a_1, a_2 \dots$ обозначают значения $a_0, a_1 p, a_2 p^2, \dots$.

Системы счисления, построенные таким образом, называются позиционными системами счисления.

В позиционной системе счисления целые числа образуются по следующему закону: следующее число образуется путем сдвига последней цифры справа от предыдущего числа; если при сдвиге число становится 0, то число слева от этого числа сдвигается.

Используя этот закон, мы создадим первые 10 целых чисел:

* В двоичной системе счисления: 0, 1, 10, 11, 100, 101, 110, 111, 1000, 1001

* В троичной системе счисления: 0, 1, 2, 10, 11, 12, 20, 21, 22, 100

* В пятеричной системе счисления: 0, 1, 2, 3, 4, 10, 11, 12, 13, 14;

* В восьмеричной системе счисления: 0, 1, 2, 3, 4, 5, 6, 7, 10, 11.

Позиционная система счисления широко используется в повседневной жизни благодаря своему удобству.

Для записи чисел в десятичной системе счисления используются десять символов: 0; 1; 2; 3; 4; 5; 6; 7; 8; 9. Эти символы называются цифрами.

Например: 8; 18; 8 - это и число и цифра. 18 - это не цифра, это число, состоящее из цифр 1 (один) и 8 (восемь). Каждая цифра в записи приведенных выше чисел имеет разное значение в зависимости от занимаемого им места. В частности, в записи 524 (пятьсот двадцать четыре) цифра 4 означает, что в этом числе четыре единицы, цифра 2 означает, что в этом числе два десятка, а цифра 5 означает, что в этом числе пять сотен. То есть

$$524 = 5 * 100 + 2 * 10 + 4 * 1;$$

$$62703 = 6 * 10000 + 2 * 1000 + 7 * 100 + 0 * 10 + 3 * 1$$

Такой способ записи чисел с помощью десяти цифр называется "десятичной системой счисления". Как известно, в десятичной системе счисления есть признаки деления, опираясь на эти правила мы приведем данные для других систем счисления. Опираясь на эти данные, читатель может легко решить примеры, которые намного сложнее в системах счисления.

В троичной системе счисления признак деления на 2:

Числа, сумма цифр которых делится на 2, делятся на 2 и наоборот. [2]

Доказательство:

$$N = \overline{a_n a_{n-1} \dots} \dots$$

$$= (2 + 1)^n a_n + (2 + 1)^{n-1} a_{n-1} + \dots \dots a_1 + a_0 = |(c + 1)^n = ct + 1| =$$

$$= 2m_n a_n + 2m_{n-1} a_{n-1} + \dots \dots$$

если учесть, что каждый член этой суммы делится на 2 то и число $(a_0 + a_1 + \dots + a_n) : 2$ делится на 2.

Пример: 102201121_3 это число в троичной системе счисления делится на 2 без остатка. Потому что сумма чисел (101_3) делится на 2 без остатка.

Считается, что ноль делится на все числа.

$n + 1$ значное число состоящее из цифр $a_n a_{n-1} \dots$ запишем в виде

$$N = \overline{a_n a_{n-1} \dots} \dots$$

Признаки деления на 3 в четверичной системе счисления:

Числа, сумма цифр которых делится на 3, делятся на 3 и наоборот.

Доказательство:

$$N = \overline{a_n a_{n-1} \dots} \dots$$

$$= (3 + 1)^n a_n + (3 + 1)^{n-1} a_{n-1} + \dots \dots a_1 + a_0 = |(c + 1)^n = ct + 1| =$$

$$= 3m_n a_n + 3m_{n-1} a_{n-1} + \dots \dots$$

если учесть, что каждый член этой суммы делится на 3, то должен быть $(a_0 + a_1 + \dots + a_n) : 3$.

Пример: 3010220112_4 это число делится на 3 без остатка. Потому что сумма чисел (30_4) делится на 3 без остатка.

Признаки деления на 2 в четверичной системе счисления:

Числа, последняя цифра которых заканчивается на 0 или 2, и только они делятся на 2.

Доказательство: $N = \overline{a_n a_{n-1} \dots a_1 a_0}$

если учесть, что каждый член этой суммы делится на 2, то должен быть a_0 :

Пример: 3010220112_4 можно сделать вывод что это число делится на 2 без остатка, поскольку последняя цифра равна 2.

Признаки деления на 4 в пятеричной системе счисления:

Числа, сумма чисел которых делится на 4, делятся на 4 и наоборот.

Доказательство:

$$\begin{aligned} N &= \overline{a_n a_{n-1} \dots a_1 a_0} \\ &= (4+1)^n a_n + (4+1)^{n-1} a_{n-1} + \dots + a_1 + a_0 = \left| (c+1)^n = ct + 1 \right| = \\ &= 4m_n a_n + 4m_{n-1} a_{n-1} + \dots \end{aligned}$$

если учесть, что каждый член этой суммы делится на 4, то и $(a_0 + a_1 + \dots + a_n) : 4$ число должен делится на 4.

Пример: 1420131_5 это число делится на 4 без остатка. Потому что сумма чисел $(202_5) [1]$ делится на 4 без остатка.

Признаки деления на 3 в пятеричной системе счисления:

Если разность суммы цифр четных номеров и суммы цифр нечетных номеров числа делится на 3, такие числа делятся на 3.

Доказательство:

$$\begin{aligned} N &= \overline{a_n a_{n-1} \dots a_1 a_0} = 5^n a_n + 5^{n-1} a_{n-1} + \dots + 5 a_1 + a_0 \\ &= \left| (5^{2n} - 1) : 3, (5^{2n-1} + 1) : 3 \Rightarrow \right| = \\ &= (5^{2n} - 1)a_{2n} + (5^{2n-1} + 1)a_{2n-1} + \dots + (5 + 1)a_1 + (a_0 + a_2 + \dots + a_{2n}) - (a_1 + a_3 + \dots + a_{2n-1}) \end{aligned}$$

если учесть, что каждый член этой суммы делится на 3, то и $(a_0 + a_1 + \dots + a_n) : 3$ число должен делится на 3.

Пример: 40402202_5 это число делится на 3 без остатка. Потому что если из суммы цифр четных мест (20_5) , вычитать сумму цифр нечетных мест числа, т.е., $(20_5 - 4_5 = 11_5)$ делится на 3 без остатка.

Признаки деления на 2 в пятеричной системе счисления:

Числа, сумма чисел которых делится на 2, делятся на 2 и наоборот.

Доказательство:

$$\begin{aligned} N &= \overline{a_n a_{n-1} \dots a_1 a_0} \\ &= (4+1)^n a_n + (4+1)^{n-1} a_{n-1} + \dots + a_1 + a_0 = \left| (c+1)^n = ct + 1 \right| = \\ &= 4m_n a_n + 4m_{n-1} a_{n-1} + \dots \end{aligned}$$

если учесть, что каждый член этой суммы делится на 2, то должен быть $(a_0 + a_1 + \dots + a_n) : 2$.

Пример: 1420131_5 это число делится на 2 без остатка. Потому что сумма чисел (202_5) делится на 2 без остатка.

Признаки деления на 5 в шестиричной системе счисления:

Числа, сумма чисел которых делится на 5, делятся на 5 и наоборот

Доказательство:

$$N = \overline{a_n a_{n-1} \dots a_1 a_0} = (5+1)^n a_n + (5+1)^{n-1} a_{n-1} + \dots + a_1 + a_0 = |(c+1)^n = cm + 1| = 5m_n a_n + 5m_{n-1} a_{n-1} + \dots$$

если учесть, что каждый член этой суммы делится на 5, то должен быть $(a_0 + a_1 + \dots + a_n) : 4$.

Пример: 54501343_6 это число делится на 5 без остатка. Потому что сумма чисел (41_6) делится на 5 без остатка.

Признаки деления на 4 в шестеричной системе счисления:

Если двузначное число, состоящее из двух последних цифр, делится на 4, то само число также делится на 4.

Доказательство:

$$N = \overline{a_n a_{n-1} \dots a_2 a_1 a_0}$$

если учесть, что каждый член этой суммы делится на 4, то должен быть $\overline{a_1 a_0} :$

Пример: 504032_6 это число делится на 4 без остатка. Потому что 2-значное число состоящее из последних двух цифр делится на 4.

Признаки деления на 3 в шестеричной системе счисления:

Числа, последняя цифра которых заканчивается на 0 или 3, и только они делятся на 3.

Доказательство:

$$N = \overline{a_n a_{n-1} \dots a_1 a_0}$$

если учесть, что каждый член этой суммы делится на 3, то должен быть $a_0 = 0$ или $a_0 = 3$.

Пример: 504033_6 это число делится на 3 без остатка, поскольку последняя цифра равна 3, можно сделать такой вывод. Другой пример 30542130_6 число также делится на 3 в той же системе счисления без остатка. Потому что, последняя цифра равна 0.

Числа, сумма чисел которых делится на $g-1$, делятся на $g-1$ и наоборот. [3]

Доказательство:

$$N = \overline{a_n a_{n-1} \dots a_1 a_0} = (g-1+1)^n a_n + (g-1+1)^{n-1} a_{n-1} + \dots + a_1 + a_0 = |(c+1)^n = cm + 1| = (g-1)m_n a_n + (g-1)m_{n-1} a_{n-1} + \dots$$

если учесть, что каждый член этой суммы делится на $g-1$, то должен быть $(a_0 + a_1 + \dots + a_n) : (g-1)$.

Таким же образом определяются признаки деления остальных систем счисления. Изучение признаков деления в таких системах счисления

направлено на повышение интереса учащихся к математике, участие в математических кружках, математических вечерах, факультативных занятиях, развитие математического мышления учащихся.

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АРХЕОЛОГИЧЕСКИЕ ПАМЯТНИКИ УСТЮРТА

Аннотация: В статье представлены результаты многолетних археологических исследований раннесредневековых памятников Устюрта. До недавнего времени плато оставалось огромным «белым пятном» на археологической карте. Случайные находки древностей и эпизодические разведочные маршруты не изменяли существа дела. С 1960 г. в археологическое изучение Устюрта включается археология Каракалпакстана. Его сотрудники в том же году обследовали ряд крепостей на Восточном чинке Устюрта. Систематические археологические исследования на плато начаты в 1971 г. Каракалпакским филиалом АН РУз.

Ключевые слова: Устюрт, С.П.Толстов, В.Н.Ягодин, Айбуйир кала, Дэвкескен.

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ARCHAEOLOGICAL MONUMENTS OF USTYURT

Abstract: The article presents the results of many years of archaeological research into the early medieval monuments of Ustyurt. Until recently, the plateau remained a huge “blank spot” on the archaeological map. Random finds of antiquities and episodic exploration routes did not change the essence of the matter. Since 1960, the archaeological study of Ustyurt has included the archeology of Karakalpakstan. In the same year, his employees examined a number of fortresses on the Eastern cliff of Ustyurt. Systematic archaeological research on the plateau began in 1971 by the Karakalpak branch of the Academy of Sciences of the Republic of Uzbekistan.

Key words: Ustyurt, S.P. Tolstov, V.N. Yagodin, Aybuyir kala, Devkesken.

В результате маршрутных археологических работ на плато Устюрта открыт и предварительно исследован несколько городищ и поселений с раннесредневековыми слоями на Восточном чинке Устюрта, от городища Шемаха-кала на юге до урочища Курганча на севере, на протяжении около 300 км по краю плато и на его обрывах на различном расстоянии друг от друга сохранились многочисленные руины башен, городища, могильники и другие сооружения.

Территориально все нанесенные к настоящему времени на карту археологические памятники кочевых племен Юго-Восточного Устюрта профессор В.Н.Ягодин разделил на три группы:

- 1 — памятники Восточного чинка;
- 2 — памятники северо-западного Барсакельмеса;
- 3 — памятники солончакового массива Чурук (курганый могильник Кара-кудук) .

Археологические разведки в отдельных районах южного участка Восточного чинка, проведенны Хорезмской археолого-этнографической экспедицией АН России [1. С. 74-75], а также сотрудниками Каракалпакского Отделения АН РУз. При археологическом обследовании Восточного чинка на всем его протяжении были обнаружены многочисленные кочевнические древности. Особенно значительной концентрации они достигают на северном участке от границы Каракалпакстана до мыса Актумсук и на среднем участке от мыса Урга до оврага Саксаулсай, Большой Айбуйир кала, Малая Айбуйир кала, Ербурун кала, Бутентау кала, Адак и др. Некоторых из этих памятников, построенный в античный период, в городищах Большой Айбуйир кала и Дэвкескен кала обнаружены культурный слой раннесредневекового периода. Городище расположено в 41 км к северо-западу от пос. Шуманай на склоне плато Устюрт, примыкая одной стороной к обрыву. Памятник был открыт и нанесен на археологическую карту С.П.Толстовым во время авиаразведок 1946 г. В 1952 году городище было вновь обследовано Хорезмской археолого-этнографической экспедицией. При этом был снят схематический план памятника и сделано его описание. С 1976 года отделом археологии Каракалпакского филиала АН РУз на памятнике произведены систематические раскопки [3.С. 38-45].

Площадь городища около 10 га. В плане оно имеет форму неправильного прямоугольника, вытянутого с востока на запад. Стены сохранилось в основном в виде оплывших валов с трех сторон. Стр.42. Длина восточной стены 120 м, северной -412, западной -260. Вдоль южной стороны, примыкающей к обрыву по краю, следов стен не обнаружено. Вход городища находится в западной части. Для изучения конструкции крепостных стен в 1976 г. были заложены три траншеи. Установлено, что стены толщиной 5,86-6,20 м, сложенные из паховых блоков, опоясывают городище с трех сторон. Первоначальная планировка помещений оставалась неизменной до уровня третьего пола. Незначительные планировки связаны с третьим полом. На стенке одного из хумов обнаружена прорезная надпись на древнехорезмийском языке. На нижних полах найдены ручки кувшинов в виде львиных голов, терракотовые женские статуэтки, фигурки коня и верблюда. Керамика верхних полов датируется I-IV вв. н.э. Помимо керамики найдены пряслица, астрагалы, оселки, терки, зернотерки и бусы. Население Айбугира занималось также рыболовством и скотоводством. После длительного периода запустения в IX-XI вв. поверх разрушенных стен античного времени возводятся новые стены. Они сложены из псы и

сохранились лишь в отдельных местах на высоту 6,1 м. В северной и западной стенах прослежены полукруглые башни с камерами длиной возведения средневековых стен, зафиксирован лишь в юго-западном углу городища [1. С. 74-75].

Комплекс расположен в 56 км к юго-западу от районного центра пос. Шуманай, на оконечности юго-восточного выступа Устюрта и у его подножья. Часть памятника, расположенная на плато, находится на территории Каракалпакстана, другая, расположенная внизу, - на территории Туркменстана. Многократно упоминался еще в дореволюционное время многими историками и путешественниками. Обследовался Хорезмской археолого-этнографической экспедицией в 1946-1947 г.г., Отделом охраны памятников культуры Министерства культуры Туркменстана в 1958 году, Институтом истории, языка и литературы Каракалпакского филиала АН РУз в 1963 году. В 1985 и 1986 гг. на памятнике произведены обмеры и шурфовки [4.С.311].

Сейчас Дэвкескен представляет собой систему полуразрушенных крепостных стен и бугров. Общая площадь комплекса больше 100 га. Уже при первом осмотре видно, что он состоит из нескольких частей: город, пригород или нижний город, городской некрополь, садовый парк, оросительная система, планировка полей и т. д. Исследователи считают, что Дэвкескен является остатками города Вазир, описываемого позднесредневековыми источниками [2 .С.120-130]. На площади городища были найдены остатки металлических, гончарных и стеклянных предметов, украшения, монеты. Находки указывают, что когда-то в городе процветали гончарное и кузнечное ремесла. Вероятно, в конце IV в Дэвкескен-кала приходит в запустение.

В Средней Азии архитектурный прием разделки стен появляется и предшественниками ее считаются прямоугольные пилястры. Применение гофр в Средней Азии, в том числе и в Хорезме особенно широкое распространение получает в V-VII вв. Аналогичный принцип обработки стен применялся и в последующие периоды, в частности, в Наиб-кале, Буран-кале №2, в дворцовом сооружении Джанпык-калы, Караван-сарая Мешикли и в Миздахкана. При этом в одних случаях гофрами украшены только башнеобразные утолщения по углам и по середине стен (Мешикли, Наиб-кала, Эрес-кала-2), а в других и то и другое (дворец Джанпык-калы, цитадели Миздахкана). Шемаха-кала, по мнению профессора С. П. Толстова, «в основе — это ранне-средневековый город-крепость, обнесенный некогда прямоугольником мощных стен с огромными башнями»[2. С .120-130].

Несмотря на то, что «раскопки, проводившиеся в центральной части городища, не дали материалов, подтверждающих существование города в домонгольское время», остатки крепостных стен и башен внутри городища XIV в. оказались «сходными с раннесредневековыми домонгольскими крепостными сооружениями» [3.С. 38-45]. Единичные фрагменты керамики X—XI вв., на наш взгляд, не являются случайными, как полагает Н. Н. Вактурская, а подтверждают возникновение данного населенного пункта в раннесредневековое время.

Этот город был уничтожен монголами. Межбашенные куртины стен были разрушены, и ряд одинокого стоящих прямоугольных и круглых башен производит своеобразное впечатление. Но к XV в. город вновь расцвел, хотя укрепления его и не были никогда восстановлены. Сверху видно паутина улиц и переулков перехлестывается за линию развалин древних укреплений, как город разрастается на запад, восток и север. Планировка после монгольского города сохранились великолепно. Каменные стены сложенные из тщательно обтесанных и не обработанных плит, стены домов сохранились на значительную высоту. Соборная мечеть в центре города с двором, окруженным несколькими рядами колонн. Другая огромная мечеть за городом [5. С.192].

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РОЛЬ СОЦИАЛЬНЫХ ИСТОРИЙ ДЛЯ ФОРМИРОВАНИЯ СОЦИАЛЬНОГО ПОВЕДЕНИЯ У ОБУЧАЮЩИХСЯ С РАССТРОЙСТВАМИ АУТИСТИЧЕСКОГО СПЕКТРА

Аннотация: В данной статье представлены роль социальных историй в коррекционной работе с детьми с расстройствами аутистического спектра (РАС), которое является эффективным инструментом для обучения социальным и поведенческим навыкам. Этот метод помогает детям с аутизмом справляться с трудностями в восприятии и интерпретации социальных сигналов, а также развивать навыки, необходимые для успешной интеграции в общество.

Ключевые слова: методика коррекционной работы с детьми с расстройством аутистического спектра, метод социальных историй в коррекционной работе с детьми с расстройствами аутистического спектра, социальная адаптация, формы поведения, поведенческие навыки.

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THE ROLE OF SOCIAL STORIES FOR THE FORMATION OF SOCIAL BEHAVIOR IN STUDENTS WITH AUTISTIC SPECTRUM DISORDERS

Abstract: This article presents the role of social stories in correctional work with children with autism spectrum disorders (ASD), which is an effective tool for teaching social and behavioral skills. This method helps children with autism cope with difficulties in perceiving and interpreting social signals, as well as develop the skills necessary for successful integration into society.

Keywords: methodology of correctional work with children with autism spectrum disorder, method of social stories in correctional work with children with autism spectrum disorders, social adaptation, behavioral forms, behavioral skills.

Использование метода социальных историй для формирования социального поведения у обучающихся с расстройствами аутистического спектра (РАС) является эффективным инструментом в коррекционной педагогике. Метод социальных историй был разработан американским психологом Темплом Грандином и широко применяется для обучения детей с аутизмом социальным навыкам и улучшения их поведения в различных

жизненных ситуациях. Этот метод помогает детям с РАС понять и освоить сложные социальные ситуации, развить способности к взаимодействию с окружающими, а также сформировать адекватное поведение в общественных и повседневных контекстах. Социальная история — это структурированный рассказ, описывающий социальную ситуацию, а также предполагаемое поведение ребенка в этой ситуации. Она представляет собой ясное объяснение того, что происходит в конкретной ситуации, как человек должен действовать, какие чувства и реакции могут возникнуть у участников, и какие последствия могут быть ожидаемы.

Социальная история — это не просто набор инструкций или правил. Это повествовательный текст, который помогает ребенку понять причинно-следственные связи между его поведением и поведением окружающих, а также узнать, как лучше адаптироваться к ситуации.

Социальная история — это короткий, понятный и структурированный рассказ, который описывает ситуацию, с которой ребенок может столкнуться, и предлагает модели правильного поведения, реакции или восприятия этой ситуации. Эти истории являются визуальными и текстовыми подсказками, которые помогают ребенку с аутизмом лучше понять, как действовать в конкретной социальной ситуации.

Социальные истории обычно используют простые и ясные фразы, часто сопровождающиеся иллюстрациями или фотографиями, чтобы облегчить восприятие информации.

В этих историях акцент делается на объяснении причин и последствий социального взаимодействия, что помогает ребенку понять, как его действия могут повлиять на окружающих и что от него ожидается в той или иной ситуации.

Метод социальных историй направлен на достижение нескольких ключевых целей, в том числе:

- Понимание социальных норм и ожиданий: Дети с РАС могут не понимать, как правильно себя вести в социальных ситуациях, например, как приветствовать людей, как извиняться, как участвовать в разговоре или делиться игрушками. Социальные истории помогают объяснить эти ожидания.

- Снижение тревожности: Социальные ситуации могут быть пугающими и вызывающими стресс у детей с аутизмом. Социальные истории помогают подготовить ребенка к предстоящим событиям, тем самым снижая уровень тревожности и непонимания.

- Управление поведением: Социальные истории помогают обучать детей адаптивному поведению в различных ситуациях, что способствует формированию более подходящих социальных реакций.

- Формирование навыков самообслуживания: Социальные истории могут быть использованы для обучения детей навыкам самообслуживания, таким как мытье рук, уход за личной гигиеной, прием пищи и другие повседневные действия.

Метод социальных историй предполагает использование простых, четких и последовательных рассказов, которые структурируют информацию о конкретной социальной ситуации. Эти истории состоят из нескольких ключевых элементов, которые помогают ребенку лучше понять, как действовать и почему важно вести себя определенным образом. Основные компоненты социальных историй:

1. Описательные предложения: Рассказывают о ситуации, в которой ребенок может оказаться. Например, "Когда я иду в магазин, я встречаю много людей".

2. Инструктивные предложения: Объясняют, что нужно сделать или как вести себя в описанной ситуации. Например, "Я должен вежливо попросить маму помочь мне выбрать продукты".

3. Ключевые предложения: Объясняют почему важно вести себя определенным образом, что помогает ребенку понять социальные нормы. Например, "Когда я говорю «спасибо», люди понимают, что я благодарен им".

4. Аффективные предложения: Описывают, как будут себя чувствовать другие люди в ответ на поведение ребенка. Например, "Когда я говорю «пожалуйста» и «спасибо», другие люди чувствуют себя счастливыми".

5. Предсказательные предложения: Объясняют, что произойдет после того, как ребенок будет вести себя соответствующим образом. Например, "Когда я внимательно слушаю, учитель скажет мне, что делать дальше".

Социальные истории могут быть адаптированы под конкретную ситуацию или нужды ребенка. Важно, чтобы они были достаточно короткими и простыми, с использованием ясных слов и фраз, чтобы избежать перегрузки информации.

История про встречу с новыми людьми:

- Описание: "Когда я встречаю нового человека, я могу поздороваться. Иногда люди здороваются со мной. Я говорю: «Привет!» и улыбаюсь".

- Инструкция: "Когда я здороваюсь, я смотрю на человека и говорю «Привет!» громко и ясно".

- Причина: "Когда я говорю «Привет!», это помогает мне начать разговор и быть дружелюбным".

- Эмоции: "Люди будут рады, если я поздороваюсь с ними. Это помогает мне завести новых друзей".

- Прогноз: "Когда я буду здороваться, люди будут улыбаться и могут начать разговор со мной".

- История про мытье рук:

- Описание: "Когда я прихожу домой или после того, как использую туалет, мне нужно помыть руки".

- Инструкция: "Я включаю воду, мою руки, а затем тщательно промываю их водой".
- Причина: "Когда я мою руки, это помогает уберечь меня от микробов и болезней".
- Эмоции: "Я буду чувствовать себя чистым и здоровым".
- Прогноз: "После того как я помою руки, я смогу поесть или играть, не переживая за свою безопасность".

Преимущества метода социальных историй

1. Упрощение сложных ситуаций: Социальные истории помогают ребенку с аутизмом понять сложные или непривычные социальные ситуации, разбивая их на понятные и доступные шаги.

2. Снижение стресса и тревожности: Подготовка к социальным ситуациям через социальные истории помогает ребенку чувствовать себя более уверенно, зная, что ожидать и как реагировать.

3. Развитие социальных навыков: Социальные истории эффективно обучают детей основам социального взаимодействия, включая манеры, просьбы, благодарности, умение слушать и выражать свои эмоции.

4. Повышение независимости: Использование социальных историй помогает детям с РАС развивать навыки самообслуживания и улучшать их способность справляться с повседневными задачами.

5. Гибкость и адаптивность: Метод социальных историй можно адаптировать под различные ситуации и нужды ребенка, что делает его универсальным инструментом.

6. Повышение уверенности: Дети, которые используют социальные истории, обычно становятся более уверенными в своих силах, так как знают, как вести себя в социальных ситуациях.

Индивидуализация: Каждая социальная история должна быть адаптирована под конкретного ребенка, его уровень развития, интересы и нужды.

- **Использование визуальных материалов:** Иллюстрации, фотографии или схемы могут значительно облегчить восприятие информации детьми с аутизмом, особенно тем, кто лучше воспринимает визуальную информацию.

- **Регулярная практика:** Социальные истории должны быть использованы многократно, чтобы ребенок мог закрепить полученные знания и навыки.

- **Обсуждение ситуаций:** После того как ребенок ознакомился с социальной историей, важно обсуждать, как он будет действовать в реальной жизни, помогая ему интегрировать новую информацию в повседневную практику.

Метод социальных историй является мощным инструментом для формирования социального поведения у детей с расстройствами аутистического спектра. Это эффективный и доступный инструмент для

коррекционной работы с детьми с аутизмом. Он помогает ребенку освоить социальные нормы и поведение, снижает тревожность, способствует развитию социальных и поведенческих навыков. Социальные истории позволяют детям с РАС лучше понимать, Этот метод помогает детям с РАС лучше понимать и адаптироваться к социальным ожиданиям, снижать уровень стресса в новых ситуациях и развивать необходимые навыки для успешного взаимодействия с окружающими. Использование социальных историй способствует развитию социальных, коммуникативных и поведенческих навыков, что в свою очередь помогает детям интегрироваться в общество и быть более успешными в повседневной жизни.

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ПОЛЕЗНЫЕ СВОЙСТВА РАСТЕНИЯ КАРДАМОНА ЛЕКАРСТВЕННОГО (ELETTARIA CARDAMOMUM)

Аннотация. В данной статье рассматриваются полезные свойства кардамона и его влияние на организм человека. Систематически изучалась современная специализированная литература и новейшая научная информация. Показаны химический состав и пищевая ценность продукта, рассмотрено применение кардамона в различной медицине и эффективность его применения при различных заболеваниях. Отдельно проанализировано возможное неблагоприятное воздействие кардамона на организм человека при некоторых заболеваниях и состояниях [1,3].

Ключевые слова: кардамон, лимонен, терпинеол, цинеол, армидон, полезные вещества.

BENEFICIAL PROPERTIES OF THE PLANT CARDAMOM (ELETTARIA CARDAMOMUM)

Abstract. This article discusses the beneficial properties of cardamom and its effect on the human body. Modern specialized literature and the latest scientific information were systematically studied. The chemical composition and nutritional value of the product are shown, the use of cardamom in various medicines and the effectiveness of its use in various diseases are considered. The possible adverse effects of cardamom on the human body in some diseases and conditions are analyzed separately.

Keywords: cardamom, limonene, terpineol, cineole, armidone, useful substances.

Введение. Кардамон (*Elettaria cardamomum*) — многолетнее травянистое растение семейства Zingiberaceae.

Существует 4 вида кардамона:

1. Кардамон зеленый (*Elettaria cardamomum* var. *cardamomum*)
 - Самый распространенный тип.
 - Культивируется в Индии и Гватемале.
2. Кардамон черный (*Amomum subulatum*).
 - Растет на северо-востоке Индии.

- Имеет более сильный и острый вкус
- 3. Кардамон белый (*Elettaria cardamomum* var. *major*)
 - Крупносемянный, но менее ароматный
- 4. Кардамон красный (*Amomum costatum*).
 - Растет в Юго-Восточной Азии.
 - Цвет красно-коричневый.

Кардамон – одна из самых дорогих специй в мире, во многих странах ее называют «королевой специй». Его использовали в качестве пряности с древних времен в Египте, Греции и Риме. Культивируется в Индии и Шри-Ланке более 4000 лет.

Кардамон содержит лимонен, терпинеол, цинеол и армидон, которые обладают противовирусными и противомикробными свойствами. Эти вещества укрепляют иммунитет, защищают организм от вирусов и бактерий, вызывающих заболевания. Кроме того, существуют мнения, что кардамон может предотвратить рак. В отличие от других специй, этот продукт не повреждает слизистую желудка. По этой причине его на протяжении веков эффективно использовали в восточной медицине при лечении заболеваний желудка и кишечного тракта. Тем не менее людям, имеющим проблемы с желудком, рекомендуется не действовать самовольно, а предварительно пройти обследование у врача и принять меры согласно инструкции. Эта специя является источником антиоксидантов, витаминов А, С и Е [5,6].

Калорийность 100 г кардамона – 311 ккал. Зеленые и черные семена имеют одинаковую пищевую ценность. Зеленые отличаются лишь тем, что их собирают до полного созревания, а черные дополнительно интенсивно сушат и измельчают. Незрелые зерна предпочтительнее не только из-за их слегка сладковатого вкуса – в них еще и немного больше пользы.

Исследования показали, что гипертоникам достаточно 3 г порошка кардамона в день для нормализации артериального давления. Точная причина этого эффекта неизвестна, но ученые полагают, что это связано с высоким уровнем антиоксидантов и мочегонным действием.

Познакомимся с целебными свойствами кардамона:

1. Обладает противораковыми свойствами. Добавка кардамона не заменяет лечение, но может использоваться в качестве поддерживающей терапии – его фитохимические соединения помогают бороться с раком. Согласно исследованиям, порошок повышает способность иммунных клеток атаковать раковые клетки и останавливать их размножение. Например, в результате короткого 15-дневного эксперимента значительно уменьшились опухоли кожи.

2. Кардамон используется для выведения токсинов, и это свойство научно доказано. Способность к детоксикации положительно влияет на печень, которая нейтрализует вредные вещества и выводит их из организма. Добавки зеленых специй дополнительно защищают печень от повреждений и улучшают состояние органа при неалкогольной жировой болезни печени, ожирении и избыточном весе.

3. Улучшает дыхание и потребление кислорода. Усиление притока воздуха в легкие происходит во время ароматерапии за счет бодрящего аромата, а при приеме внутрь экстракт кардамона расслабляет дыхательные пути. Инъекции экстракта действуют быстрее, расширяют бронхи (актуально при астме).

4. Нормализует пищеварение и защищает от язвы желудка. Кардамон – эффективное средство от дискомфорта, тошноты и рвоты. Он известен своей способностью лечить желудок, уменьшать кислотный рефлюкс и лечить язвы желудка. В исследованиях, проведенных на мышах, экстракт полностью предотвращал развитие язв желудка и уменьшал размеры уже имеющихся на 50%. В пробирке он защитил от *Helicobacter pylori*, бактерии, вызывающей проблемы с желудком. Его метаноловый экстракт помогает бороться с повышенной кислотностью, метеоризмом и спазмами желудка.

5. Предотвращает кариес и устраняет неприятный запах. В древности семена кардамона использовали вместо жевательной резинки после еды. Сегодня многие компании используют их при производстве жевательных резинок, зубных паст и ополаскивателей для рта – натуральный продукт не только придает свежий мятный аромат, но и нейтрализует бактерии в полости рта. Эксперименты в пробирке подтвердили, что этот экстракт борется с пятью бактериями, вызывающими кариес, сокращая их количество на 54 процента.

6. Снижает уровень сахара в крови. Регулирование уровня глюкозы и инсулина происходит за счет подавления пищеварительных ферментов – когда они менее активны, переваривание крахмалов и белков замедляется. Другие лабораторные исследования показали, что кардамон снижает окислительный стресс и воспаление у женщин.

7. Обладает антибактериальными свойствами. Кандидоз, стафилококки, сальмонеллы, кампилобактерии (одна из основных причин диареи в мире) и другие опасные бактерии уничтожаются эфирным маслом, содержащимся в семенах кардамона. Природные соединения не так эффективны, как антибиотики, но не уничтожают полезные бактерии. В будущем они могут стать альтернативной терапией против устойчивых к антибиотикам микробов.

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ПЕРСПЕКТИВЫ МАРКЕТИНГОВОЙ ДЕЯТЕЛЬНОСТИ ПАО «ГАЗПРОМ»

Аннотация: В статье рассматриваются результаты деятельности ПАО «Газпром» и ее место на экономическом мировом рынке. Рассмотрены причины и предпосылки к расширению зон влияния с помощью маркетинговой деятельности. Подчеркивается важность анализа внешней среды. Приводятся перспективные направления маркетинговой деятельности для ПАО «Газпром».

Ключевые слова: маркетинговая деятельность, устойчивое развитие, имидж, стратегия, диверсификация.

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PROSPECTS FOR MARKETING ACTIVITIES OF PJSC GAZPROM

Annotation: The article discusses the results of the activities of PJSC Gazprom and its place in the global economic market. The reasons and prerequisites for expanding zones of influence through marketing activities are considered. The importance of analyzing the external environment is emphasized. Promising areas of marketing activities for PJSC Gazprom are presented.

Keywords: marketing activities, sustainable development, image, strategy, diversification.

ПАО «Газпром» играет значительную роль в экономике России как крупнейшая государственная компания, занимающаяся добычей, транспортировкой и продажей природного газа. Компания является крупнейшим экспортером природного газа из России, что приносит значительные доходы в бюджет страны и способствует укреплению экономической позиции России на мировом рынке. Несмотря на сложную экономическую и политическую ситуацию в мире, «Газпром» по-прежнему остается основным поставщиком природного газа для внутреннего потребления и экспорта, что обеспечивает энергетическую безопасность страны.

ПАО «Газпром» является вертикально-интегрированной компанией в нефтегазовом секторе, то есть занимается полным спектром работ от геологоразведки и разработки месторождений до переработки и транспортировки газа, нефти и нефтепродуктов. Имея такие большие охваты и масштабы производства, компания нуждается в постоянных и платежеспособных рынках сбыта. Данный аспект деятельности компании в текущих экономических реалиях претерпевает большие изменения.

Компания осуществляет свою маркетинговую деятельность, направленную как на внутренний рынок, так и на внешний, но наиболее перспективным направлением является, конечно, внешняя маркетинговая деятельность. Это обуславливается большим неохваченным внешним рынком, а также несоответствием объемов спроса и предложения внутри страны ввиду больших объемов добычи и переработки углеводородов.

Передел зон влияния на внешнем экономическом рынке, безусловно, затрагивает и нефтегазовую отрасль. Поэтому для успешной разработки и реализации маркетинговой стратегии необходим подробный анализ внешнего рынка для качественного прогноза ситуации ввиду большой турбулентности экономической ситуации. Так, маркетинговая стратегия ПАО «Газпром» направлена на расширение своих активов путем увеличения источников экспертной выручки, а также на удержание уже существующих рынков сбыта нефти, газа и нефтепродуктов и рост влияния на новых перспективных рынках сбыта. Один из приоритетов деятельности — это увеличение объемов производства сжиженного природного газа, в том числе его доля в экспортном портфеле ПАО «Газпром».

Перспективы маркетинговой деятельности ПАО «Газпром» могут быть определены следующими факторами:

1. Развитие технологий. Внедрение новых цифровых инструментов и технологий в маркетинговые стратегии. Это способствует улучшению эффективности коммуникации с потребителями и повышает конкурентоспособность компании.

2. Расширение рынков сбыта. Развитие новых рынков и поиск новых потребителей для продукции.

3. Укрепление имиджа компании. Активное продвижение бренда и формирование положительного образа компании в глазах потребителей

4. Анализ конкурентной среды. Изучение действий конкурентов и адаптация маркетинговых стратегий к изменениям на рынке позволит компании оставаться конкурентоспособной.

5. Устойчивое развитие. Внедрение принципов устойчивого развития в маркетинговые стратегии.

Сохранение достигнутых позиций на европейском рынке способствует стабильному поддержанию прибыли, но для ее увеличения необходимо диверсифицировать рынки сбыта путем выхода в Азиатский и Тихоокеанский регион. Данное сотрудничество уже зарекомендовало себя в других отраслях промышленности страны как крайне эффективное и перспективное, поэтому

есть возможность в ближайшем будущем организовать трубопроводные поставки газа не только в страны Европы, но и в страны Востока, нарастить поставки в Китай. Нельзя исключать перспективы развития смежных сегментов бизнеса, которые сейчас только набирают обороты, к таким относится электроэнергетика.

Таким образом, успешная маркетинговая деятельность ПАО «Газпром» будет зависеть от умения компании адаптироваться к изменяющимся условиям рынка, использовать инновационные подходы и стремиться к устойчивому развитию. Постоянная модернизация подходов к анализу внешней среды и разработке стратегий компании позволит снижать негативное влияние внешней среды на результаты деятельности.

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ОСОБЕННОСТИ PR-ДЕЯТЕЛЬНОСТИ НЕФТЕГАЗОВЫХ КОМПАНИЙ

Аннотация: В статье рассматривается понятие PR-деятельности, ее задачи и применение. Рассмотрена связь PR-деятельности и имиджа компании. Представлены особенности ведения связей с общественностью для компаний нефтегазовой отрасли. Даны характеристики указанным особенностям, причины их возникновения.

Ключевые слова: нефтегазовые компании, эффективное взаимодействие, имидж, стратегия, PR-деятельность.

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FEATURES OF PR ACTIVITIES OF OIL AND GAS COMPANIES

Abstract: The article examines the concept of PR activity, its objectives and application. The relationship between PR activity and the company's image is considered. Features of public relations for companies in the oil and gas industry are presented. Characteristics of these features and the reasons for their occurrence are given.

Keywords: oil and gas companies, effective interaction, image, strategy, PR activity.

В настоящее время тяжело представить крупную компанию, которая не имеет PR-стратегии и не занимается изучением мнения общественности о своей компании. Для формирования общественного мнения PR-специалисты используют различные методы и инструменты, включая взаимодействие со СМИ, партнерами и другими заинтересованными сторонами, взаимодействие с государственными органами.

Деятельность во связям с общественностью направлена на формирование определенного положительного имиджа в общественном сознании для повышения лояльности к компании и увеличению конкурентоспособности. Причем PR-деятельность актуальна не только для коммерческих организаций, но и для государственных учреждений и некоммерческих организаций.

Такое взаимодействие с общественностью всегда носит двухсторонний характер, так как компании не только транслируют желаемое представление о своей деятельности, путем предоставления информации и социальных действий, но и собирают и анализируют мнение людей о функционировании организации. На основании глубокого всестороннего анализа собранной информации выявляются слабые места PR-стратегии для ее последующего корректирования.

Имидж компании среди аудитории, формируемый деятельностью по связям с общественностью, должен строиться только на достоверной информации, используя индивидуальность и существующие преимущества организации. К задачам PR можно отнести не только информирование общественности, но и создание доверительных отношений с аудиторией для поддержания эффективного взаимодействия.

Кроме упомянутых аспектов PR-деятельности стоит отметить, что она также должна помогать в управлении кризисными ситуациями. К этому можно отнести как превентивные меры, которые учитываются при создании стратегии, так и обеспечение быстрого реагирования на уже возникшие негативные ситуации, для чего разрабатываются антикризисные стратегии для восстановления репутации.

При разработке PR-стратегии важно соблюдать стратегические цели компании, а также формировать ее учитывая меняющиеся условия внешней среды. Все указанные аспекты ведения PR относят ко всем организациям и публичным лицам, в том числе и к компаниям нефтегазового сектора.

Но ввиду определенной специфики деятельности предприятий топливно-энергетического комплекса их взаимодействие с общественностью имеет особенности. Это обуславливается не только уникальным и своеобразным фронтом работы, но и разными видами взаимоотношений, которые в большинстве своем присущи компаниям ТЭК. Ниже рассмотрены особенности PR-деятельности нефтегазовых компаний:

1. Кризисное управление в области экологии. Так как деятельность компаний напрямую связана с природой и экологией, важно, чтобы PR-специалисты оперативно реагировали на различные аварии и утечки, чтобы предоставлять актуальную информацию и общаться с заинтересованными сторонами.

2. Социальная ответственность. Из-за агрессивного вмешательства в экосистемы регионов, где компании ведут свою деятельность, общественность может негативно относиться к предприятиям, поэтому необходимо развивать регионы присутствия, вкладывая средства в инфраструктуру и социальную поддержку населения, а также информировать аудиторию о положительных вкладах.

3. Работа с государственными органами. Большой вклад в экономику страны и ее места на мировой арене обязывают нефтегазовые компании взаимодействовать с государственными регуляторами и органами

власти. Это в том числе обосновывается государственным регулированием природопользования и пользования недр.

4. Международное взаимодействие. Особенность функционирования компаний ТЭК предполагает взаимодействие с международными партнерами и регуляторами. Поэтому важно PR-стратегию формировать с учетом выхода на мировой рынок, а также уметь коммуницировать с представителями различных культур.

5. Специфика информации. PR-специалисты нефтегазовых компаний должны хорошо разбираться в технических аспектах деятельности, чтобы уметь достоверно и популярно донести необходимую информацию и процессах и технологиях до аудитории.

6. Внутренний PR. Широкий территориальный разброс обязывают предприятия ТЭК проводить PR внутри компании среди сотрудников, чтобы объединять их в единый коллектив и транслировать миссию и политику компании.

В заключение, PR-деятельность нефтегазовых компаний играет критически важную роль в формировании их имиджа и управлении репутацией в условиях высокой конкуренции и общественного внимания. Учитывая специфику отрасли, включая экологические вызовы, социальные аспекты и необходимость прозрачности, компании должны разрабатывать стратегически продуманные PR-кампании. Эффективное взаимодействие с общественностью, активное участие в социальных инициативах и внимание к устойчивому развитию становятся неотъемлемыми компонентами успешной PR-стратегии.

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ОСОБЕННОСТИ ВОДНОГО РЕЖИМА И АДАПТАЦИОННЫХ СВОЙСТВ ВНУТРИВИДОВЫХ ФОРМ ПШЕНИЦЫ В РАЗЛИЧНЫХ УСЛОВИЯХ СРЕДЫ

Аннотация: Изучен водообмен видов пшеницы в условиях Сурхандаринской области.

Ключевые слова: пшеница , рост, развитие, зерно, транспирация, экологические факторы.

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FEATURES OF WATER REGIME AND ADAPTIVE PROPERTIES OF INTRASPECIFIC FORMS OF WHEAT UNDER DIFFERENT ENVIRONMENTAL

Abstract: it has been learned features of water exchange during the of wheat varieties in soil climatic condition in surkhandarya region.

Key words: triticum v. growth, development, number of grain, transpiration, ecological factors.

Процессы роста и фотосинтеза пшеницы, обуславливающие накопление биомассы и урожая, определяются в большой степени регуляцией водного режима растений в период вегетации. Недостаточная влажность сдерживает поглощение растением воды, вследствие чего замедляются рост и развитие растений. В свою очередь это приводит к дефициту воды в растениях, которые вынуждены регулировать водный режим. В связи с этим значительный интерес представляют исследования водообеспеченности листьев в течение вегетации растений.

Как установлено, наиболее интенсивный процесс обезвоживания в листьях растения происходит в конце октября – начале ноября. При этом у К-55563 х К-24596 под влиянием недостаточного водоснабжения обезвоживание листьев продолжалось вплоть до прекращения вегетации, а у остальных, менее устойчивых общее содержание воды в листьях стабилизируется в начале ноября и таким остается вплоть до зимы. Заметно различие в ходе обезвоживания листьев разновозрастных форм растений. Наиболее интенсивно этот процесс протекает у растений оптимального срока сева (5 ноября) по сравнению с поздним (20 ноября). Выявлено, что процесс

вегетации и динамика водного режима у изученных форм изменялись в пределах, обуславливающих меньшее число нарушений жизненных функций растения. Следует отметить, что содержание воды в листьях не остается постоянным: оно заметно меняется по фазам развития растений. Максимальная величина оводненности листьев по сравнению с контролем и другими наблюдалась у Ф-1.

Например, если у этой комбинации Ф-1 в фазе кущения содержание общей воды в листьях составляло 72.7%, то в фазе трубкования – 69.2%. Небольшое колебание содержания воды в листьях растения этой комбинации в разных фазах развития, возможно, связано с такими морфологическими особенностями листьев, как способность свертывать листовые пластинки в экстремальных условиях.

Показано, что резкий спад общей оводненности листьев растений отмечается в фазе налива зерна. В результате этого содержание воды в листьях растений не остается постоянным как в течение дня, так и в период вегетации. Следует отметить, что наименьшая оводненность для всех комбинаций отмечается в утренние часы, затем в середине дня она повышается. К вечеру опять наблюдается снижение содержания воды в листьях, хотя оно не достигает уровня утренних часов. Максимальная величина оводненности листьев отмечается в апреле (фаза колошение-цветение), минимальная - в мае (фаза налива зерна). При этом наблюдается различие по показателям общей оводненности листьев растений в зависимости от форм пшеницы.

В фазе трубкования в середине дня наименьшая интенсивность транспирации отмечена у комбинаций Ф-1 и Ф-3 (423,6 и 398,2 мг/г сутки сухой массы соответственно).

Снижение транспирации в листьях растений этих комбинаций в середине дня объясняется уменьшением содержания воды в корнеобитаемом слое почвы.

В таблице 1.3 приведены данные по интенсивности транспирации за один час у формы растений в зависимости от фазы развития. Выявлено, что у Ф-1 в среднем за три года исследований установлен наименьший показатель потери воды за определенный промежуток времени (от 15 до 60 мин.) по сравнению с контролем и другими формами пшеницы.

В результате проведенных исследований установлено, что в течение трех сроков определения за первые 30 минут листья пшеницы формы К-55563 х К-55571 и К-55571 х К-24596 больше теряли воды, чем листья К-55563 х К-24596, что свидетельствует о меньшей устойчивости этих форм в экстремальных условиях, в частности в условиях засухи.

Таблица 1.1

Интенсивность транспирации у разных форм в течение часа, %

Формы пшеницы	Фазы развития			
	кущение	трубкование	колошение	налив зерна
Контроль	24.6±0.59	32.6±0.65	40.1±0.97	36.8±0.85
Ф-1	23.3±0.56	30.5±0.50	36.8±0.96	33.8±0.90
Ф-2	24.7±0.59	31.2±0.64	39.6±0.95	36.3±0.84
Ф-3	23.8±0.57	33.4±0.52	38.3±0.88	35.6±0.82
Ф-4	24.2±0.58	32.3±0.65	33.8±0.90	36.3±0.84

Примечание: полученные значения достоверно отличается от показателей контрольного варианта при $P < 0,05$

Обобщая полученные результаты можно заключить, что оптимальная оводненность тканей в течение вегетации при дефиците влаги способствует лучшему формированию элементов структуры продуктивности и, тем самым, повышению урожайности растения.

Таким образом, сравнение различных внутривидовых форм пшеницы по особенностям водного режима показало, что генетически обусловленный признак «свертывание листа», срабатывающий в ответ на экстремальное воздействие факторов окружающей среды, способствует меньшим колебаниям общей оводненности тканей и расходу воды на транспирацию.

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СУРХОНДАРЁ ВИЛОЯТИДА ДОРИВОР ЎСИМЛИКЛАРНИ ЎРГАНИШ МУАММОЛАРИ

Аннотация: Мақолада, Бойсуннинг бетакрор табиати, шифобаҳш гиёҳлар ва зироат ресурсларини ўрганишга қаратилган илмий тадқиқотлар таҳлил этилган. Ўзбекистонда доривор ўсимликларни ўрганиш ва уларни фармацевтика саноатига қўллаш бўйича амалга оширилаётган тадқиқотлар, хусусан, Сурхондарё вилоятларида кенг тарқалган доривор ўсимликларнинг биологик ва фармакологик хусусиятлари ҳақида сўз боради.

Калит сўзлар: Доривор ўсимликлар, Бойсун, фармацевтика саноати, шифобаҳш гиёҳлар, экспорт, доривор ўсимликларни ўрганиш, экологик тадқиқотлар.

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PROBLEMS OF STUDYING MEDICINAL PLANTS IN SURKHANDARYA REGION

Annotation: The article analyzes scientific research on the unique nature of Boysun, medicinal herbs, and the utilization of plant resources. It discusses ongoing studies in Uzbekistan regarding medicinal plants, particularly focusing on the biological and pharmacological properties of medicinal plants in the Boysun and Surkhandarya regions.

Keywords: Medicinal plants, Boysun, pharmaceutical industry, medicinal herbs, export, plant research, ecological studies.

Мустақиллик йилларида мамлакатимизда фармацевтика соҳасида иқтисодий ислохотларни янада чуқурлаштириш, янги ишлаб чиқариш қувватларини ишга тушириш ва мавжудларини модернизация қилиш, чет эл инвестицияларини жалб қилиш учунқулай шароитлар яратиш, жаҳон бозорида рақобатдош тайёр маҳсулотлар ишлаб чиқариш ҳажмларини ва

унинг турларини кенгайтиришга қаратилган таркибий ўзгартиришлар амалга оширилди. Натижада 146 та маҳаллий фармацевтика корхонаси томонидан 2000 хилдан ортиқ дори - дармон воситаларини ишлаб чиқариш йўлга қўйилди. 2016 йил якунлари бўйича мамлакатимиз фармацевтика бозорида маҳаллий дори - дармон воситаларининг улуши 55 фоизни ташкил этди.

Шу билан бирга, тармоқда бугунги кунда олиб борилган таҳлиллар ички бозорни маҳаллий дори - дармон воситалари ҳамда тиббиёт буюмлари билан янада кўпроқ тўлдириш учун республикамизнинг фармацевтика соҳасини ривожлантириш бўйича янада самарали чора-тадбирлар кўриш зарурлигини кўрсатмоқда. Таъкидлаш жоизки, дунё фармацевтика саноатида 8500 турдаги дори-дармон воситалари ишлаб чиқарилаётган бўлса, уларнинг 6300 таси халқимиз эҳтиёжлари учун импорт қилинади.

Маҳаллий хомашё ва доривор ўсимликлар асосида дори-дармон воситаларини ишлаб чиқаришни кенгайтириш ҳисобига фармацевтика маҳсулотларининг маҳаллийлаштирилишини чуқурлаштириш ҳамда кенгайтириш, шунингдек, уларни тиббиёт амалиётига кенг жорий этиш долзарб масала ҳисобланади. Ҳозирги пайтда халқаро тиббиёт амалиётида фойдаланилаётган 350 турдаги доривор ўсимликлардан 71 таси республикамизда ташкил этилган саноат плантацияларида етиштирилади. Бу эса талаб ва эҳтиёж катта бўлган дори - дармон воситаларини маҳаллий шароитда узлуксиз ишлаб чиқариш учун етарли эмас, албатта. Шунининг илоҳиятига олган ҳолда, ишлаб чиқариш қувватларига яқин бўлган экологияси тоза ва соф бўлган туманларда янги плантацияларни ташкил этиш ривожланаётган фармацевтика соҳасининг долзарб вазифаларидан бири ҳисобланади.

Ўзбекистонда доривор ўсимликларнинг 577 тури аниқланган бўлиб, ҳозирги вақтда 250 тури илмий таъбиқатда ишлатилмоқда. Шу кўрсатилган доривор ўсимлик маҳсулотларининг 48% табиий ўсимликлардан, 30% маълум ҳудуднинг турли тупроқ - иқлим шароитидаги хўжаликларида тайёрланади. Қолган 22% эса “аралаш” гуруҳни ташкил қилади, яъни бу гуруҳ доривор ўсимлик маҳсулотлари ҳам ёввойи ҳолда ҳам плантацияларда етиштирилган ўсимликлардан йиғилади.

Доривор ўсимликларни етиштириш технологияси маълум фармацевтик, биологик, экологик, агрономик ва агрохимик, бошқа билимларни умумметодологик қоидаларни билиш зарурлигини тақозо этади.

Доривор ўсимликларни 2 хил тавсифлаш қабул қилинган: 1. Таъсир қилувчи моддаларнинг таркибига қараб - алколоидли, гликозидли, эфир мойли, витаминли ва бошқалар; 2. Фармокологик кўрсаткичларига қараб - тинчлантирувчи, оғриқ қолдирувчи, ухлатувчи, шунингдек, юрак - қон томир тизимига таъсир қилувчи, марказий асаб тизимини қўзғатувчи, қон босимини пасайтирувчи ва бошқа доривор ўсимликлар. Инсон организмига шифобахш моддаларни таъсири доривор ўсимликларнинг таркибидаги бирикмаларнинг миқдорига боғлиқ. Бу бирикмалар мавсумга боғлиқ ҳолда ўсимликнинг ҳар - хил қисмларида турли миқдорда тўпланади. Дори шакллари тайёрлаш учун ўсимликнинг ишлатилган зарур қисмлари турли муддатларда йиғилади.

Ўзбекистонда кейинги йилларда профессор Б.Ё. Тухтаев томонидан маҳаллий шароитда доривор ўсимликларни иқлимлаштириш ва етиштириш бўйича самарали илмий натижаларолинди. У томонидан Ўзбекистоннинг шўр тупроқларида 111 тур доривор ўсимликлар интродукция қилинган ёки бошқача қилиб айтганда бу доривор ўсимликлар республикамиз иқлим шароитида ватан топган доривор ўсимликлар ҳисобланади. Ҳозирги пайтда доривор ўсимликлардан оддий игир (*acorus calamus* L.), райхон (*ocimum basilicum* L.), доривор асорун (*valeriana officinalis* L.), доривор тирноқгул (*calendula officinalis* L.), буйрак чойи - (*orthosiphon stamineus* Benth.), доривор мойчечак (*matricaria chamomilla* L.), тукли эрва (*aerva lanata* L.), доривор маврак (*salvia officinalis* L.), бозулбанг (*lagochilus inebrians* Bunge), ўткир баргли сано (*cassia acutifolia* Del.), туркман мандрагораси (*mandragora turcomanica* Mizg.), қора мевали арония (*aronia melanocarpa* L.), доривор розмарин (*rosmarinus officinalis* L.), оддий қулмоқ (*humulus lupulus* L.), Япон софораси (*sophora japonica* L.), стевия (*stevia rebaudiana* Bertoni), кизил эхинацея (*echinacea purpurea* L.), заъфарон (*Crocus*L.) ва бошқалар ўрганилган. Ҳозирги кунда юқорида келтирилган 30 га яқин доривор ўсимлик турларининг катта ёки кичик масштабдаги плантациялари мавжуд.

ЎзР ФА Ботаника институти, Ўсимлик моддалари кимёси институти, Тошкент фармацевтика институти илмий ходимлари билан Термиз давлат университетининг профессор – ўқитувчилари томонидан узвий илмий ҳамкорлик ўрнатилган.

Хулосалар:

1. Сурхондарё табиатдаги доривор ўсимликларни ўрганиш, захираларини аниқлаш ва хом - ашёни тайёрлашни илмий тарзда тўғри режалаштириш зарур.

2. Ўзга худудларга мансуб бўлган доривор ўсимликларни интродукция қилиш ва иқлимлаштириш, уларнинг плантацияларини ташкил этиш, хом - ашёни тайёрлаш, ҳамда қайта ишлаш натижасида тайёр шифобахш дори шакллари ишлаб чиқишни ташкил этиш.

3. Доривор ўсимликлардан тайёрланган турли дори шакллари ва воситаларини маҳаллий аҳолига етарли миқдорда тайёрлаш ва экспорт салоҳиятини кўпайтириш замон талаби ҳисобланади.

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СУРХОН ҚЎРИҚХОНАСИ ФЛОРАСИ ТАРКИБИДА ЭНДЕМ ТУРЛАРИ ВА УЛАРНИНГ БИОЭКОЛОГИЯСИ

Аннотация: Ушбу мақолада Сурхон давлат қўриқхонаси флорасининг ўзига хос хусусиятлари, жумладан, Кўҳитанг тизмасида тарқалган эндемик ўсимликлар турлари таҳлил қилинган. Мақолада Сурхон давлат қўриқхонаси флорасининг географик таркиби ва экологик аҳамияти ўрганилиб, ўсимликлар турининг генофонди ва биохилма-хиллигини сақлаб қолиш муҳимлиги таъкидланган.

Калит сўзлар: Сурхон қўриқхонаси, Кўҳитанг тизмаси, эндемик ўсимликлар, Тоғли Ўрта Осиё флора провинцияси, биохилма-хиллик.

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THE FLORA OF SURKHAN RESERVE INCLUDES ENDEM SPECIES AND THEIR BIOECOLOGY

Annotation: This article examines the unique features of the flora of the Surkhan State Reserve, including endemic plant species found in the Kohitang Range. The geographical composition and ecological importance of the reserve's flora have been analyzed, emphasizing the necessity of preserving the plant species gene pool and biodiversity.

Keywords: Surkhan Reserve, Kohitang Range, endemic plants, Mountain Central Asia floral province, biodiversity.

Сурхон давлат кўриқхонаси жойлашган Кўхитанг тизмаси Россия Ботаниклар уюшмасининг президенти, Ўрта Осиё флорасининг йирик билимдони Р.В. Камелиннинг диққат марказида бўлиб келган. У 1973 йилда нашр эттирган асарида Тоғли Ўрта Осиёда Кўхитанг тизмасининг тутган ўрнига баҳо беради ва уни Тоғли Ўрта Осиё провинциясининг Фарбий Ҳисор округи таркибига киритади. Айнан, у Кўхитанг тизмасининг флористик хилма-хиллиги масаласига оидинлик киритади ва С.А. Невскийнинг дастлабки маълумотларини бойитади [1].

Кўхитанг тизмасининг флораси Тоғлиўртаосиё флораларига хос хусусиятларга эга ҳамда таркибида эндем турлари кўплиги билан бошқа худуд флораларидан ажралиб туради.

Кўхитанг тизмасининг шарқий ёнбағрида жойлашган Сурхон кўриқхонасининг флораси 77 оила, 372 туркумга мансуб, 743 турдан иборат бўлиб, кўриқхона флорасининг географик элементлар таркиби Қадимий Ўртаерденгизи флораси учун характерлидир [2]. Ксерофит хусусиятга эга бўлган Қадимий Ўртаерденгизига хос турлар тизма флорасида 296 турни (умумий турларнинг 39,83%) ташкил этса, Тоғлиўртаосиё турлари 164 турдан (22%) иборат. Шунингдек, Кўхитанг тизмаси умумий флораси таркибининг 12% ареали кенг майдонларга тўғри келадиган (палеарктика, голарктика, плурегионал) турлар ёки ёввойи ўт ўсимликлар (*Chenopodium album* L., *Parietaria serbica* Panc., *Convolvulus arvensis* L. кабилар) ташкил этади.

Кўхитанг тизмаси худуди Туркменистон ва Сурхон-Шеробод чўл-текисликларига яқин бўлганлиги учун бу ерда чўл минтақасига хос бўлган турон типи вакиллари (*Alhagi kirghisorum* Schrenk, *Aphanopleura capillifolia* (Regel et Schmalh.) Lipsky, *Cryptospora omissa* Botsch., *Spinacia turkestanica* Pjin.) кам ҳолда (16 тур ёки 2,15%) ҳам кўп учрайди.

Шундай қилиб ареал типларининг таҳлили натижаси шуни кўрсатадики, Сурхон кўриқхонасининг флораси Тоғлиўртаосиё флораларига хос хусусиятларга эга ҳамда таркибида Кўхитанг тизмасининг эндем турлари кўплиги билан ажралиб туради.

Сурхон давлат кўриқхонаси флорасида Тоғли Ўрта Осиё провинцияси таркибига кирувчи 6 оила, 7 туркумга мансуб 8 турдаги эндем турлар тарқалган. Улардан 1 таси яъни, *Lepidolopha fedtschenkoana* Knorring тури Кўхитанг тоғ тизмасида жойлашган Сурхон давлат кўриқхонасининг эндем ўсимлиги ҳисобланади. Бу тур асосан кўриқхонага яқин жойлашган қишлоқ аҳолиси томонидан ўтин сифатида чопиб кетилиши сабабли популяцияси камайиб кетмоқда.

Тоғли Ўрта Осиё провинциясининг эндем туркум ва турлари

Оиласи	Тур	Биоэкологияси
<i>Brassicaceae</i>	<i>Trichochiton inconspicuum</i> Kom.	Ўрта Осиёда тарқалган тур. Кўхитанг тизмасининг пастки адир қисмида кенг тарқалган бўлиб, асосан майда тошли, қумлоқ ва соз тупроқли ерларда ўсади.
<i>Apiaceae</i>	<i>Lipskya insignis</i> (Lipsky) Nevski	Жанубий Помиролой учун тор эндем тур. Кўхитанг тизмаси худудида Вандоп бўлимининг жанубий қисмида д.с. 1000 м баландликда гипсли, ола жинсли, тош тупроқли ёнбағирликларда ўсади. 100 м ² майдонда 100-120 туп атрофида тарқалган. Камайиб бораётган тур. Ўзбекистон Республикасининг “Қизил китоби” га киритилган.
	<i>Korshinskya olgae</i> (Regel et Schmalh.) Lipsky	Жануби-Ғарбий Ҳисор тоғ тизмаларидаги ареали ажралган камёб ўсимлик. Сурхон кўриқхонасида Кампиртепа, Шалқон, Қизилолма ва Хўжанко бўлимларида д.с. 2500 м баландликда тошли, шағалли, ола жинсли ёнбағирларда тарқалган.
<i>Plumbaginaceae</i>	<i>Chaetomon setiferum</i> (Bunge) Lincz.	Ўрта Осиё паст текистликларида тарқалган эндем тур. Асосан Кўхитанг, Туркменистон паст тоғлари, Ҳисор ва Бойсун тоғ тизмаларида тарқалган.
<i>Scrophulariaceae</i>	<i>Spirostegia bucharica</i> (B.Fedtsch.) Ivanina	Жануби-ғарбий Помир Олойдаги камёб, эндем ўсимлик. Кўхитанг тизмасида Қизилолма бўлими Зарутсой сойининг шимолий ёнбағрида учрайди. Сурхон кўриқхонаси худудидан ташқарида Лойлик кишлоғи атрофида кичкина популяцияси аниқланган. Асосан гипсли оҳактошларда, гипсли қояларда тўп-тўп бўлиб ўсади. 100 м ² майдонда ўртача 15-20 донани ташкил этади. Ўзбекистон Республикасининг “Қизил китоби” га киритилган.
<i>Campanulaceae</i>	<i>Sergia regelii</i> (Trautv.) Fed.	Ўрта Осиёда кам учрайдиган тур. Асосан Кўхитанг, Бойсун ва Каттақурчуқ, Тахтақарачи, Ҳисор тизмаларида шағалли ва майда тошли, соз тупроқли ёнбағирларда д.с. 2200-2800 м баландликда ўсади
<i>Asteraceae</i>	<i>Lepidolopha fedtschenkoana</i> Knorring	Тоғли Ўрта Осиёда жуда кам учрайдиган турлардан бири. Фақатгина Кўхитанг тизмасининг Боғлидара ва Танги-Дувал худудларида д.с. 1000 м баландликда тош ёриқларида, тошли ва шағалли ёнбағирларда учрайди. Асосан якка-якка ҳолда тўп-тўп бўлиб ўсади
	<i>Lepidolopha nuratavica</i> Krasch.	Нурота ва Кўхитанг тизмаларида тарқалган камёб ўсимлик. Кўриқхонада фақат битта популяцияда, яъни Боғлидара худудида аниқланди. Тўп-тўп бўлиб, тошли ёнбағирларда д.с. 1200-1500 м баландликда (100 м ² майдонда ўртача 5-10 дон) ўсади.

Сурхон кўриқхонаси флораси таркибида тарқалган Тоғли Ўрта Осиё провинциясининг эндем турлари Кўхитанг тизмасининг 0,8 %, Сурхон кўриқхонаси флорасининг 1,1 % ни ташкил этади. Бу эса Кўхитанг

тизмасининг Ўзбекистонда ўсимликлар генофондини ҳамда биохилма-хиллигини сақлаб қолишда муҳим аҳамиятга эга эканлигини кўрсатади.

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ЗНАЧЕНИЕ ПСИХОЛОГИИ В УВЕЛИЧЕНИИ ПРОДОЛЖИТЕЛЬНОСТИ ЖИЗНИ ЛЮДЕЙ

Аннотация

Статья посвящена роли психологии в увеличении продолжительности жизни человека. В ней рассматриваются основные психологические факторы, влияющие на здоровье и долголетие, такие как стресс, эмоциональное благополучие, социальные связи и психотерапевтическая поддержка. Особое внимание уделено влиянию стресса на физическое состояние организма и способам его управления посредством психологической практики. Также уделяется внимание важности позитивного восприятия жизни и социальной поддержке в улучшении качества жизни и замедлении процессов старения.

Ключевые слова: практика, фактор, эмоция, стресс, гормон, иммунная система, гипертония.

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IMPORTANCE OF PSYCHOLOGY IN INCREASING HUMAN LIFE EXPECTANCY

Abstract

The article is devoted to the role of psychology in increasing human life expectancy. It examines the main psychological factors affecting health and longevity, such as stress, emotional well-being, social connections and psychotherapeutic support. Particular attention is paid to the impact of stress on the physical condition of the body and ways to manage it through psychological practice. Attention is also paid to the importance of a positive perception of life and social support in improving the quality of life and slowing down the aging process.

Key words: practice, factor, emotion, stress, hormone, immune system, hypertension.

Продолжительность жизни является важным показателем здоровья и благополучия населения. Современные исследования показывают, что она зависит не только от физического состояния организма, но и от психологического благополучия человека. Психология играет ключевую роль в поддержании здоровья, увеличении продолжительности жизни и улучшении качества жизни на всех этапах существования.

Одним из основных факторов, сокращающих продолжительность жизни, является стресс. Хронический стресс может привести к развитию различных заболеваний, таких как гипертония, заболевания сердца, диабет, расстройства иммунной системы. Психологический стресс активирует механизмы, которые в долгосрочной перспективе ослабляют организм. Например, стресс вызывает выброс гормонов, таких как кортизол, который, при длительном воздействии, негативно сказывается на внутренних органах и тканях, стареет организм быстрее.

Психология помогает людям осознавать источники стресса, управлять эмоциональными реакциями и снижать уровень напряжения. Развитие стрессоустойчивости, а также использование методов релаксации и медитации, способствует снижению уровня стресса и поддержанию здоровья.

Психологическое состояние человека напрямую влияет на его физическое здоровье. Оптимистический взгляд на жизнь, положительное мышление и высокие уровни эмоционального интеллекта ассоциируются с более высокой продолжительностью жизни. Люди, которые умеют справляться с трудностями и сохранять позитивный настрой, реже страдают от депрессии и имеют более низкие риски сердечно-сосудистых заболеваний.

Психология также помогает человеку осознать важность самопомощи и заботы о своем теле. Это может включать в себя правильное питание, регулярные физические нагрузки, отказ от вредных привычек, таких как курение или злоупотребление алкоголем. Осознание своей ценности и забота о себе мотивируют на активные действия, которые способствуют укреплению здоровья и увеличению продолжительности жизни.

Социальные связи играют важную роль в жизни человека и его здоровье. Люди, имеющие сильную социальную сеть, такие как поддерживающая семья, друзья и коллеги, живут дольше. Психология подчеркивает важность социальных взаимодействий, которые способствуют снижению стресса, улучшению настроения и поддержанию психоэмоционального баланса.

Люди, которые ощущают социальную поддержку, могут легче справляться с трудными ситуациями и быстрее восстанавливаться после болезней. Психологи и психотерапевты помогают людям развивать навыки эффективного общения, поддержания здоровых отношений и формирования позитивной социальной среды, что в свою очередь положительно влияет на продолжительность жизни.

Не менее важным фактором является психотерапия, которая помогает людям справляться с глубокими эмоциональными проблемами, травмами и

депрессиями. Множество заболеваний, таких как хроническая боль, диабет, депрессия и другие, могут быть связаны с неразрешенными психологическими проблемами. Психотерапевты помогают пациентам проработать свои переживания, избавиться от негативных установок и научиться новым способам преодоления жизненных трудностей.

Психология старения изучает, как возрастные изменения влияют на личность и здоровье. Оптимистическое отношение к старению и активный образ жизни могут замедлить процессы старения и улучшить качество жизни в пожилом возрасте. Психологическое восприятие старости играет важную роль в том, как человек воспринимает свои возрастные изменения и как адаптируется к новым жизненным условиям.

Кроме того, психологи работают с пожилыми людьми, помогая им адаптироваться к изменениям в жизни, снижать уровень тревоги и депрессии, а также развивать позитивное отношение к процессу старения. Эти усилия не только увеличивают продолжительность жизни, но и делают ее более насыщенной и удовлетворяющей.

Таким образом, психология играет важную роль в поддержании здоровья и увеличении продолжительности жизни. Управление стрессом, психологическое благополучие, развитие социальных связей и эффективная психотерапия — все это способствует не только улучшению качества жизни, но и снижению риска развития многих заболеваний, способных сокращать жизнь. Психологические практики, направленные на развитие позитивного мышления и умение справляться с трудностями, становятся важной частью общего подхода к укреплению здоровья и долголетию.

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МЕТОДИКА ДИАГНОСТИКИ ЗНАНИЙ, УМЕНИЙ И КВАЛИФИКАЦИИ СТУДЕНТОВ В ВЫСШЕЙ ШКОЛЕ

Аннотация: В статье рассматриваются современные подходы и методы диагностики знаний, умений и квалификации студентов в системе высшего образования. Раскрывается значение диагностики в образовательном процессе, анализируются ключевые инструменты и их эффективность. Отмечается роль педагогов в адаптации методик диагностики к индивидуальным потребностям студентов.

Ключевые слова: диагностика, высшее образование, методы оценки, компетенции, педагогика.

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METHOD OF DIAGNOSTICS OF KNOWLEDGE, SKILLS AND QUALIFICATIONS OF STUDENTS IN HIGHER EDUCATION

Abstract: The article considers modern approaches and methods of diagnostics of knowledge, skills and qualifications of students in the system of higher education. The importance of diagnostics in the educational process is revealed, key tools and their effectiveness are analyzed. The role of teachers in adapting diagnostic methods to the individual needs of students is noted.

Keywords: diagnostics, higher education, assessment methods, competencies, pedagogy.

Введение

Современное высшее образование нацелено не только на передачу знаний, но и на формирование у студентов ключевых компетенций, необходимых для успешной профессиональной деятельности. Важным инструментом достижения этой цели является диагностика знаний, умений и квалификации студентов. Эффективная диагностика позволяет выявить уровень подготовки студентов, определить их сильные и слабые стороны, а также корректировать образовательный процесс. Актуальность темы обусловлена необходимостью внедрения инновационных методов диагностики, соответствующих современным требованиям общества и рынка труда.

Основная часть

Диагностика знаний и умений студентов должна быть системной и многоуровневой, охватывая различные этапы обучения. На начальных этапах важна диагностика входного уровня знаний, которая помогает выявить подготовленность студентов к изучению курса и их потенциальные затруднения. Для этого широко используются входные тесты, анкетирование и диагностические задания. Эти методы позволяют преподавателю адаптировать учебный план и выбрать наиболее эффективные педагогические стратегии.

В процессе обучения акцент делается на текущую диагностику, которая позволяет оценить прогресс студентов и оперативно корректировать образовательный процесс. Текущая диагностика включает тесты, контрольные работы, индивидуальные и групповые задания, а также самооценку. Особенно полезным является применение адаптивного тестирования, когда задания подбираются в зависимости от уровня студента. Такой подход делает процесс диагностики более персонализированным и мотивирующим.

Итоговая диагностика, проводимая в конце учебного модуля или курса, имеет целью оценить степень достижения учебных целей и сформированности компетенций. Традиционные экзамены и зачёты постепенно дополняются инновационными методами, такими как презентация проектов, защита кейсов, участие в деловых играх и моделирование реальных профессиональных ситуаций. Эти подходы позволяют не только проверить знания, но и оценить навыки практического применения информации.

Особое внимание следует уделять диагностике профессиональных компетенций, которые играют ключевую роль в подготовке будущих специалистов. Например, в инженерных и технических специальностях диагностика может включать выполнение лабораторных работ, проектирование, создание прототипов или разработку программного обеспечения. Для педагогических и гуманитарных направлений актуальны ролевые игры, педагогические практики, эссе и тематические дискуссии. Комплексная оценка компетенций помогает выявить готовность студентов к выполнению профессиональных задач.

Одним из перспективных направлений диагностики является применение искусственного интеллекта (ИИ) и аналитики больших данных. Современные системы, такие как Learning Management Systems (LMS), могут автоматически анализировать результаты тестов, участие студентов в учебных активностях и предоставлять рекомендации по улучшению обучения. Это открывает новые возможности для объективной оценки, минимизирует влияние человеческого фактора и экономит время преподавателей. Однако важно учитывать этические аспекты и необходимость конфиденциальности данных студентов.

Еще одним важным аспектом является развитие навыков самооценки у студентов. Самооценка позволяет им осознавать свои сильные и слабые стороны, ставить цели и планировать собственное развитие. Для этого преподаватели могут использовать такие методы, как рефлексивные дневники, таблицы прогресса или обсуждение результатов в рамках групповых занятий. Включение самооценки в процесс диагностики помогает формировать у студентов навыки саморегуляции и ответственности за собственное обучение.

Эффективность диагностики повышается при использовании принципа прозрачности. Преподаватели должны разъяснять студентам цели, критерии и методы оценки, что способствует снижению стресса и повышению доверия к образовательному процессу. Например, предоставление студентам детальной обратной связи по выполненным заданиям помогает им лучше понять, на что следует обратить внимание, и как улучшить свои результаты.

Наконец, интеграция диагностики с современными образовательными подходами, такими как проектное обучение, смешанное обучение и *flipped classroom* (перевернутый класс), позволяет не только оценивать, но и развивать ключевые компетенции. В таких моделях диагностика становится частью самого процесса обучения, способствуя активному участию студентов, развитию их творческих и аналитических способностей.

Таким образом, диагностика знаний, умений и квалификации студентов в высшей школе должна быть динамичной, интегративной и ориентированной на компетентностный подход. Это требует от педагогов готовности использовать разнообразные методы, учитывать индивидуальные особенности студентов и активно внедрять инновационные технологии.

Важным направлением диагностики в высшем образовании является использование междисциплинарного подхода. Знания и умения студентов зачастую требуют комплексной оценки, особенно в условиях подготовки специалистов для динамично развивающихся отраслей. Например, в медицинских вузах оценка студентов может сочетать проверку теоретических знаний по биологии и химии с практическими навыками диагностики заболеваний, а в технических вузах — проверку математических знаний в сочетании с инженерными навыками. Междисциплинарная диагностика позволяет не только оценить готовность студентов к профессиональной деятельности, но и выявить их способность интегрировать знания из разных областей.

Еще одной перспективной областью является использование геймификации в диагностике. С помощью игровых методов преподаватели могут оценивать не только знания, но и такие важные компетенции, как работа в команде, стрессоустойчивость и креативное мышление. Например, использование симуляторов реальных профессиональных ситуаций или деловых игр позволяет смоделировать условия, приближенные к реальным задачам, с которыми студенты столкнутся в своей профессиональной

деятельности. Эти подходы не только делают диагностику увлекательной, но и позволяют получить более объективную оценку навыков студентов.

В современных условиях важно также учитывать психолого-педагогические аспекты диагностики. Диагностические мероприятия должны проводиться с учетом психологического состояния студентов, их мотивации и уровня стресса. Например, применение формативной оценки, которая направлена не только на контроль знаний, но и на поддержку обучающегося, помогает создать более комфортную образовательную среду. Позитивная и конструктивная обратная связь от преподавателя может стать мощным инструментом повышения уверенности студентов в своих силах и стимулирования их к дальнейшему развитию.

Заключение

Диагностика знаний, умений и квалификации студентов является важным элементом образовательного процесса в высшей школе. Ее эффективность напрямую зависит от выбранных методов и подходов, компетентности преподавателей и готовности студентов к активному участию в диагностическом процессе. Разработка и внедрение инновационных методик, включая использование цифровых технологий и компетентностного подхода, позволяют более полно оценивать уровень подготовки студентов и способствуют повышению качества образования.

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НАПРАВЛЕНИЯ ПОВЫШЕНИЯ ОЦЕНОЧНОЙ СТОИМОСТИ КОМПАНИИ

Аннотация: Оценка стоимости компании требуется в различных обстоятельствах от анализа того, насколько вложенные в бизнес средства преумножились за определенный период функционирования и заканчивая получением конкретной информации по сумме вероятной продажи компании. Существует ряд подходов к оценке стоимости, и часто их синергия помогает сформировать объективное представление об оценочной стоимости, а также определить факторы, благодаря которым эту самую стоимость можно будет повысить. Указанные факторы определяют направления роста стоимости компании, как с точки зрения финансовых показателей, так и результатов деятельности и потенциала самого бизнеса на рынке. А перспективы увеличения оценочной стоимости компании напрямую влияют на её привлекательность для инвесторов и партнеров, а также конкурентное положение, что очень важно в условиях высоких ставок в экономике.

Целью данной статьи является поиск ключевых направлений повышения стоимости компании.

В ходе написания статьи решаются следующие задачи:

- рассмотреть основные подходы к оценке стоимости компании,*
- определить факторы, влияющие на стоимость компании,*
- выявить направления повышения оценочной стоимости компании.*

Ключевые слова: стоимость компании, оценка стоимости, повышение стоимости компании, анализ финансово-хозяйственной деятельности, прибыль.

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DIRECTIONS FOR INCREASING THE ESTIMATED VALUE OF THE COMPANY

Abstract: An assessment of the company's value is required in various circumstances, from analyzing how much money invested in the business has multiplied over a certain period of operation and ending with obtaining specific information on the amount of the likely sale of the company. There are a number of approaches to valuation, and often their synergy helps to form an objective idea of the estimated value, as well as to identify the factors through which this very value can be increased. These factors determine the direction of growth in the company's value, both in terms of financial performance, as well as the results of operations and the potential of the business itself in the market. And the prospects for increasing the estimated value of a company directly affect its attractiveness to investors and partners, as well as its competitive position, which is very important in conditions of high rates in the economy.

The purpose of this article is to find key ways to increase the value of the company.

During the writing of the article, the following tasks are solved:

- consider the main approaches to assessing the value of the company,*
- to identify the factors affecting the value of the company,*
- to identify ways to increase the estimated value of the company.*

Keywords: company value, valuation, company value increase, analysis of financial and economic activities, profit

Оценка стоимости компании представляет собой процесс, в ходе которого определяется финансовая стоимость предприятия с учетом различных факторов, влияющих на текущее финансовое положение, возможности его изменения в будущем и потенциал роста активов, человеческих ресурсов и т.д. [1].

Информационной базой оценки стоимости компании можно назвать материалы бухгалтерской финансовой отчетности, подготовленные в соответствии с законодательством.

Существует ряд подходов, определяющих рыночную стоимость компании.

Доходный подход основан на прогнозировании будущих финансовых потоков компании с учетом дисконтирования, таким образом оценочная стоимость определяется с учетом вероятного потенциала роста, который вполне возможен при текущих ресурсах.

Сравнительный анализ как инструмент основан на сопоставлении показателей анализируемой компании с аналогичными в отрасли, что даст возможность приблизительно понять, сколько стоит подобная организация на конкретном рынке в текущих условиях [2].

Затратный метод предполагает пересчет всех активов компании, которые поддаются оценке, чтобы выявить совокупную сумму, характеризующую оценочную стоимость исследуемого бизнеса.

Они представлены на рисунке 1.

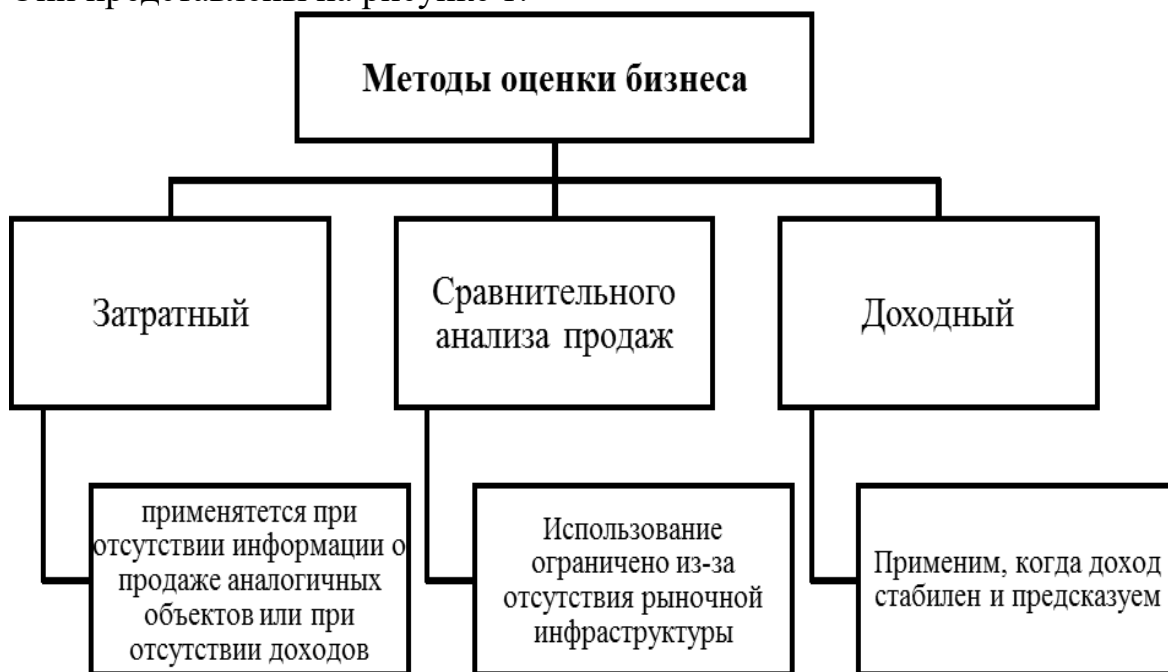


Рисунок 1 – Подходы к определению стоимости компании

Источник: [3]

Соответственно, можно констатировать, что не все подходы учитывают потенциал роста и другие отдельные факторы, а вот синергия подходов может дать более объективный результат оценки. И именно выявление отдельных факторов даст возможность говорить о направлениях повышения оценочной стоимости.

Можно выделить ряд факторов, которые влияют на такую синергетическую стоимость:

- наличие прибыли,
- платежеспособность и ликвидность баланса,
- стоимость имеющихся активов,
- конкурентное положение и динамика занимаемых объемов рынка.

Соответственно, можно выделить направления роста оценочной стоимости компании.

1. Наращивание прибыли.

Рост прибыльности компании может привести к увеличению оценочной стоимости. Достижение результатов в данном направлении возможно путем оптимизации бизнес-процессов, снижения издержек и увеличения объемов продаж.

2. Диверсификация продуктов/услуг.

Разработка новых продуктов или услуг, а также расширение деятельности способствует увеличению потенциала для роста и, следовательно, увеличению оценочной стоимости [4].

3. Оптимизация финансовых показателей.

Проведение качественного финансового анализа дает возможность оптимально распределить имеющиеся активы для достижения такого баланса обязательств, при котором ключевые показатели финансового положения позволят говорить об улучшении уровня платежеспособности и ликвидности.

4. Усиление корпоративного управления.

Эффективное корпоративное управление, предполагающее прозрачность финансов, стабильность отчетных данных могут повысить доверие инвесторов и партнеров, способствуя росту оценочной стоимости.

5. Эффективное использование активов. Оптимизация использования активов компании, таких как недвижимость, оборудование и интеллектуальная собственность, может увеличить ее стоимость [5].

Указанные направления являются лишь общими, которые могут быть использованы для увеличения оценочной стоимости компании. Конкретные стратегии будут варьироваться в зависимости от отрасли, существующего ресурсного состояния.

Для повышения стоимости компании можно использовать систему оценки угроз, которая позволяет выявить наиболее «узкие» аспекты функционирования бизнеса, изменение которых в лучшую сторону позволит повысить оценочную стоимость [6].

Важно отметить, что оценочная стоимость может быть подвержена рисковому воздействию в связи с неконтролируемыми изменениями внутренней и внешней среды, в результате чего необходимо учитывать возможность корректировки параметров, определяющих итоговую стоимость компании. Чтобы объективно оценивать такую вероятность, что также будет заложено в оценке, следует определиться с форматом управления рискованной составляющей.

Существует несколько сторон, с которых можно оценить рискованную составляющую:

1. Правовая сторона – наличие судебных тяжб и споров, способных повлиять на экономическое положение компании;
2. Управленческая сторона – проблемы бизнес-процессов;
3. Экономическая сторона – финансово-экономические показатели.

Общая система оценки представлена в таблице 1.
Таблица 1 - Общие параметры оценки рисков составляющей

Параметр управления рисками	Пояснение
Правовая сторона	наличие судебных тяжб и споров, способных повлиять на экономическое положение компании
Управленческая сторона	Риски бизнес-процесса с точки зрения его функционирования
Экономическая сторона	финансово-экономические показатели

Источник: [7]

При выделении значимости каждой из них в общей системе управления бизнесом можно определить наиболее уязвимые моменты, в направлении которых и нужно будет работать, чтобы повысить оценочную стоимость компании.

Управление рисками может реализовываться следующим образом (таблица 2).

Таблица 2 – Экспертное управление рисками

Вид риска	Эксперт 1	Эксперт 2	Эксперт 3
1. Риск 1			

Источник: составлено автором

Как видно, эксперты формируют перечень ключевых рисков для компании, и выставляют по 5-балльной шкале уровень их опасности, где 5 – максимальный уровень, 0 – отсутствует вероятность риска.

В итоге рассчитывается среднее значение для каждого риска, и затем составляется карта рисков для управления ими. Карта рисков представляет собой графическое изображение пересечения вероятностей возникновения событий в корреляции с серьезности возможных последствий, которые возникнут из-за того, что рискованная составляющая воплотилась в одном из направлений, учтенном в системе оценки рисков.

Формат карты представлен на рисунке 2.

Вероятность событий	Почти точно				
	Вероятно				
	Может быть				
	Почти невозможно				
		Слабая	Умеренная	Значительная	Высокая
		Серьезность последствий			

Рисунок 2 - Модель карты рисков

Источник: составлено автором

Причем почти невозможная вероятность события определяет уровень риска в зеленой зоне даже при потенциале серьезных последствий, а вот если событие достаточно вероятно, то даже при умеренных последствиях рисковая зона становится желтой, т.е. требует повышенного внимания. Высокая же вероятность с возможными значительными последствиями – это красная зона рисков, которая требует немедленного реагирования от руководства компании в формате корректировки бизнес-процессов, чтобы перспектива возникновения такого события сокращалась [8].

По итогам распределения рисков по степени опасности и вероятности можно оценить их влияние на стоимость компании.

Оценка рыночной стоимости компании также учитывает текущие тенденции рынка, в частности:

- спрос и предложение,
- макроэкономические факторы,
- риски ужесточения госрегулирования [6].

Все эти аспекты влияют на стоимость компании на рынке.

Таким образом, в рамках настоящего исследования были выявлены факторы, влияющие на стоимость компании, а также определены направления повышения оценочной её стоимости.

Применение указанной методологии может быть адаптировано под конкретную компанию с учетом особенностей того, какие именно риски будут возникать при её функционировании.

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СОВЕРШЕНСТВОВАНИЕ СИСТЕМЫ УПРАВЛЕНИЯ МАТЕРИАЛЬНЫМИ РЕСУРСАМИ В ОРГАНИЗАЦИИ

Аннотация: В статье проведена оценка эффективности материальных ресурсов молокоперерабатывающего предприятия. Предложены пути совершенствования системы управления материальными ресурсами на основе оптимизации запасов и внедрения инновационных продуктов на базе CRM-систем.

Ключевые слова: материальные ресурсы, управление, оптимизация, запасы, эффективность, оборачиваемость, программный продукт, бизнес-процесс.

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IMPROVING APPROACHES TO THE AUDIT OF THE BANK'S SECURITIES

Abstract: An assessment of the efficiency of the material resources of a dairy processing enterprise is given. The ways of improving the material resources management system based on inventory optimization and the introduction of innovative products based on CRM systems are proposed.

Keywords: material resources, management, optimization, stocks, efficiency, turnover, software product, business process.

Повышение эффективности системы управления материальными ресурсами в организациях тесно связано с качественной оценкой состояния и эффективности производственных запасов, а также автоматизацией бизнес-процессов в цепи их поставок.

Проанализируем показатели эффективности использования материальных ресурсов на молокоперерабатывающем предприятии ОАО «Милкавита» за период 2022-2023 гг. (таблица 1).

Таблица 1 – Динамика показателей эффективности использования материальных ресурсов ОАО «Милкавита» за 2022-2023 гг.

Показатель	2022 г.	2023 г.	Отклонение, +/-	Темпы роста, %
Материальные затраты, тыс. руб.	248607	244018	-4589	98,15
Объем производства продукции, тыс. руб.	317080	287543	-29537	90,68
Выручка от реализации продукции, тыс. руб.	319667	292771	-26896	91,59
Прибыль от реализации продукции, тыс. руб.	33579	1867	-31712	5,56
Материалоотдача, руб.	1,28	1,18	-0,1	92,19
Материалоемкость, руб.	0,78	0,85	0,07	108,97
Прибыль на 1 руб. материальных затрат, руб.	0,14	0,01	-0,13	7,14

Анализируя данные таблицы 1 можно отметить, что за период 2022-2023 гг. в ОАО «Милкавита» материалоотдача имеет тенденцию к сокращению в 2023 г. на 0,1 руб. до 1,18 руб. Прослеживается рост материалоемкости в 2023 г. на 0,07 руб. до 0,85 руб. и снижение прибыли на 1 руб. материальных затрат или на 0,13 руб. Это говорит о снижении эффективности использования материальных ресурсов в 2023 г.

Проведенный анализ показал, что имеется необходимость совершенствования сложившейся системы управления материальными ресурсами, что предусматривает расчет оптимального запаса материальных ресурсов и ускорения их оборачиваемости, а также внедрение современных программных продуктов с целью совершенствования бизнес-процессов в цепи поставок [1]. Расчет оптимального запаса материальных ресурсов и ускорения их оборачиваемости представлен в таблице 2.

Таблица 2 – Расчет оптимального запаса материальных ресурсов и ускорения их оборачиваемости в ОАО «Милкавита»

Показатель	Формула расчета и условные обозначения	Расчет показателей
Величина фактического запаса материальных ресурсов ($Z_{\text{факт}}$)	$Z_{\text{факт}} = Z_{2023} \times (1 - N_c)$ Z – стоимость фактически сформированных запасов материальных ресурсов, руб.; N_c – норма снижения величины запасов материальных ресурсов	$Z_{\text{факт}} = 244018 \times (1 - 0,166) = 203511,01 \text{ тыс. руб.}$ Расчет $N_c = 15,0 + 1,6 = 16,6$
Изменение величины фактического запаса материальных ресурсов ($\Delta Z_{\text{факт}}$)	$\Delta Z_{\text{факт}} = Z_{\text{факт}} - Z_{2023}$	$\Delta Z_{\text{факт}} = 203511,01 - 244018 = -40506,99 \text{ тыс. руб.}$

Средняя стоимость материальных ресурсов за год (MP_{cp})	$MP_{cp} = (Z_{факт} + Z_{2023}) / 2$	$MP_{cp} = (248607 + 244018 - 40506,99) / 2 = 226059,01$ тыс. руб.
Коэффициент оборачиваемости материальных запасов (план) ($K_{об}^{план}$)	$K_{об}^{план} = \frac{B}{MP_{cp}}$ B – выручка от реализации продукции, тыс. руб.; MP – среднегодовая стоимость материальных ресурсов, тыс. руб.	$K_{об}^{план} = 292771 / 226059,01 = 1,30$ оборот
Оборачиваемость материальных ресурсов (план) ($П_{об}^{план}$)	$П_{об}^{план} = \frac{MP_{cp} \times 360}{B}$	$П_{об} = 360 / 1,30 = 276,92$ дня $K_{об}^{2023} = 292771 / 246312,5 = 1,19$ оборот $П_{об}^{2023} = 360 / 1,19 = 302,52$ дня
Размер условно дополнительной выручки, которую может получить организация в результате сокращения длительности одного оборота материальных ресурсов (ΔB)	$\Delta B = \frac{B_{2023} \times (П_{об}^{план} - П_{об}^{факт})}{T=360}$	$\Delta B = 292771 \times (-25,6) / 360 = 20819,27$ тыс. руб.

Таким образом, расчеты показали, что условное высвобождение выручки в ОАО «Милкавита» составит 20819,27 тыс. руб. в год.

Современный логистический подход к организации цепи поставок материальных ресурсов предполагает внедрение уникальных, разрабатываемых для конкретной организации и сферы деятельности, программных продуктов на базе различных ERP, CRM и иных систем.

Так, для ОАО «Милкавита» предлагается внедрить CRM-систему для обработки данных о продажах, организации взаимодействия с клиентами и прогнозирования спроса. Система OMP Plus включает в себя возможности: календарного и операционного планирования, планирования сбыта (S&OP), прогнозирования (collaborativeforecasting), мультиэшелонной оптимизации запасов (MEIO) и др. [2].

Экономический эффект от внедрения рассматриваемой CRM-системы OMP Plus для ОАО «Милкавита» будет выражен в минимизации фактических отклонений прогнозируемого спроса от фактических (снижение величины созданных запасов на 1,6 %), а также в возможности расчета и прогнозирования текущего оптимального размера заказа до рекомендуемого уровня (снижение величины запасов на 15-20 %).

Таким образом, совершенствование системы управления материальными ресурсами в организации будет способствовать оптимизации запасов материалов и автоматизации бизнес-процессов путем внедрения инновационных программных продуктов на базе CRM-систем.

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АГРОТЕХНИКА ВЫРАЩИВАНИЯ АМОРФЫ КУСТАРНИКОВОЙ (AMORPHA FRUTICOSA)

Аннотация

Статья посвящена агротехнике выращивания аморфно-кустарниковой (Amorpha fruticosa), многолетних кустовых растений бобовых, известных своими лечебными методами и высокой устойчивостью к климатическим условиям. В статье рассмотрены основные агротехнические приемы, необходимые для получения выгоды от выращивания аморфии, такие как выбор места для посадки, подготовка почвы, способы размножения, а также особенности ухода за растением на разных этапах его выращивания.

Ключевые слова: агротехника, прием, этап, удобрения, уход, листья, побег.

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AGROTECHNOLOGY OF CULTIVATION OF AMORPHA FRUTICOSA

Abstract

The article is devoted to the agricultural technology of cultivation of amorpha fruticosa, perennial bush legumes known for their medicinal methods and high resistance to climatic conditions. The article discusses the main agricultural techniques necessary to benefit from growing amorpha, such as choosing a place for planting, preparing the soil, propagation methods, as well as the features of caring for the plant at different stages of its cultivation.

Key words: agricultural technology, technique, stage, fertilizers, care, leaves, shoot.

Аморфа кустарниковая (*Amorpha fruticosa*) - это уникальное растение, принадлежащее к семейству бобовых (Fabaceae). Она является многолетним кустарником, который произрастает в основном в Северной Америке, но благодаря своей устойчивости и адаптивности была успешно

интродуцирована в другие регионы мира. У аморфы кустарниковой есть несколько интересных биологических особенностей, которые делают ее объектом изучения и использования в различных областях.

Во-первых, аморфа обладает выдающейся способностью к симбиозу с азотфиксирующими бактериями, что позволяет ей обогащать почву азотом и улучшать ее плодородие. Это качество делает растение ценным для экологической реконструкции и лесовосстановительных проектов, особенно на бедных и истощенных почвах. Кустарник достигает высоты до трех метров. Его стебли мощные и гибкие, часто образуют густые заросли.

Листья аморфы сложные, перистые, с многочисленными мелкими листочками, что обеспечивает значительную площадь для фотосинтеза. Они могут изменять свою окраску в зависимости от времени года, что придает кустарнику декоративный вид.

Соцветия аморфы длинные, цилиндрической или конусообразной формы, украшены густыми кистями фиолетовых цветков с характерными желтыми тычинками. Период цветения приходится на летние месяцы, и каждое соцветие может производить огромное количество нектара, привлекая опылителей, таких как пчелы и бабочки.

Плоды аморфы представляют собой небольшие бобы, которые после созревания становятся коричневыми и содержат до двух-трех семян. Семена обеспечены своеобразными структурами, которые помогают им распространяться на значительные расстояния с помощью ветра и воды.

Аморфа кустарниковая известна своей устойчивостью к засухе и солености почвы, что делает ее идеальным вариантом для использования в ландшафтном дизайне и озеленении местностей с неблагоприятными климатическими условиями. Она также играет важную роль в предотвращении эрозии почв благодаря своей мощной корневой системе, которая удерживает почву, предотвращая ее вымывание.

Благодаря своим характеристикам аморфа кустарниковая используется не только как декоративное растение, но и как ресурс для улучшения агроэкосистем. В то же время важно контролировать ее распространение, так как в некоторых регионах она может проявлять инвазивный характер, подавляя местные виды растений.

Агротехника выращивания аморфы кустарниковой является важным элементом в контексте современной сельскохозяйственной практики и экологического равновесия. Аморфа кустарниковая, известная своим разнообразием полезных свойств и уникальной устойчивостью к неблагоприятным условиям, заслуживает внимания при разработке устойчивых агротехнологий.

Аморфа кустарниковая представляет собой многолетний листопадный кустарник из семейства бобовых, который произрастает преимущественно в теплых и умеренных регионах. Ее широкое распространение обусловлено высокой адаптивностью и способностью к симбиотической фиксации азота, что делает ее отличным компаньоном для улучшения плодородия почвы.

Посадка аморфы кустарниковой требует тщательной подготовки почвы. Оптимальным вариантом является легкая, хорошо дренируемая почва, богатая органическими веществами. Перед посадкой необходимо провести глубокую вспашку и внести комплекс минеральных удобрений для обеспечения начального этапа роста.

Саженьцы аморфы кустарниковой предпочтительно высаживать весной, когда температура почвы достигает оптимальных значений, способствующих прорастанию корневой системы. Рекомендуемое расстояние между кустами составляет от 1 до 1.5 метров для обеспечения достаточного пространства для роста и формирования кроны.

Уход за аморфой кустарниковой включает регулярное рыхление почвы, полив в засушливые периоды, а также использование мульчи для сохранения влаги. Необходимо следить за состоянием листьев и побегов, чтобы вовремя выявить признаки заболеваний или паразитов. Биологический контроль и своевременная обработка природными пестицидами помогут сохранить здоровье растений.

Аморфа кустарниковая также ценится за свои декоративные качества. Красивые фиолетовые цветы придают ландшафтным композициям яркость и оригинальность, а ее плотная листва служит естественным барьером для ветра и пыли. Благодаря своей неприхотливости и универсальности, аморфа кустарниковая часто используется в зелёных насаждениях городских парков и садов.

Повсеместное внедрение агротехники выращивания аморфы кустарниковой способствует улучшению не только агроклиматических условий, но и укреплению экосистемной устойчивости, внедрению практик устойчивого сельского хозяйства и восстановлению истощенных земель.

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РОЛЬ ИННОВАЦИЙ В ПОВЫШЕНИИ ЭФФЕКТИВНОСТИ ОБСЛУЖИВАНИЯ

***Аннотация:** В данной статье рассматривается важность инновационной деятельности в сфере услуг, выполнения требований, изучения зарубежного опыта, применения новых идей с учетом населения и потребностей.*

***Ключевые слова:** услуга, производство, инновации, инвестиции, инфраструктура, потребность, благосостояние населения, качество, эффективность*

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THE ROLE OF INNOVATION IN IMPROVING SERVICE EFFICIENCY

***Annotation:** This article discusses the importance of innovation in the service sector, meeting requirements, studying foreign experience, applying new ideas taking into account the population and needs.*

***Key words:** service, production, innovation, investment, infrastructure, need, welfare of the population, quality, efficiency*

Введение. Рост мирового населения и потребностей, развитие сферы услуг на основе особых подходов с учетом особенностей каждой страны и региона, использование инновационной деятельности, обеспечение субъектов предпринимательства финансовыми ресурсами и инфраструктурой, а также поддержка государства. Нужна поддержка и поощрение. В настоящее время развитие мировой экономики, основанное на опыте развитых стран, увеличение спроса на услуги во всех сферах требует обратить внимание на использование опыта и применение современных технологий.

Развитие сферы услуг в Узбекистане и система государственной поддержки этой сферы реализуются в целях повышения благосостояния населения и укрепления экономики страны. На основе градостроительных проектов полностью реконструируются сферы обслуживания, модернизируется наружное освещение, ирригационные и дренажные системы, строятся пешеходные и велосипедные дорожки, продаются,

обслуживаются многолюдные улицы, уделяется внимание развитию парков и улиц развлечений, развитие всех видов сфер обслуживания.

В условиях инновационного развития экономики большое значение имеет организационно-экономическое правильное формирование сферы услуг. Поскольку развитие этого сектора организационно оптимально и гибко по отношению к условиям рынка услуг, тем выше качество и эффективность обслуживания. Правильная организация работы в сфере услуг приведет к устранению ряда социальных и экономических проблем в масштабах народного хозяйства. Сегодня в нашей республике «бурное развитие сферы услуг, повышение роли и доли услуг в формировании валового внутреннего продукта, коренное изменение состава предоставляемых услуг, прежде всего, за счет их современного высокотехнологичные типы» является актуальной проблемой.

Сложность и многообразие составляющих производственно-сервисного процесса в сфере услуг, самостоятельный выбор, расчет, проектирование и координация мероприятий по их реализации, возможности применения инноваций вносят важные изменения в содержание работы. Для обеспечения максимально эффективной работы работников предприятий сферы услуг необходимо изучить и усовершенствовать процессы обслуживания, разработать комплексные нормы обслуживания и определить возможность повышения производительности труда на основе эффективного использования рабочего времени. Однако существуют факторы, которые замедляют и останавливают рост производительности труда даже в современных условиях развития рыночных отношений. Потому что сервисные компании не сокращают постоянно затраты, увеличивая объемы производства и услуг, а используют дефицит и дефицитность производимой ими продукции или предоставляемых услуг и в обмен на повышение своих цен добиваются запланированного объема дохода. Такая ситуация, в свою очередь, не только усиливает дальнейшее развитие неконтролируемого инфляционного процесса, но и не позволяет снизить затраты на организацию и управление процессом обслуживания за счет широкого внедрения комплексных норм научного обслуживания.

Организационную структуру сферы услуг зарубежных стран можно классифицировать следующим образом:

- о механизмах реализации (посредничество финансовое, информационно-технологическое, юридическое, маркетинговое);
- по форме собственности (частная, кооперативная (общинная), государственная, общественная, иностранная);
- по объему предоставляемых услуг (международные, национальные, межрегиональные, региональные, местные);
- по видам и направлениям предоставляемых услуг: деловые услуги (финансовые, страховые, кредитные услуги), распределительные услуги (торговля, общественное питание), социальные услуги (образование, здравоохранение, физическая культура, юридические услуги).

Многие зарубежные экономисты предлагают классифицировать структурную структуру сферы услуг с точки зрения ее отраслевых особенностей и развития. На наш взгляд, уместно классифицировать эту сферу с организационно-экономической точки зрения. В этом случае необходимо выделить следующее:

- информационно-коммерческая инфраструктура (маркетинговые центры, рекламные агентства, центры сбора и обработки информации и т.д.);
- экономическая и правовая инфраструктура (суды, юридические консультационные центры, адвокатские и нотариальные конторы и т.д.);
- финансово-кредитная инфраструктура (коммерческие банки, кредитные, страховые и гарантийные организации);
- торговая, посредническая инфраструктура (ярмарки, биржи, торговые дома, торговые центры и т.д.)

Вышеупомянутые классификации имеют важное значение для обеспечения эффективности сферы услуг. Однако реформы, направленные на повышение значимости услуг в экономической политике нашей страны, требуют дальнейшего развития этих сфер услуг. Например, торговые дома, организации, ярмарки как вид услуг положительно влияют на реализацию продовольственных и непродовольственных товаров и эффективную работу их производителей. Услуги как особый товар требуют соблюдения особых требований от тех, кто их предоставляет. В подтверждение этого мнения в качестве примера можно привести место и роль ярмарок. В последнее время в мировом опыте их роль как торгово-посреднической структурной структуры сферы услуг несколько снижается. В рамках рынка услуг необходимо собирать и обрабатывать информацию о состоянии этого рынка, о производителях и потребителях услуг.

В целях постепенного увеличения доли цифровых услуг осуществляется обеспечение необходимой инфраструктуры и покрытия качественными услугами связи и Интернета, а также резкое расширение использования услуг системы «Электронное правительство».

В районах с численностью населения менее 300 000 человек в Республике Узбекистан, отдавая приоритет организации услуг торговли, гостиничного хозяйства, общественного питания и логистики, а также объектов технического обслуживания и развлечений, в районах, где промышленность и сфера услуг развиваются на уровне высокой темп, Развитие туристических услуг на основе готовых проектов и улучшение автодорог, электро- и питьевого водоснабжения и другой инфраструктуры в районах с высоким потенциалом рекреационного туризма, развитие туристических услуг, расположенных в приграничных районах и с территории международных автомобильные и железные дороги. Актуальными считаются вопросы специализации этих районов в обеспечении торговли, туризма, логистики и придорожного сервиса. Также планируется развивать современные сельскохозяйственные услуги в районах с высокой долей сельского хозяйства.

В соответствии с Законом Президента Республики Узбекистан «Об инновационной деятельности» №ORQ-630 от 24 июля 2020 года инновации включаются в гражданский оборот или используются для личных нужд, использование которых требует достижения больших социально-экономические результаты на практике – это новая разработка, обеспечивающая.

Инновационная деятельность – это деятельность по организации новых разработок, а также обеспечению их передачи и внедрения в сфере услуг.

В экономике страны важно использовать инновационную деятельность и государственную поддержку в сфере услуг, использовать инновационную деятельность, использовать зарубежный опыт, внедрять стимулы.

В заключение подчеркнем, что организационное обеспечение деятельности работников предприятий сферы услуг остается задачей первого уровня с точки зрения их эффективного управления. Также возрастает спрос на менеджеров и специалистов, хорошо владеющих методами достижения высокого качества и повышения производительности труда в процессе оказания услуг. Общие результаты труда сотрудников компании зависят от личных результатов труда каждого сотрудника. Поэтому необходимо поддерживать определенный порядок их совместной работы, начала и окончания работы, соблюдения перерывов. Также необходим четкий механизм поддержания трудовой дисциплины. В настоящее время роль информации на рынке услуг серьезно возрастает. Высокая потребность в информации и быстрое развитие информационных процессов с целью повышения эффективности оказания услуг выдвигают на первый план создание ее организационных подразделений на предприятиях. Фактически спрос на услуги таких информационных систем будет расширяться и охватывать региональный рынок услуг. По нашему мнению, информационные отделы на предприятиях должны включать в себя следующие компоненты: - сбор исходной информации о спросе и предложении услуг на рынке услуг; - разработка программного обеспечения для обработки данных; - создание базы данных на основе существующей собранной и собранной информации.

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НАПРАВЛЕНИЯ РАЗВИТИЯ СЕЛЬСКОХОЗЯЙСТВЕННЫХ ПРЕДПРИЯТИЙ АПК

Аннотация. В статье акцентируется внимание на специфических особенностях предпринимательства и роли предпринимательства. Также были изучены и проанализированы мнения ученых, проводивших научные исследования в сфере агропредпринимательства. Проанализированы показатели развития бизнеса и разработаны прогнозные показатели. Были даны предложения и рекомендации по нехватке специалистов в сфере сельского хозяйства и решению существующих проблем в предпринимательстве.

Ключевые слова: Сельское хозяйство, предпринимательство, агробизнес, технологии, эффективность, уровень предпринимательских наклонностей.

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DIRECTIONS FOR THE DEVELOPMENT OF AGRICULTURAL ENTERPRISES OF THE THE ROLE OF INNOVATION IN IMPROVING SERVICE EFFICIENCY

Annotation. The article focuses on the specific features of entrepreneurship and the role of entrepreneurship. The opinions of scientists who conducted scientific research in the field of agribusiness were also studied and analyzed. Business development indicators were analyzed and forecast indicators were developed. Suggestions and recommendations were made on the shortage of specialists in the field of agriculture and solving existing problems in entrepreneurship.

Key words: Agriculture, entrepreneurship, agribusiness, technology, efficiency, level of entrepreneurial inclinations.

Введение. Развитие агропромышленного комплекса в нашей республике является одной из стратегических задач современности. Исходя из требований рыночной экономики только за счет усиления ее развития будет создана возможность укрепить национальную экономику нашей страны и использовать ее имеющиеся резервы для роста национального богатства.

Развитие агропромышленного комплекса зависит от развития двух основных направлений. Во-первых, это зависит от увеличения объемов производства сельскохозяйственной продукции, во-вторых, от развития ее перерабатывающей промышленности. Позитивное решение этих двух вопросов зависит от укрепления малого предпринимательства.

Агропромышленный комплекс требует, чтобы сельскохозяйственное производство и промышленная переработка создаваемой в нем продукции осуществлялись на основе интеграции сельского хозяйства и промышленности. Это обеспечивает удовлетворение потребности в сельскохозяйственной продукции в течение всего года. Часть производимой сельскохозяйственной продукции направляется на непосредственное потребление, а часть превращается в готовую продукцию путем переработки.

В Узбекистане и его регионах малое предпринимательство развивается на основе государственной программы независимо от отрасли народного хозяйства. Потому что государство обеспечивает экономическую стабильность страны на основе поддержки малого бизнеса.

Методология исследования и научно-методические основы. При реализации данного исследования рассмотрены теоретические и методологические основы развития малого предпринимательства, развитие малого бизнеса в аграрном секторе, роль сельскохозяйственной продукции в развитии рынка, изучение факторов, влияющих на него, а также работа ряда ученых, проводивших научные исследования, являются теоретическими. На основе диалектической теории научного исследования, анализа и синтеза в качестве методологии исследования использовались методы статистического анализа.

Обзор литературы. На основе исследований современных экономистов проблем предпринимательства и анализе сущности предпринимательства можно разделить на следующие направления:

Первое направление - предпринимательство - это самостоятельная экономическая деятельность, направленная на получение прибыли.

Второе направление - целью предпринимательской деятельности является не отрицая прибыли достижение высокой эффективности производства, основанной на сумме отношений при реализации новых сочетаний ресурсов как определяющей сущности предпринимательства [4].

Третье направление заключается в том, что в управлении движением ресурсов в предпринимательской деятельности необходим творческий подход. Сюда можно отнести Д. В. Бусыгина [5], В. Д. Камаева [7], И.Н.Герчикову [6], Ф. М. Русинова [8] и других. В исследованиях этих ученых предпринимательство отражается не как простая трудовая деятельность, а как активная творческая деятельность.

По мнению А. Н. Асаула [1], предпринимательство – это специфический вид экономической деятельности, суть которого состоит в стимулировании и удовлетворении спроса общества на конкретные потребности его членов посредством рыночного обмена и направлены на получение конкурентных

преимуществ за счет рыночного дисбаланса. Предпринимательство в сельском хозяйстве предполагает участие отдельных субъектов и объектов предпринимательской деятельности. По мнению И.В. Украинцевой [2], хозяйствующие субъекты – это предприниматели, которые осуществляют хозяйственную деятельность и несут полную ответственность.

Анализ и результаты. В агропромышленном комплексе требуется, чтобы сельскохозяйственное производство и промышленная переработка создаваемой в нем продукции осуществлялись на основе интеграции сельского хозяйства и промышленности. Это обеспечивает удовлетворение потребности в сельскохозяйственной продукции в течение всего года. Часть производимой сельскохозяйственной продукции направляется на непосредственное потребление, а часть превращается в готовую продукцию путем переработки [10].

Учитывая, что сельскохозяйственное производство носит циклический характер необходимо улучшить кредитование. Если проблема кредитования связана с природными климатическими условиями, инвестиционный риск возрастает. Поэтому развитие малого предпринимательства в АПК связано не только с субъективными, но и объективными трудностями. Поэтому государственная и местная власть, исходя из сложившихся условий, должна проводить политику, стимулирующую развитие малого бизнеса и создание интегрированного механизма [9].

С точки зрения основных целей и задач экономических реформ проводимых в нашей стране можно сказать, что создание условий для развития рыночной экономики в регионе следует считать приоритетной задачей. В первые дни независимости в целях создания условий свободной конкуренции в рыночной экономике были созданы различные субъекты собственности на основе приватизации всех государственных предприятий. В результате повсеместной реализации решений по поддержке малого предпринимательства, сокращения проверочной работы, снижения финансовых затрат на ведение бизнеса, внедрения регистрационно-уведомительной системы количество зарегистрированных и действующих субъектов малого предпринимательства резко возросло также изменения происходят положительные в их экономических показателях. В результате таких усилий во всех отраслях экономики созданы субъекты малого предпринимательства, а их количество в Кашкадарьинской области по состоянию на 1 января 2023 года достигло 78 552 человек.

По данным анализа численности субъектов малого предпринимательства Кашкадарьинской области по составу отраслей мы можем наблюдать, что существуют несоответствие в распределении субъектов малого предпринимательства по отраслям. Количество промышленных предприятий в 2023 году увеличилось в 1,2 раза по сравнению с 2018 годом, а их доля в экономике снизилась в 0,2 раза, а также сферы торговли и бытовых услуг (0,7), жилищно-коммунального хозяйства (0,7), видно, что доля в сфере образования (0,9) снизилась. В регионе за последние

пять лет увеличилась доля таких отраслей экономики, как строительство (1,0), сельское хозяйство (1,1), транспорт (2,3), здравоохранение, спорт и социальное обеспечение (1,2).

По данным статистики, в регионе насчитывается 58,2 тыс. Человек ищущих работу и 2532 человека признанных безработными на биржах труда, или 0,002 процента от общего числа трудоспособного населения. При анализе численности занятого в малом и частном предпринимательстве Кашкадарьинской области и ее районов по данным выявлено, что в агропромышленном комплексе в среднем занято 19,7% населения, тогда как в сельской местности проживает 56,4% населения. . Это означает, что хотя процент занятых на предприятиях малого бизнеса в аграрном секторе и увеличивается, он низок по сравнению с темпами роста работающего населения. Это требует ускоренного развития малого предпринимательства в агропромышленном комплексе.

Выводы и предложения. Исследования показали, что внедрение промышленных предприятий в сельское хозяйство является основой развития других отраслей. Поэтому развитие малого предпринимательства в отрасли должно стать приоритетом экономики региона. В этой связи необходимо широко использовать иностранные и внутренние инвестиции. 25,2 процента инвестиций, привлеченных в область в 2023 году, будут соответствовать вкладу малого бизнеса. Более широкое развитие инвестиционной сферы в АПК является основой развития малого предпринимательства в сельском хозяйстве и обеспечивает увеличение доли предпринимательства в объеме произведенной продукции, выполненных работ и оказанных услуг.

С использованием метода скользящей средней экстраполяции было спрогнозировано количество действующих в регионе субъектов предпринимательства по отраслям на ближайшие несколько лет. Согласно прогнозу, в 2024-2026 годах количество субъектов малого предпринимательства в регионе увеличится, то есть достигнет 76 819 и 77 471 соответственно. Ожидается, что в 2026 году их число увеличится до 33 176 по сравнению с 2018 годом.

Комплексная оценка уровня влияния организационно-экономических решений на эффективность путем классификации факторов повышения эффективности агропромышленного комплекса и предприятий, с другой стороны, требует определения взаимосвязей показателей эффективности. Исходя из отмеченных аспектов, основными принципами разработки факторов повышения эффективности промышленности и предприятий должны стать: взаимозависимость при разработке классификаций факторов по всем показателям эффективности; определение ресурсного потенциала и использование резервов для повышения экономической эффективности; необходимо обеспечить достоверность и обоснованность расчета прироста эффективности на основе группировки факторов.

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СУРХОН ДАВЛАТ ҚЎРИҚХОНАСИ ФЛОРАСИНИНГ БИРПАЛЛАЛИ ЎСИМЛИКЛАРИ

Аннотация: Мазкур мақола Сурхон давлат қўриқхонасининг бирпаллали ўсимликларига бағшилланган бўлиб, ушбу ҳудуднинг флористик бойлиги ва унинг ўзига хос таксономик спектри ўрганилган. Қўриқхонада 21 оилага мансуб 208 тур ўсимлик қайд этилган, уларнинг асосий қисми *Poaceae*, *Alliaceae*, ва *Liliaceae* каби полиморф оилалардан иборат. Бирпаллалиларнинг тарқалиши бўйича юқори зичлик тоғ (68.7%) ва адир (58.6%) минтақаларига тўғри келади. Мақолада келтирилган маълумотлар минтақанинг экологик ва биохилма-хиллигини сақлаш учун муҳим аҳамият касб этади.

Калим сўзлар: Сурхон давлат қўриқхонаси, бирпаллали ўсимликлар, флора, *Poaceae*, *Alliaceae*, *Liliaceae*, полиморф оилалар, баландлик минтақалари, тоғ-ўрмон экотизимлари, Ўрта Осиё флораси.

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THE MONOCOT PLANTS OF THE FLORA OF SURKHANDARYA STATE NATURE RESERVE

Abstract: This article focuses on the study of monocotyledonous plants in the Surkhan State Reserve, analyzing its floristic diversity and unique taxonomic spectrum. The reserve hosts 208 plant species from 21 families, with *Poaceae*, *Alliaceae*, and *Liliaceae* being the most represented. The majority of monocotyledons are found in mountain (68.7%) and foothill (58.6%) zones. The presented data is crucial for the preservation of the region's ecology and biodiversity.

Keywords: Surkhan State Reserve, monocotyledons, flora, *Poaceae*, *Alliaceae*, *Liliaceae*, polymorphic families, altitude zones, mountain-forest ecosystems, Central Asian flora.

Сурхон давлат қўриқхонаси 1986 йилда ташкил этилган ва Кўҳитанг тизмасининг шарқий ёнбағрида, денгиз сатҳидан 850-3137 м баландликда жойлашган. Умумий майдони 24583 га. Асосан тоғ-ўрмон экотизими, ноёб ҳайвон ва ўсимлик турлари муҳофаза қилинади.

Кўҳитанг тизмасининг дастлабки флористик таркиби С.А. Невский [1] томонидан келтирилган. Унинг маълумотлари асосан тизманинг ғарбий

ёнбағирларига тегишли бўлиб, 588 турдаги ўсимликлардан йиғилган гербарий материаллари асосида Кўҳитанг тизмасининг флористик хилма-хиллиги тахминан 800 турдан иборат эканлигини айтиб ўтган. Р.В. Камелиннинг [2] маълумотига кўра эса Кўҳитанг тизмасининг флораси 1000 турдан кам эмас. Муаллиф фақатгина тизманинг ғарбий ёнбағри учун 860 турдан кўп ўсимликларни қайд этган.

Ф.О. Ҳасанов [3] Кўҳитанг тизмасининг дарахт-бутазорлари таркибида 55 оилага мансуб 269 туркум ва 578 турдаги ўсимликлар келтирган.

Кўриқхона ҳудудида олиб бораётган флористик изланишлар давомида бирпаллали ўсимликларнинг тур таркиби аниқланди. Олинган натижаларга кўра, кўриқхона флораси таркибидаги бирпаллалилар ўсимликлар 21 та оила, 80 туркум ва 208 турлардан иборат эканлиги аниқланди.

Кўриқхона флорасида бирпаллалиларнинг полиморф оилаларини *Poaceae*, *Alliaceae*, *Liliaceae*, *Iridaceae*, *Cyperaceae*, *Asphodelaceae*, *Juncaceae* ташкил этади. Ушбу рўйхатга таркибига 5 тадан ортиқ турларга эга бўлган оилалар киритилган. Ушбу рўйхатдан *Alliaceae*, *Poaceae* кўриқхона умумий флорасининг полиморф оилалари таркибига киради холос. Мазкур оилалар кўриқхона бирпаллалиларининг 61 % ташкил этади. Таркибида 2 ва 3 та тур тутган оилалар 6 та ва ягона турга эга оилалар 8 та. Полиморф туркумлар қаторига *Allium*, *Poa*, *Gagea*, *Bromus*, *Eremurus*, *Tulipa*, *Stipa*, *Juno*, *Juncus* кабилар киритилди (1-жадвал). Улар жами бирпаллалиларнинг 46.1 % ни ташкил этади. Биринчи бешликдаги туркумларнинг ўзида 74 та турлар жамланган.

1-жадвал

Сурхон кўриқхонаси флорасидаги бирпаллали ўсимликларнинг полиморф оилалари ва туркумлари

Т/р	Оилалар	сон		полиморф туркумлар	турлар сони
		туркум	тур		
1	<i>Poaceae</i>	44	98	<i>Allium</i>	29
2	<i>Alliaceae</i>	1	29	<i>Poa</i>	13
3	<i>Liliaceae</i>	7	25	<i>Gagea</i>	11
4	<i>Iridaceae</i>	5	12	<i>Bromus</i>	11
5	<i>Cyperaceae</i>	5	10	<i>Eremurus</i>	10
6	<i>Asphodelaceae</i>	1	9	<i>Tulipa</i>	7
7	<i>Juncaceae</i>	1	5	<i>Stipa</i>	5
8				JUNO	5
9				<i>Juncus</i>	5
	Жами:	64	188		96

Ўсимликларнинг баландлик минтақалари бўйлаб тарқалиши Қ.З. Зокиров [4] таснифи асосида амалга оширилди (2-жадвал). Сурхон кўриқхонаси асосан адир минтақасидан бошланади. Бирпаллали ўсимлик турларининг катта қисми тоғ (143 тур, 68.7 %) ва адир (122, 58.6 %) минтақасига тўғри келади. Кўриқхона ҳудудида яйловлар кичик майдонларни эгаллайди. Чунки, тизманинг ўзига хос геоморфологик тузилиши, ҳаддан зиёд тик жарликлар, ҳамда қоя тошлар бу ерда ўсимликларнинг тарқалишига

тўскинлик қилади. Шунинг учун яйлов минтақасида бирпаллали ўсимликлар (16 тур, 7.8) кам миқдорларда учрайди.

2-жадвал

Сурхон қўриқхонасида бирпаллали ўсимликларнинг баландлик минтақаси бўйлаб тарқалиши (Қ.З. Зокиров бўйича, 1955).

Т/р	Баландлик минтақалари	Турлар сони	% ҳисобида
1.	Адир (700-1100 м)	122	58.6
2.	Тоғ (1100-2600 м)	143	68.7
3.	Яйлов (2600-3137 м)	16	7.8
4.	Адир-тоғ	60	28.8
5.	Тоғ-яйлов	7	3.3
6	Адир-тоғ-яйлов	3	3

Хулоса қилиб айтганда, Сурхон қўриқхонаси флораси таркибида бирпаллали ўсимликларнинг 208 тури учрайди. Уларнинг дастлабки тахлили шуни кўрсатадики, мазкур флора тоғли Ўрта Осиё флораси таркибидаги бирпаллалиларнинг таксономик спектрига монанд келади. Унинг ўзига хос хусусиятлари сифатида *Eremurus* туркуми турларининг кўплиги (10 та), яйлов минтақаси флорасининг кам турлар билан намоён бўлганлиги келтирилади.

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ЭКОЛОГИКО-БИОЛОГИЧЕСКОЕ ОБОСНОВАНИЕ ВЫРАЩИВАНИЯ РАСТИТЕЛЬНояДНЫХ РЫБ

Аннотация

Статья посвящена эколого-биологическому обоснованию выращивания растительноядных рыб в аквакультуре. Рассматриваются ключевые экологические и биологические аспекты, такие как роль растительноядных рыб в поддержании здоровья водоемов, их влияние на растительность и качество воды. Подробно анализируются особенности питания, размножения и условий разведения различных видов растительноядных рыб. Статья подчеркивает важность применения экологически устойчивых методов аквакультуры для оптимизации использования водных ресурсов и обеспечения продовольственной безопасности.

Ключевые слова: аквакультура, метод, перспектива, экосистема, водоем.

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ECOLOGICAL AND BIOLOGICAL JUSTIFICATION OF CULTIVATION OF HERBIVOROUS FISH

Abstract

The article is devoted to the ecological and biological justification of cultivation of herbivorous fish in aquaculture. Key ecological and biological aspects are considered, such as the role of herbivorous fish in maintaining the health of reservoirs, their impact on vegetation and water quality. The features of nutrition, reproduction and conditions of breeding of various species of herbivorous fish are analyzed in detail. The article emphasizes the importance of using environmentally sustainable aquaculture methods to optimize the use of water resources and ensure food security.

Key words: aquaculture, method, perspective, ecosystem, reservoir

В последние десятилетия интенсивное развитие аквакультуры, особенно выращивания растительноядных рыб, приобретает важное значение в контексте обеспечения продовольственной безопасности, устойчивого

использования водных экосистем и повышения экономической эффективности рыбного хозяйства. Растительноядные рыбы, такие как карп, тилапия, амур, сазан, являются ценными объектами аквакультуры, поскольку они не только обладают высоким коммерческим потенциалом, но и играют ключевую роль в регулировании экосистем водоемов. В этой статье рассмотрим эколого-биологическое обоснование их выращивания, включая роль этих рыб в поддержании здоровья водоемов и особенности их питания и размножения.

Растительноядные рыбы играют важную роль в поддержании здоровья водоемов, особенно в искусственных водоемах, таких как пруды и рыбоводные хозяйства. Одной из основных экологических функций этих рыб является регулирование растительности в водоемах. Активное поедание водных растений помогает избежать их избыточного разрастания, что, в свою очередь, способствует улучшению качества воды и предотвращает эвтрофикацию (процесс избыточного накопления органических веществ и питательных элементов в воде). Эвтрофикация может привести к ухудшению условий для жизни рыб и других водных организмов.

Кроме того, растительноядные рыбы помогают снизить уровень загрязненности воды органическими веществами, так как они перерабатывают растительную биомассу, поддерживая баланс в экосистеме. Это особенно важно для водоемов, где существует риск накопления избытка органических веществ, таких как нитраты и фосфаты, которые могут вызвать массовое цветение водорослей.

Рыбы, питающиеся растительной пищей, представляют собой множество видов, каждый из которых обладает своими уникальными биологическими характеристиками, что необходимо учитывать при их разведении.

Растительноядные рыбы, как правило, питаются водными растениями, водорослями, водяными растениями, водными плодами и частично – мелкими беспозвоночными организмами. Наиболее известными видами являются карпы, амур, тилапии и сазаны. Карпы, например, могут поедать широкий спектр растительности, включая водоросли и мелкие водные растения. Амур же специализируется на поедании водных трав, таких как ряска, камыш и другие растения, которые могут быстро разрастаться и затруднять нормальное развитие экосистемы водоема.

Забота о сбалансированном рационе этих рыб важна для их роста и здоровья, а также для максимизации их экологического воздействия. Питание должно включать не только водные растения, но и добавки, если это необходимо, чтобы компенсировать дефицит питательных веществ.

Успешное выращивание растительноядных рыб также зависит от их способности к размножению в искусственных условиях. Например, карпы и сазаны способны хорошо размножаться в прудовых хозяйствах, где им предоставляются благоприятные условия для нереста. Для этого необходимы специальные условия, такие как температура воды и наличие укрытий для

молоди. Важно также контролировать плотность посадки, так как перенаселение может привести к ухудшению условий для разведения и снижению качества воды.

Выращивание растительноядных рыб имеет несколько экологических преимуществ, которые делают его привлекательным для устойчивого рыбоводства.

Растительноядные рыбы помогают снизить избыточное содержание растительности, что улучшает кислородный баланс в водоемах и способствует очищению воды. Они также уменьшают количество мелких водных растений, которые могут затруднять движение воды, создавать препятствия для других водных организмов и увеличивать потребность в химических удобрениях для поддержания экосистемы.

Рыбы, питающиеся растительностью, проявляют значительную стойкость к переменам в водных экосистемах, включая изменения температуры воды и другие экологические стрессоры. Это делает их перспективным выбором для выращивания в аквакультуре в широком спектре климатических зон, от умеренных до тропических.

Растительноядные рыбы играют активную роль в поддержании биоразнообразия водоемов. Они создают оптимальные условия для других видов, регулируя численность водных растений, что способствует увеличению количества других водных организмов, таких как ракообразные, моллюски и беспозвоночные, которые являются частью цепочки питания водной экосистемы.

Несмотря на все преимущества, существует ряд проблем, которые необходимо учитывать при выращивании растительноядных рыб. Среди них — необходимость контроля за состоянием водоемов, соблюдение экологических стандартов и минимизация воздействия на естественные экосистемы. Важно также учитывать возможность инвазии растительноядных рыб в природные водоемы, что может привести к нарушению их экосистем. Однако, с учетом правильного подхода и использования современных технологий, выращивание растительноядных рыб может стать важной частью устойчивого сельского хозяйства и обеспечивать как экологические, так и экономические выгоды.

Таким образом, растительноядные рыбы представляют собой значимый ресурс для экосистем и аквакультуры, способный внести весомый вклад в решение проблемы продовольственной безопасности. Развитие этой отрасли требует комплексного подхода, учитывающего как экологические, так и биологические аспекты выращивания рыб. Выращивание растительноядных рыб имеет значительный экологический и экономический потенциал. Оно способствует улучшению экосистем водоемов, снижению загрязнения воды и поддержанию биоразнообразия. Осуществление такого рода аквакультуры требует глубокого понимания биологических особенностей рыб и экологических процессов в водоемах, что позволит создать устойчивые и эффективные системы рыбоводства. Эколого-биологическое обоснование

является основой для создания эффективных и устойчивых систем аквакультуры, способствующих улучшению состояния окружающей среды и обеспечению устойчивого развития.

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ТЕНДЕНЦИИ И ПЕРСПЕКТИВЫ ИНВЕСТИЦИОННО-СТРОИТЕЛЬНОЙ ДЕЯТЕЛЬНОСТИ В УСЛОВИЯХ ЭКОНОМИЧЕСКОЙ НЕСТАБИЛЬНОСТИ

Аннотация. В данной статье рассматриваются тенденции и перспективы инвестиционно-строительной деятельности в условиях экономической нестабильности. В рамках исследования выделяются ключевые аспекты, влияющие на сферу инвестиционно-строительной деятельности в условиях экономической неопределённости. В заключении были определены ключевые факторы, которые позволят обеспечить устойчивое развитие строительным организациям.

Ключевые слова: инвестиционно-строительная деятельность, экономическая нестабильность, устойчивое развитие строительной организации.

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TRENDS AND PROSPECTS FOR INVESTMENT AND CONSTRUCTION ACTIVITIES IN CONDITIONS ECONOMIC INSTABILITY

Abstract. This article examines the trends and prospects of investment and construction activities in conditions of economic instability. The study highlights key aspects that influence the sphere of investment and construction activities in conditions of economic uncertainty. In conclusion, key factors that will ensure sustainable development for construction organizations were identified.

Keywords: investment and construction activities, economic instability, sustainable development of a construction organization.

Инвестиции играют ключевую роль в современной экономике, являясь важнейшим фактором экономического роста. Особая роль инвестиций заключается в трансформации средств государства, хозяйствующих субъектов и отдельных граждан в простое и расширенное воспроизводство материальных и нематериальных ценностей, обеспечивающих рост национального благосостояния. Инвестиционная деятельность представляет собой сложный, многоаспектный процесс, требующий теоретического осмысления многих концепций, положений и выводов [1].

Основопологающим способом повышения устойчивости инвестиционно-строительного цикла является развитие инфраструктуры, охватывающей такие услуги, как экспертиза, управление, юриспруденция, финансы и инженерия. Одновременно необходимо совершенствование ценообразования в взаимодействии всех участников строительной индустрии.

Кроме того, внедрение современных технологических процессов в строительстве и использование экологически чистых материалов и изделий сейчас считается одним из ключевых направлений для дальнейшего роста строительной отрасли, по мнению множества экспертов.

Тем не менее, многие разработки, как от российских, так и от иностранных компаний, пока что не находят широкого применения среди инвесторов и проектировщиков, и лишь ограниченное количество застройщиков может использовать эти технологии в своих проектах.

Лишь использование инновационных решений в масштабных инвестиционных проектах даёт возможность застройщикам развивать строительную отрасль на должном уровне.

Экономическая нестабильность - это характерное для развития экономики страны свойство, выраженное в состояниях системы с существенными изменениями, обусловленными нарушением сложившихся связей [2].

Важным выражением экономической нестабильности часто называют изменение курса национальной валюты, такое, которое может принести убытки хозяйствующим субъектам, особенно если они вовлечены во внешнеэкономическую деятельность [3].

В условиях глобальной экономической нестабильности, которые вызваны внешними (пандемия, геополитические конфликты) и внутренними проблемами (инфляция), инвестиционно-строительная деятельность сталкивается с серьезными трудностями. Однако, несмотря на проблемы, данная отрасль обладает ёмким потенциалом для роста, обусловленным потребностями общества в жилье, достойной инфраструктуре и объектах социально-культурного назначения.

В условиях экономической нестабильности возникают такие ключевые проблемы, как дефицит квалифицированных кадров и риски невозврата инвестиций. Организациям нужно инвестировать в образование и профессиональную подготовку специалистов, а также разрабатывать механизмы страхования рисков. Одной из главных проблем является инфляция и рост стоимости материалов, в таком случае компаниям необходимо найти способы оптимизации расходов и поиска альтернативных материалов.

Для поддержания жизнеспособности строительной компании можно выделить несколько ключевых тенденций:

- Снижение объемов инвестиций. В условиях неопределенности инвесторы проявляют осторожность, сокращая инвестиции в строительство. Данные действия обусловлены рисками невозврата инвестиций, ростом процентных ставок по кредитам и увеличением стоимости материалов.

- Ставить в приоритет проекты с высокой рентабельностью. Инвесторы фокусируются на проектах с быстрой окупаемостью и низким уровнем риска, таких как строительство жилья эконом-класса, логистических центров и инфраструктурных объектов.

- Удержание спроса на коммерческую недвижимость. Поддержка ипотечного кредитования с помощью введения комбинированных процентных ставок на определенный период времени.

- Усиление государственного регулирования. Правительство активно вмешивается в строительную отрасль, поддерживая наиболее важные проекты и вводя стимулы для создания новых рабочих мест. Поддержка государства малого и среднего предпринимательства при осуществлении строительной деятельности.

- Развитие цифровых технологий. Применение информационного моделирования, цифровых платформ для управления проектами и контроля качества, а также использование роботов на стройплощадках повышает эффективность строительных процессов и снижает затраты.

- Повышение безопасности окружающей среды при строительстве. Растет спрос на экологичное строительство, использующее природосберегающие материалы и технологии, снижающие потребление энергии и воды.

Также в условиях экономической нестабильности инвестиционно-строительной деятельности выделяются следующие перспективы:

- Стимулирование спроса на жилье. Правительство может стимулировать спрос на жилье через субсидирование ипотеки, предоставление льгот для молодых семей, а также развитие доступного жилья.

- Развитие инфраструктуры. Инвестиции в транспортную, энергетическую и социальную инфраструктуру создают новые рабочие места и стимулируют экономический рост.

- Инновационные строительные материалы и технологии. Разработка и внедрение новых материалов, таких как биоматериалы и 3D-печать, позволит повысить качество строительства, сократить сроки реализации проектов и снизить стоимость.

- Рост спроса на квалифицированные кадры. Развитие строительной отрасли потребует привлечения специалистов с высокой квалификацией в области управления проектами, проектирования, строительства и эксплуатации объектов.

Инвестиционно-строительная деятельность в современных условиях экономической нестабильности столкнулась с множеством трудностей и новых тенденций. В условиях глобальных экономических перемен и повышенной неопределенности, важно рассмотреть ключевые аспекты, влияющие на эту сферу.

Компании вынуждены адаптироваться к новым экономическим условиям, что требует пересмотра стратегий инвестирования. Внедрение современных технологий и автоматизация процессов оказывают значительное влияние на строительно-инвестиционную сферу, позволяя повысить эффективность и снизить затраты [4].

Благодаря повышенному вниманию к экологии и устойчивому развитию наблюдается увеличение инвестиций в «зелёные» технологии.

Экологическое благополучие планеты, государства, региона – один из важнейших показателей жизнеобеспечения цивилизации в целом и ее территориальных групп. До поры до времени об этом можно было не вспоминать, но в XX-м веке появились грозные симптомы экологических заболеваний [5].

В связи с потребностью обеспечить экологическую безопасность при строительстве проекты, направленные на снижение углеродного следа и использование возобновляемых ресурсов, становятся приоритетными для многих инвесторов.

В условиях неопределенности аналитики советуют инвесторам диверсифицировать свои портфели. Это может включать в себя как географическую диверсификацию, так и инвестирование в разные сегменты строительного рынка, такие как жилое, коммерческое и инфраструктурное строительство.

Цифровизация процессов в строительстве, включая использование больших данных и искусственного интеллекта, способствует повышению

точности и скорости реализации проектов. Это открывает новые горизонты для инвестиционных возможностей.

Изменения во внешнеэкономической политике и международной торговле также имеют значительное влияние на инвестиционно-строительную деятельность. Санкции и ограничения могут приводить к увеличению затрат и изменению условий для реализации проектов.

Инвестиционно-строительная деятельность играет ключевую роль в экономическом развитии страны. Несмотря на сложную экономическую обстановку, отрасль обладает значительным потенциалом для роста. В условиях экономической нестабильности инвестиционно-строительная деятельность сталкивается с множеством непредвиденных ситуаций, включая колебания цен на строительные материалы, изменение спроса и необходимость адаптации к новым уставам. Тем не менее, наблюдаются определенные тенденции, такие как рост интереса к устойчивым и экологически чистым технологиям, а также к цифровизации процессов.

Перспективы данной области заключаются в внедрении инновационных подходов, таких как технологии и методы проектирования, которые могут повысить эффективность и сократить затраты. Также стоит ожидать активизации государственных программ поддержки строительства, что сможет способствовать инвестициям и улучшить финансовую устойчивость участников рынка.

На основе всего выше сказанного можно сказать о том, что ключевыми факторами успеха остаются гибкость в планировании, стратегический подход к управлению рисками, способность к быстрому реагированию на изменения и открытость к новым технологиям, что позволит обеспечить устойчивое развитие инвестиционно-строительной деятельности даже в условиях экономической нестабильности.

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ФАКТОРЫ ВНЕШНЕЙ СРЕДЫ И ИХ ВОЗМОЖНОЕ ВЛИЯНИЕ НА МАРКЕТИНГОВУЮ ДЕЯТЕЛЬНОСТЬ ТОРГОВОЙ СЕТИ

В работе рассматриваются вопросы влияния факторов внешней среды на аспекты маркетинговой деятельности ведущей торговой сети России и её структурных подразделений.

Ключевые слова: розничная торговля; торговая сеть; торговая организация; маркетинговая деятельность; внешняя среда; влияние факторов внешней среды на маркетинговую деятельность.

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ENVIRONMENTAL FACTORS AND THEIR POSSIBLE IMPACT FOR MARKETING ACTIVITIES OF THE TRADING NETWORK

The paper discusses the impact of environmental factors on aspects of marketing activities of the leading trading network of Russia and its structural divisions.

Keywords: retail; trading network; trade organization; marketing activities; external environment; influence of environmental factors on marketing activities.

Торговые сети, под которыми понимается «совокупность двух и более торговых объектов, которые находятся под общим управлением, или совокупность двух и более торговых объектов, которые используются под единым коммерческим обозначением или иным средством индивидуализации» [1], в н.в. занимают значительный удельный вес в формировании показателей розничного товарооборота нашей страны. По нашему мнению, их высокая конкурентоспособность обусловлена

постоянным учетом факторов внешней и внутренней среды, оказывающих значимое влияние на финансово-хозяйственную деятельность, и необходимостью разработки соответствующих им технологий [7].

Практическое влияние факторов внешней среды на маркетинговую деятельность рассмотрим на примере ведущей торговой сети по реализации электроники и бытовой техники – ООО «ДНС Ритейл», основанной в 1998 г. и насчитывающей более 2600 магазинов.

Охарактеризуем аспекты политико-правового регулирования:

1. Государственная политика в области стандартизации товаров и услуг розничной торговли может оказать значительное влияние на бизнес ООО «ДНС Ритейл» (разработка и введение новых стандартов качества приведет для компании к возможности изменения ассортимента товаров).

ООО «ДНС ритейл» владеет собственными брендами, каждый из которых представляет свою линейку продуктов. Например, для выпуска и обращения мобильных телефонов на территории ЕАЭС потребуются подтвердить соответствие устройств требованиям Технических регламентов Таможенного союза ТР ТС 004/2011 «О безопасности низковольтного оборудования», ТР ТС 020/2011 «Электромагнитная совместимость технических средств», ТР ЕАЭС 037/2016 «Об ограничении применения опасных веществ в изделиях электротехники и радиоэлектроники».

Изучение структуры реализованных товаров в ООО «ДНС ритейл» за 2020-2022 гг. показывает, что доля продажи смартфонов за анализируемый период снизилась с 12,4% (69581 тыс. руб.) до 10,8% (85216 тыс. руб.), в то время как общий товароборот организации увеличился на 41,3%. Полагаем, что в случае введения новых стандартов, возможно дальнейшее снижение их удельного веса в структуре товарооборота [12].

2. Механизмы таможенного регулирования проявляются в том, что при введении новых правил взимания таможенных пошлин на импортные товары их стоимость может увеличиться, что оказывает влияние на спрос. Так, Правительство РФ Постановлением от 06.05.2023 N 710 «О внесении изменений в постановление Правительства РФ от 26 марта 2020 г. N 342» ввело фиксированный таможенный сбор для юрлиц, которые ввозят в страну электронно-телекоммуникационное оборудование. Всего в списке 108 групп товаров, многие из которых постоянно присутствуют в ассортименте сети (компьютеры, вычислительные машины и их блоки; смартфоны; фотокамеры, кинокамеры и кинопроекторы; консоли и оборудование для видеоигр и пр.). Таким образом, независимо от размера партии товаров ООО «ДНС ритейл» будет платить фиксированный взнос.

3. Политическая стабильность и безопасность в регионах, где находятся магазины и объекты инфраструктуры ООО «ДНС Ритейл», являются значимыми факторами. Нестабильность и конфликты в регионах могут привести к ухудшению экономической ситуации и снижению покупательной способности населения, что может отразиться на товарообороте компании.

4. Необходимо учитывать и аспекты региональной и муниципальной политики в области землепользования, строительства и развития инфраструктуры, которые могут повлиять на размещение магазинов. Например, если муниципалитет запретит строительство магазинов в определенных районах, то это может ограничить возможности расширения бизнеса компании.

5. Политика конкуренции и антимонопольное регулирование оказывают влияние на бизнес ООО «ДНС Ритейл». Чрезмерное антимонопольное регулирование может привести к ограничению возможностей компании для расширения бизнеса и конкуренции на рынке.

Собственники и менеджмент ООО «ДНС ритейл» в феврале 2022 г. решили увеличить розничные цены (на 30%) в связи с ажиотажным спросом на фоне падения курса рубля. Федеральная антимонопольная служба направила в компанию запрос и выдала предостережение о «недопустимости совершения действий, которые могут нарушать закон о защите конкуренции» [12].

Рассмотрим экономические факторы:

1. Макроэкономическая ситуация в России напрямую влияет на деятельность ООО «ДНС Ритейл». Общеизвестно, что если национальная экономика находится в кризисе, то потребители могут сократить свои расходы на товары электроники, что отразится на показателях деятельности специализированных торговых сетей. Так, по данным Ассоциации компаний розничной торговли (АКОРТ) товарооборот в крупнейших сетях в 2022 г. сократился на 5% в натуральном выражении, что свидетельствует о стремлении потребителей экономить [2].

2. Мировая экономическая ситуация также оказывает влияние на деятельность ООО «ДНС Ритейл». Изменения в мировой экономике могут повлиять на цены на импортируемые товары или изменить конкурентную ситуацию на рынке. Например, если происходит рост курса доллара, то цены на импортируемые товары могут вырасти, что может отразиться на показателях розничного товарооборота ООО «ДНС Ритейл».

3. Рыночные циклы в отрасли электроники могут оказать влияние на деятельность ООО «ДНС Ритейл». Например, если на рынке происходит рост продаж новых моделей смартфонов, то компания может увеличить свою прибыль за счет увеличения продаж. Однако, если на рынке происходит спад продаж, то компания может столкнуться с проблемами в удержании своих позиций на рынке.

Потребительский спрос на смартфоны поделился на два сегмента. В первом — аппараты, которые предлагают максимальную производительность за доступные средства, во втором — мощные флагманы. Однако первый сегмент по объёму продаж существенно превосходит второй, что обусловлено распространением технологий в странах Азии и Африки и непрекращающимся финансовым кризисом.

4. Инфляция может повлиять на деятельность ООО «ДНС Ритейл». Если цены на электронику растут быстрее, чем увеличивается покупательская способность населения, то это может привести к снижению продаж и прибыли компании.

Проанализируем возможное влияние социально-культурных факторов:

1. Общественные тенденции существенно влияют на деятельность сети. Общеизвестно, что если в обществе возрастает интерес к использованию инновационных технологий, то компания должна следить за новинками в этой области и предлагать их своим клиентам.

2. Сформированное мнение потребителей имеет огромное значение для ООО «ДНС Ритейл». Компания должна следить за отзывами клиентов, чтобы улучшать качество обслуживания и товаров. Если у клиентов возникают претензии, то компания должна быстро на них реагировать и искать пути решения проблемы. Положительные отзывы и рекомендации клиентов также могут положительно повлиять на деятельность компании.

3. Реклама и пропаганда могут оказывать значительное влияние на деятельность ООО «ДНС Ритейл». Компания должна разрабатывать эффективные рекламные кампании, которые будут привлекать новых клиентов и удерживать старых. Общеизвестно, что реклама также может помочь компании укрепить свой имидж и создать у клиентов положительное впечатление о бренде [5, 14, 15].

Технологические факторы обусловлены следующими тенденциями:

1. Развитие электронной коммерции и онлайн-платежей может оказать положительное влияние на деятельность ООО «ДНС Ритейл», поскольку это позволяет компании расширить свой рынок и увеличить количество клиентов. Кроме того, онлайн-платежи упрощают процесс покупки для клиентов, что может привести к увеличению продаж. По аналогии с другими хозяйствующими субъектами, в этом направлении компания должна улучшать свой интернет-магазин и предлагать удобные условия доставки [3, 4, 9].

2. Рост использования мобильных устройств также может быть положительным фактором для ООО «ДНС Ритейл». Компания может разработать мобильное приложение и адаптировать свой сайт под мобильные устройства, что позволит клиентам быстро и удобно делать покупки в любое время и в любом месте [6, 13].

3. Развитие искусственного интеллекта и аналитики данных может помочь ООО «ДНС Ритейл» оптимизировать свои процессы и повысить эффективность продаж. Например, компания может использовать аналитику данных для выявления потребностей клиентов и предлагать им более подходящие товары и услуги. Кроме того, искусственный интеллект может помочь автоматизировать процессы в компании и снизить затраты на персонал [8, 10, 11].

Таким образом, постоянные инвестиции в инновационные решения в условиях появления и широкого распространения торговых предприятий,

реализующих аналогичную продукцию, могут помочь ООО «ДНС Ритейл» развиваться и быть более конкурентоспособной компанией на рынке. По примеру российских сетей, компания может внедрять современные технологии в свои бизнес-процессы, улучшать качество обслуживания потребителей и предлагать им новые товары и услуги.

Обобщая представленную информацию, отметим, что менеджмент торговой сети должен постоянно следить за изменениями факторов внешней среды и адаптироваться к ним, чтобы сохранять конкурентоспособность и стремиться к улучшению и оптимизации своих бизнес-процессов (в т.ч. и в маркетинговой деятельности).

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ИННОВАЦИОННО-ТЕХНОЛОГИЧЕСКИЕ ОСНОВЫ ЦИФРОВИЗАЦИИ В СОВРЕМЕННОМ МИРЕ

Аннотация. В статье рассмотрены вопросы теоретических основ инновационно-технологические основы цифровизации в современном мире. А также инновационные ренты и издержки, ключевые аспекты перехода к технологическому укладу.

Ключевые слова: цифровая экономика, цифровизация, совершенствование, подходы, решения задач.

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INNOVATION AND TECHNOLOGICAL FOUNDATIONS OF DIGITIZATION IN THE MODERN WORLD

Annotation. The article discusses issues of the theoretical foundations of the innovative and technological foundations of digitalization in the modern world. As well as innovation rents and costs, key aspects of the transition to a technological structure.

Key words: digital economy, digitalization, improvement, approaches, problem solving.

В изучении данной темы явление объясняется условиями существования инновационной ренты, также именуемой шумпетерианской рентой. На рисунке 1 схематично изображена последовательность процесса возникновения и исчезновения коммерческой целесообразности в отношении внедрения инноваций.

Вначале фирме необходимо понести определенный объем затрат, связанный с разработкой или изменениями в прежних практиках осуществления деятельности. Далее, если внедрение было произведено успешно, компания на протяжении определенного периода получает экономическую прибыль благодаря, к примеру, сократившимся издержкам и возросшей маржинальности. Данный период продолжается пока конкурирующие компании не предпримут ответные действия, тем самым уравнивая степень доходности в отрасли.



Рисунок 1. – Инновационная рента и издержки

Для того, чтобы перейти к шестому ТУ необходимы качественные преобразования в организации фундаментальной науки и в модели экономической системы, что должно привести к цепочке взаимозависимостей, представленных на 2.

Сам же процесс развития технологических укладов имеет вид поступательного волнообразного движения, где начало каждого этапа является завершающей стадией предыдущего (рисунок 2).

Для целей данной работы представляет интерес взаимодействие организмов с внешней средой, в частности, их адаптация или вымирание. Каждый вид организмов в природе функционирует в соответствии с текущими условиями окружающего его мира или внешней среды, которая определяет, будет ли он успешен (останется в живых и продолжит род) или нет (вымрет). Условия внешней среды постоянно меняются. Данным изменениям противопоставляется процесс мутации, который в биологии определяют, например, как «наследуемые изменения в генетическом материале», которые «...являются основным источником всех генетических изменений и обеспечивают сырье для эволюции».

Выживание посредством адаптации к условиям внешней среды представляет собой процесс эволюции организма, Технологический прогресс в схожей манере оказывает воздействие на общество, влияя на его шумпетерианские комбинации ресурсов и стимулируя их наилучшее соответствие текущим условиям внешней среды.

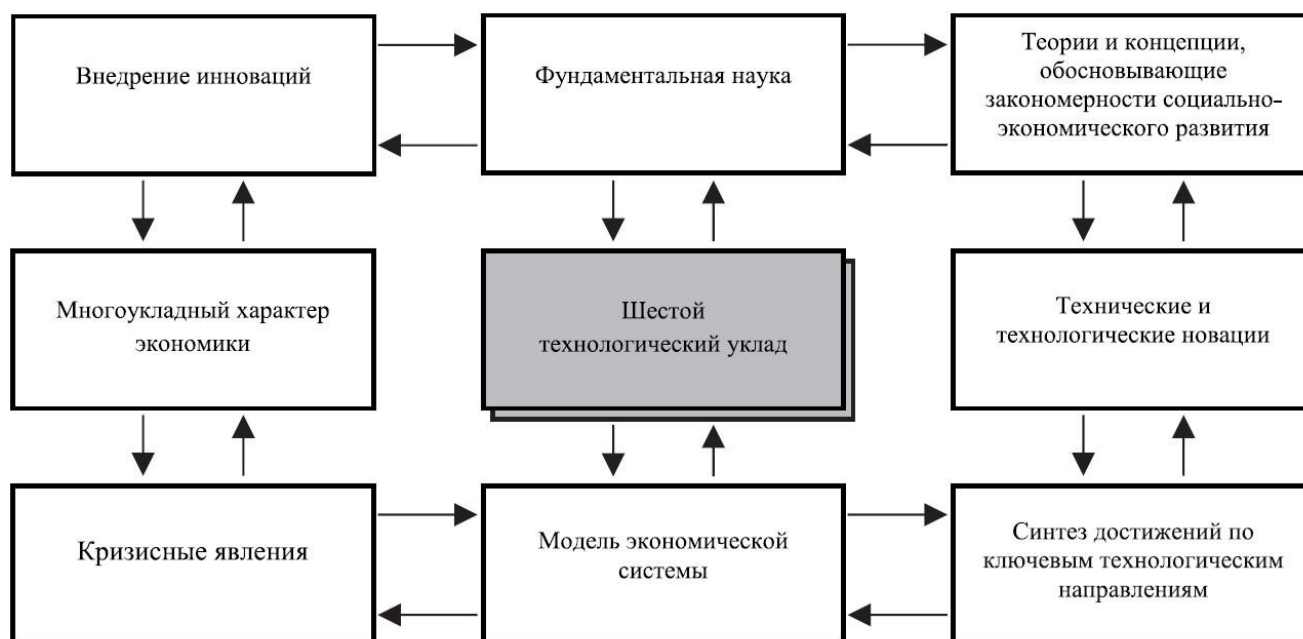


Рисунок 2– Ключевые аспекты перехода к технологическому укладу

Возникновение и распространение технологий, в свою очередь, происходит по схожим с мутационными закономерностям. На фоне общего многообразия постоянно разрабатываемых технологий в период застоя успешно распространиться и интегрироваться в жизнь общества (тем самым видоизменяя его) могут лишь те, которые наиболее точно отвечают его текущим потребностям. В терминах эволюционной экономики данный процесс называется технологической или инновационной адаптацией. Мутации, как и инновационные технологии фактически приносят изменения в устоявшиеся формы осуществления текущих процессов, которые либо адаптируются своими носителями (обществом) тем самым доказывая свою полезность, либо остаются незамеченными, либо отвергаются. Однако необходимо отметить, что эволюционные процессы в природе и в обществе имеют важное различие, связанное с преднамеренностью: эволюция живых организмов бесцельна, в то время как рассматриваемая технологическая эволюция в большинстве случаев является следствием решения конкретных задач.

На основании проанализированного в данном подразделе материала можно заключить, что успешное распространение технологических инноваций (или технологическая диффузия с последующей адаптацией) имеет наилучшие шансы реализации после исчерпания потенциала увеличения эффективности технологиями предыдущего уклада или парадигмы. Помимо этого, необходимо соответствие эндогенным и экзогенным факторам, к которым относятся:

1. Технологический прогресс;
2. Экономическая целесообразность;

3. Институциональные условия.

Таким образом, цифровизация как инновационная категория представляет собой процесс диффузии и адаптации цифровых технологий. В следующем подразделе будет более подробно исследована взаимосвязь экономической деятельности и особенностей диффузии современных цифровых информационно-коммуникационных технологий.

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ТЕОРЕТИЧЕСКИЕ ОСНОВЫ СОВЕРШЕНСТВОВАНИЯ ЦИФРОВОЙ ЭКОНОМИКИ И ТЕХНОЛОГИЧЕСКИЕ АСПЕКТЫ В ЗЕЛЕННОЙ ЭКОНОМИКЕ

Аннотация. В статье рассмотрены вопросы теоретических основ совершенствования цифровой экономики и технологические аспекты в зеленой экономике. А также даны ряд предложений по усовершенствованию и изъятия проблем «цифровой экономики» непрерывно возрастает во всем мире. Одной из причин возрастающего интереса служит восприятие цифровизации в качестве новой промышленной революции и ожидание аналогичных по масштабу последствий.

Ключевые слова: цифровая экономика, цифровизация, совершенствование, подходы, решения задач.

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THEORETICAL BASIS FOR IMPROVING THE DIGITAL ECONOMY AND TECHNOLOGICAL ASPECTS IN THE GREEN ECONOMY

Annotation. The article discusses the theoretical foundations of improving the digital economy and technological aspects in the green economy. A number of proposals for improving and eliminating the problems of the “digital economy” are also given, which are continuously growing throughout the world. One of the reasons for the growing interest is the perception of digitalization as a new industrial revolution and the expectation of consequences of a similar scale.

Key words: digital economy, digitalization, improvement, approaches, problem solving.

Актуальность проблемы «цифровой экономики» непрерывно возрастает во всем мире. Одной из причин возрастающего интереса служит восприятие цифровизации в качестве новой промышленной революции и ожидание аналогичных по масштабу последствий. Исторически результатом подобных явлений оказывалось существенное увеличение эффективности экономической деятельности, в том числе производственной, являющейся

ключевым источником роста общественного благополучия в материалистическом понимании развития человечества.

Однако цифровизация нередко воспринимается бизнесом не только как источник дополнительных выгод, но и как угроза для существования текущих организационных моделей и определенной доли коммерческих предприятий в целом данном подразделе будут рассмотрены представления о цифровой экономике и цифровизации среди ученых, коммерческих компаний и международных некоммерческих организаций.

Даже с учетом постоянно увеличивающегося объема исследований, границы понятий цифровой экономики и цифровизации остаются в значительной степени размытыми, что приводит к различиям в понимании предмета и сложностям при сопоставлении результатов научных исследований.

В общем виде содержание работ в отношении цифровизации и цифровой экономики можно представить следующим образом:

научные сообщества: понятие цифровой экономики, её концепция и перспективы воздействия на общество;

некоммерческие международные организации: аналитические доклады и отчеты, содержащие данные по различным показателям развития на макроуровне;

коммерческие фирмы: прогнозы экономических эффектов, связанных с цифровизацией и описание практик внедрения конкретных технологий.

В это же время, деятельность государственных органов, также пристально наблюдающих за цифровыми тенденциями, выражается в составлении программ развития и учреждении специализированных регулирующих и надзорных организаций. Под цифровой экономикой подразумевается «среда, в которой данные в цифровой форме являются ключевым фактором производства во всех сферах социально-экономической деятельности, что повышает конкурентоспособность страны, качество жизни граждан, обеспечивает экономический рост и национальный суверенитет». Данное определение представляется корректным, но несколько упрощенным, что, вероятно, объясняется ранней стадией развития цифровизации на момент разработки и принятия документа.

Первые же упоминания цифровой экономики можно было встретить около двадцати пяти лет назад после публикации книг Д. Тапскотта «The Digital Economy: Promise and Peril in the Age of Networked Intelligence» в 1994 г. и Н. Негропonte «Being Digital» в 1995 г. В те времена еще не существовало сегодняшнего многообразия информационно-коммуникационные технологий, в связи с чем цифровая экономика у Тапскотта, в основном, ограничивается сетями и сетевыми технологиями, а у Негропonte – оцифровкой аналоговой информации и развитием интернет-медиа, что в современных реалиях оставляет без внимания значительную долю происходящих процессов.

В современных учебниках цифровую экономику определяют, например, как «новый этап развития экономики, в основе которого лежит интеграция физических и цифровых объектов в сфере производства и потребления, в экономике и обществе» или как «экономическую деятельность, базирующуюся на цифровых технологиях». Приведенные примеры имеют упомянутый ранее и распространённый в данной области недостаток, который заключается в несколько тавтологической передаче сути предмета.

Р. Бухт и Р. Хикс в своей статье проанализировали двадцать одно толкование признаваемых ученых, международных организаций, государственных органов и транснациональных коммерческих предприятий, придя в итоге к выводу, что цифровая экономика – это «совокупность всех примеров экстенсивного применения информационно-коммуникационных технологий и создание данных технологий»⁵. В той же работе авторы сформулировали подходы к определению понятия цифровой экономики, представленные в таблице 1. Следует отметить, что приведенная классификация имеет свои таксономические недостатки. В частности, подходы к определению понятия цифровой экономики не являются взаимоисключающими. К примеру, применение технологий для осуществления хозяйственной деятельности как особенность процессуального подхода также имеет достаточные основания для того, чтобы быть отнесенной к бизнес-ориентированному, ввиду того что коммерческие организации в меньшей степени осуществляют хозяйственную деятельность и принуждены рынком совершенствовать технологии своей деятельности.

Таблица 1. – Подходы к определению понятия цифровой экономики

Понятия ЦЭ	1	2	3	4
Подход	Ресурсоориентированный	Процессуальный / поточный	Структурный	Бизнес-ориентированный
Особенности	Новые технологии, изменения в информационных и человеческих ресурсах	Применение технологий для осуществления хозяйственной деятельности	Трансформация экономики	Возникновение новых бизнес-моделей

Отличительная характеристика структурного подхода, трансформация экономики, представляет собой применение новых технологий и изменения в структуре ресурсов, что уже является особенностью ресурсоориентированного подхода.

Далее, на рисунке 1. представлены результаты опроса коммерческих организаций, совместно проведенного компаниями Econsultancy и Adobe, в

котором отражены планируемые приоритеты в цифровой деятельности у компаний, предоставляющих цифровые услуги.

В рамках опроса участникам был задан вопрос: «Какие три связанные с цифровой средой области являются главными приоритетами для вашей организации?». Оказалось, что деятельность большей части респондентов была направлена на контент-маркетинг, следом за которым находилось управление клиентским опытом, в то время как третью строчку заняли таргетирование и персонализация.

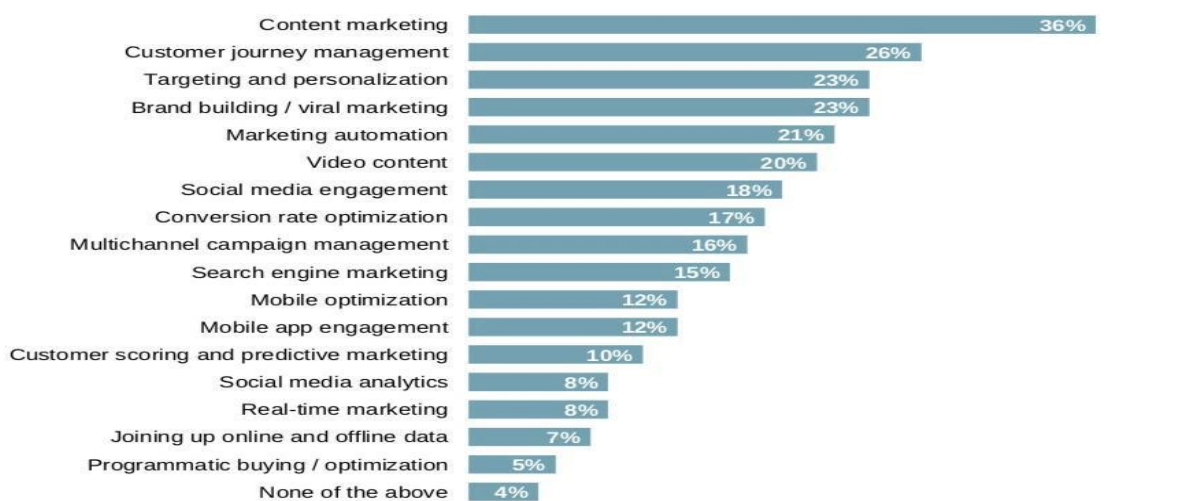


Рисунок 1. Приоритеты цифровой деятельности для цифрового бизнеса

Данные результаты свидетельствуют о том, что в современных условиях ярко выраженным трендом цифровизации, оказывающим влияние на ведение бизнеса является выстраивание индивидуальных отношений с клиентами: как до момента сделки, так и после. Также, следует отметить, что цифровую деятельность в предпринимательской сфере, в основном, ассоциируют с цифровым маркетингом, т.е. фактически с сетями (интернетом) и сетевыми алгоритмами.

В международном документе семейства Фраскати – Руководстве Осло, которое публикуется Организацией экономического сотрудничества и развития (ОЭСР) и посвящается изучению инновационной деятельности, цифровизация рассматривается одновременно как инновационный процесс и как ключевой фактор, стимулирующий инновации. В этом же документе подчеркивается существенно увеличившаяся в современном обществе роль информации, которая проявляется как при производстве цифровых информационных благ, так и в преобразовании привычных операций других видов экономической деятельности.

Среди рассмотренных определений прослеживаются общие черты, основываясь на которых можно утверждать, что в мировом сообществе под цифровизацией и цифровой экономикой подразумевается нечто, включающее распространение и использование современных цифровых информационно-коммуникационных технологий.

Подход, при котором цифровизация исследуется в качестве категории теории инноваций, представляется достаточно обоснованным, а изучение особенностей процесса цифровизации, таким образом, необходимо продолжить в направлении освещения относящихся к предмету исследования фундаментальных положений теории инноваций, после чего проанализировать характер технологических и информационных изменений в экономике.

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АСАЛ ЕТИШТИРИШ КЎРСАТКИЧЛАРИ АСОСИДА ИНТЕРАКТИВ КАРТА ЯРАТИШ АМАЛИЁТИ

Аннотация. Интерактив карталарни турли картографик услда яратиш мумкин, жумладан картограмма усулида ҳам. GeoJSON файл форматидги маълумотнинг атрибутлар жадвалида мавжуд бўлган ҳар қандай миқдорий кўрсаткичлар бунга асос бўла олади. Мақолада Ўзбекистон республикаси вилоятлари кесимида 2023 йил давомида йиғиб олинган асал миқдори асосида интерактив картограмма усулида карта яратиш тартиби ёритилади.

Калит сўзлар: GeoJSON, html ҳужжат, интерактив карта, картограмма.

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PRACTICE OF CREATING AN INTERACTIVE MAP BASED ON HONEY PRODUCTION INDICATORS

Annotation. Interactive maps can be created using various cartographic methods, including the cartogram method. It can be based on any quantitative data contained in the data attribute table in the GeoJSON file format. The article describes the procedure for creating a map using the interactive cartogram method based on the amount of honey collected in 2023 in the regions of the Republic of Uzbekistan.

Key words: Electronic atlas, image map, image map generator, HTML document, USEMAP.

Асал 3000 йил давомида ҳам айнимасдан, шифобахшлик хусусиятлари ва истеъмолга яроқлилигини сақлаб қоладиган ягона озиқ-овқат маҳсулоти ҳисобланади. Уни қайта ишлаш талаб қилинмаслиги, асаларичилик қишлоқ жойларида иш ўринлари яратиш учун ҳам жуда қулай касб эканлигини кўрсатади. Асаларичиликнинг жорий ҳолатини баҳолаш учун вилоятлар кесимида асал етиштириш карталарини тузиш самарали усулдир. Шу

сабабли аҳоли жон бошига тўғри келадиган ўртача йиллик асал истеъмоли кўрсаткичларидан интерактив картограмма яратиш учун асосий параметрлар сифатида фойдаланамиз ва интерактив карталарни картограмма усулида яратишни мисол ёрдамида кўриб чиқамиз. Бунинг учун республика маъмурий ҳудудий бирликлари шейп файлининг атрибут жадвалига вилоятлар кесимида 2023 йилнинг доимий аҳоли сонини ва шу йил давомида йиғиб олинган асал миқдорини киритамиз ва “asalarichilik” деб ном бериб, geoJSON форматда сақлаймиз. Шунингдек, оддий html ҳужжат яратамиз ва унга leaflet кутубхонаси ёрдамида OpenStreetMap қатламини қўшамиз.

```

<html>
  <head>
    <title> O‘zbekiston viloyatlarida asal yetishtirish kartasi </title>
    <link rel="stylesheet" href="https://unpkg.com/leaflet@1.9.4/dist/leaflet.css"
    integrity="sha256-p4NxAoJBhIIN+hmNHrzRCf9tD/miZyoHS5obTRR9BMY="
    crossorigin="" />
    <script src="https://unpkg.com/leaflet@1.9.4/dist/leaflet.js" integrity="sha256-
    20nQCcHB9co0qIjZRGuk2/Z9VM+kNiyxNV1lvTIZBo=" crossorigin=""></script>
    <script src="asalarichilik"></script>
  </head>
  <body>
    <div id="map" style = "width: 1300px; height: 680px" ></div>
    <script>
      var map = L.map('map').setView([41.331831, 64.235970], 6);
      var tiles = L.tileLayer('https://tile.openstreetmap.org/{z}/{x}/{y}.png', { maxZoom: 19,
      attribution: '&copy; <a href="http://www.openstreetmap.org/copyright">OpenStreetMap </a>
      contributors'
      }).addTo(map);
      var асал = L.geoJSON(as).addTo(map);
    </script>
  </body>
</html>

```

Ҳужжатга JavaScript дастурлаш тилида ўзгарувчиларни эълон қилиш учун ишлатиладиган калит сўз – “var” орқали “id” (ўзгарувчи номи) қўшамиз, мисолда id яъни ўзгарувчи номи “as” ҳарф бирикмасидан иборат (1-расм).

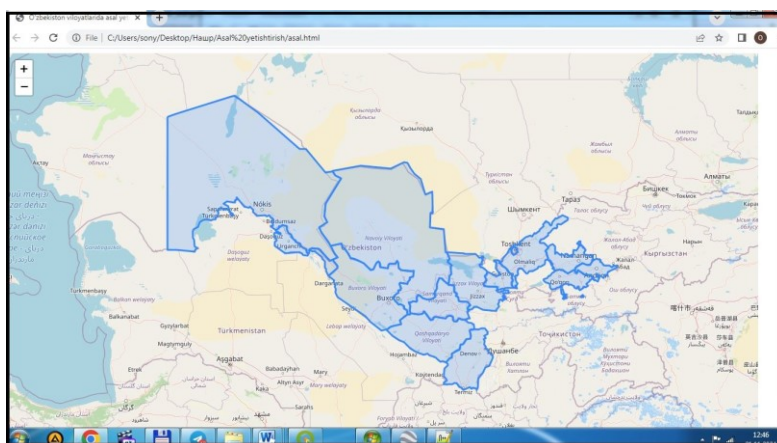
```

1 var as = {
2   "type": "FeatureCollection",
3   "name": "asalarichilik",
4   "crs": { "type": "name", "properties": { "name": "urn:ogc:def:crs:OGC:1.3:CRS84" } },
5   "features": [
6     { "type": "Feature", "properties": { "ID_1": 1, "NAME_1": "Andijon", "Aholi_2023": 3394.4, "Asal_kg": 1312.0, "K_E": 1.0 },
7     { "type": "Feature", "properties": { "ID_1": 2, "NAME_1": "Bukhoro", "Aholi_2023": 2044.0, "Asal_kg": 2484.6, "K_E": 1.0 },
8     { "type": "Feature", "properties": { "ID_1": 3, "NAME_1": "Fergana", "Aholi_2023": 4061.5, "Asal_kg": 1459.1, "K_E": 1.0 },
9     { "type": "Feature", "properties": { "ID_1": 4, "NAME_1": "Jizzakh", "Aholi_2023": 1507.4, "Asal_kg": 1300.1, "K_E": 1.0 },
10    { "type": "Feature", "properties": { "ID_1": 5, "NAME_1": "Karakalpakstan", "Aholi_2023": 2002.7, "Asal_kg": 877.2, "K_E": 1.0 },
11    { "type": "Feature", "properties": { "ID_1": 6, "NAME_1": "Kashkadarya", "Aholi_2023": 3560.6, "Asal_kg": 1465.6, "K_E": 1.0 },
12    { "type": "Feature", "properties": { "ID_1": 7, "NAME_1": "Khorezm", "Aholi_2023": 1995.6, "Asal_kg": 1208.2, "K_E": 1.0 },
13    { "type": "Feature", "properties": { "ID_1": 8, "NAME_1": "Namangan", "Aholi_2023": 3066.1, "Asal_kg": 1289.3, "K_E": 1.0 },
14    { "type": "Feature", "properties": { "ID_1": 9, "NAME_1": "Navoi", "Aholi_2023": 1075.3, "Asal_kg": 1184.8, "K_E": 1.0 },
15    { "type": "Feature", "properties": { "ID_1": 10, "NAME_1": "Samarkand", "Aholi_2023": 4208.5, "Asal_kg": 1288.1, "K_E": 1.0 },
16    { "type": "Feature", "properties": { "ID_1": 11, "NAME_1": "Sirdaryo", "Aholi_2023": 914.0, "Asal_kg": 395.2, "K_E": 1.0 },
17    { "type": "Feature", "properties": { "ID_1": 12, "NAME_1": "Surkhandarya", "Aholi_2023": 2877.1, "Asal_kg": 976.2, "K_E": 1.0 },
18    { "type": "Feature", "properties": { "ID_1": 13, "NAME_1": "Tashkent", "Aholi_2023": 2585.9, "Asal_kg": 594.7, "K_E": 1.0 },
19  ]
20 }
21

```

(1-расм). Тематик карта яратиш учун GeoJSON форматдаги маълумот

Юқоридаги ҳужжатга асосида яратилган интерактив карта оддий кўринишга эга бўлади (2-расм).



2-расм. Интерактив картанинг дастлабки ҳолати

Энди биз полигонларга уларнинг аҳолисининг жон бошига тўғри келадиган ўртача йиллик асал олиш кўрсаткичлари қийматига кўра ранг беришимиз керак. Бу қийматлар атрибут жадвалидаги “asal_etish” устунидан олинади ва у 230 дан 1220 гача ўзгаради (3-расм).

ID_1	NAME_1	Aholi_2023	Asal_kg	K_B_Y_A	asal_etish	jami_asal
1	Andijon	3394.400	1312.000	0.39	390	1312
2	Bukhoro	2044.000	2484.600	1.220	1220	2484
3	Ferghana	4061.500	1459.100	0.36	360	1459
4	Jizzakh	1507.400	1300.100	0.86	860	1300
5	Karakalpakstan	2002.700	877.200	0.44	440	877
6	Kashkadarya	3560.600	1465.600	0.41	410	3560
7	Khorezm	1995.600	1208.200	0.61	610	1208
8	Namangan	3066.100	1289.300	0.42	420	1289
9	Navoi	1075.300	1184.800	1.100	1100	1184
10	Samarqand	4208.500	1288.100	0.31	310	1288
11	Sirdaryo	914.000	395.200	0.43	430	395
12	Surkhandarya	2877.100	976.200	0.34	340	976
13	Tashkent	2585.900	594.700	0.23	230	2585

3-расм. Интерактив карталарни картограмма усулида яратиш параметрлари

Baliq_ist устунидан олинган қийматлардан фойдаланиб, биз балиқ истеъмоли кўрсаткичлари асосида рангни акс эттирадиган функция яратамиз. Бунда диапазонлар фойдаланувчи томонидан мустақил равишда танланади (1):

```
function getColor(d) {
  return d > 1220 ? '#004d00' :
    d > 1100 ? '#006600' :
    d > 860 ? '#008000' :
    d > 610 ? '#009900' :
    d > 440 ? '#00b300' :
    d > 430 ? '#00cc00' :
    d > 420 ? '#00e600' :
    d > 410 ? '#00ff00' :
    d > 390 ? '#33ff33' :
    d > 360 ? '#4dff4d' :
    d > 340 ? '#66ff66' :
    d > 310 ? '#80ff80' :
    d > 230 ? '#99ff99' :
    '#cfffcc';
}
```

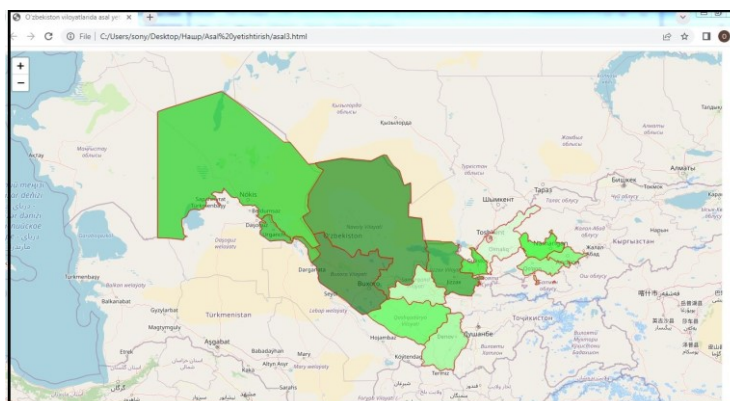
```
function style(feature) {
  return {
    fillColor: getColor(feature.properties.asal_etish),
    weight: 1,
    opacity: 1,
    color: 'red',
    fillOpacity: 0.7
  };
}
L.geoJson(var, {style: style}).addTo(map);
```

Юқоридаги **function** кодларининг иккаласи **<body>** теги таркибидаги **<script>** тегидан кейин, **var map = L.map('map').setView([41.331831, 64.235970], 6);** қаторидан олдин киритилади.

<var> - HTML элементи математик ифода ёки дастурлаш контекстидаги ўзгарувчининг номини ифодалайди. У одатда жорий шрифтнинг курсивланган версияси ёрдамида тақдим этилади.

L.geoJson(var, {style: style}).addTo(map); коди эса **</script>** теги ёпилишидан олдин **var asal = L.geoJson(bis, {style: style}).addTo(map);** кўринишида киритилади.

Юқоридаги тартибда интерактив карта яратишда, ҳар бир қийматни алоҳида кўрсатмасдан балки, маълум бир чегаралар асосида гуруҳларини ҳам белгилаш мумкин. Мисол учун юқоридаги картани 3 тоифада ифодалашимиз мумкин. Республика ўртача кўрсаткичлари 410 грамгача, ундан кўп ва 2 баробар кўп, яъни 860 дан катта. Бунинг учун **asal_etish** устунидан олинган қийматлардан фойдаланиб, рангни қайтарадиган функцияни ўзгартиришимиз кифоя (4-расм):



4-расм. Картограмма усулида яратилган интерактив карта

```
function getColor(d) {
  return d > 860 ? '#004d00' :
    d > 410 ? '#00cc00' :
    '#99ff99';
}
```

Интерактив карта легендасини [2] бошқариш элементи яратиш учун қуйидаги кодлардан фойдаланиш лозим.

```
var legend = L.control({position: 'bottomright'});
legend.onAdd = function (map) {
```

```

const div = L.DomUtil.create('div', 'info legend');
const grades = [230, 310, 340, 360, 390, 410, 420, 430, 440, 610, 860, 1100,
1220];

const labels = [];
let from, to;
for (let i = 0; i < grades.length; i++) {
    from = grades[i];
    to = grades[i + 1];
    labels.push('<i style="background:$ {getColor(from + 1)}"></i>
$ {from}$ {to} ? `&ndash;$ {to}` : '+'` `);
}
div.innerHTML = labels.join('<br>');
return div;
};
legend.addTo(map);

```

Бу кодларда - `var legend = L.control({position: 'bottomright'})`; - карта легендасини тасвирлаш жойи кўрсатилган бўлиб, мисолда унинг картанинг пастки, ўнг бурчагига жойлаштирилишини белгиланган.

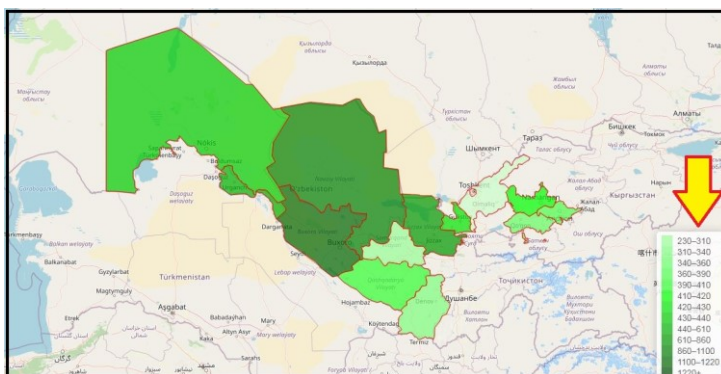
Легенда тўлиқ бўлиши учун HTML ҳужжатнинг бош қисмига яъни `<head>` ва `</head>` теглари орасида картанинг `<script src="Xz_baliq_ist.geojson"></script>` маълумотларидан кейин қуйидаги кодларни киритиш лозим:

```

<style>
.info { padding: 6px 8px; font: 14px/16px Arial, Helvetica, sans-serif; background: white;
background: rgba(255,255,255,0.8); box-shadow: 0 0 15px rgba(0,0,0,0.2); border-radius: 5px; }
.info h4 { margin: 0 0 5px; color: #777; }
.legend { text-align: left; line-height: 18px; color: #555; } .legend i { width: 18px; height:
18px; float: left; margin-right: 8px; opacity: 0.7; }
</style>

```

Бу эса карта параметрларининг ранглар билан уйғунлашувига ёрдам беради (5-расм).



5-расм. Интерактив карта легендаси

Хулоса ыилиб айтганда GeoJSON файл форматидги маълумотнинг атрибутлар жадвалида мавжуд бўлган ҳар қандай миқдорий кўрсаткичлар асосида картограмма усулида интерактив карта яратиш мумкин.

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ОБЕСПЕЧЕНИЕ БЕЗОПАСНОСТИ НИЖНЕГО БИЬЕФА УЧКУРГАНСКОГО ГИДРОУЗЛА НА РЕКЕ НАРЫН

Анотация. Приведена работоспособность Учкурганского гидроузла на реке Нарын. Изменения условия эксплуатации гидроузла. Затопляемая площадь земель при аварии гидроузла.

Ключевые слова. Гидроузел, плотина, регулятор, расход, основание, грунт, затвор, нанос, биеф, орошение, участок.

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ENSURING THE SAFETY OF THE LOWER RESOURCE OF THE UCHKURGAN HYDRAULIC SYSTEM ON THE NARIN RIVER

The announcement. The efficiency of the Uchkurgan hydroelectric complex on the Naryn River is shown. Changes in the operating conditions of the hydraulic unit. The flooded area of land in the event of a hydroelectric power plant accident.

Keywords. Hydroelectric power plant, dam, regulator, flow rate, base, soil, gate, drift, relief, irrigation, plot.

Все гидротехнические сооружения в нашей Республике почти строились 70-75 лет назад, что их надежность и безопасность в настоящее время являются первоочередной проблемой.

В связи с этим в 1999 году принят Закон Республики Узбекистан “О безопасности гидротехнических сооружений”. Для претворения в жизнь этого закона Кабинетом Министров Республики Узбекистан был принят постановление за № 499 от 16 июля 1999 года “О мерах по реализации закона Республики Узбекистан “О безопасности гидротехнических сооружений”.

На основании вышеизложенных документов начиная с 2000 года до сих пор в нашей стране ведутся обширные работы по составлению декларации безопасности гидротехнических сооружений.

Одним из важным объектом является рассматриваемый Учкурганский гидроузел на реке Нарын.

Учкурганский гидроузел расположен на северо-восточной части Ферганской долины, на южной окраине города Учкурган. Проект гидроузла разработан в 1962 году институтом Узгипроводхоз. В 1967 году сооружения забора воды в правобережный Северный Ферганский канал (СФК) $110 \text{ м}^3/\text{с}$; -обеспечения забора воды в левобережный канал Хакулабад $50 \text{ м}^3/\text{с}$; и подпитывающий Большой Ферганский канал (БФК) $70 \text{ м}^3/\text{с}$; -борьба с донными и взвешивающими насосами реки Нарын.

Щитовая плотина состоит из 12 пролетов по 10 м., перекрываемых спаренными плоскими металлическими затворами. С напорной стороны плотины бычки толщиной 2 м из условия спаренных затворов, а в пределах автодорожного моста 1,5 м.

Левобережный регулятор состоит из восьми двухъярусных отверстий. Ширина верхних отверстий в свету 2,5 м., а высота отверстия 1,95 м., ширина промежуточных бычков по 0,8 м; ширина бычка по оси регулятора 1,2 м. Отметка порога верхних отверстий 482,0 м. Забор воды осуществляется через верхние отверстия, а донные криволинейные промывные галереи служат для промывки донных насосов. Размеры донных галерей: ширина в свету 2,5 м., а высота отверстия 2,0 м. Отметка порога нижних отверстий 479,7 м.

Регулятор СФК расположен на правом берегу Нарын и состоит из 6-ти пролетов по 4 метра, перекрываемых плоскими одиночными металлическими затворами. Промежуточные бычки приняты толщиной 1,2 м. Перед водосливом СФК с целью уменьшения попадания донных насосов, устроен "Г" образный порог, высота и ширина которого равна 1,2 м.

В середине 1970 годов с вводом в эксплуатацию Большого Андижанского канала (БАК) забор воды в Левобережный регулятор увеличился со $120 \text{ м}^3/\text{с}$; до $320 \text{ м}^3/\text{с}$, в связи с этим эксплуатация сооружения претерпела изменению. С целью обеспечения сооружения претерпела изменению. С целью обеспечения водой БАК нижний ярус отверстий Левобережного регулятора предназначенных для промывки Левобережного регулятора осуществляется гасителями расположенных в шахматном порядке в два ряда.

Суммарный водозабор в Левобережный и Правобережный регуляторы составляет $430 \text{ м}^3/\text{с}$.

Сведения об изменении конструкции и класса сооружения со дня ввода в эксплуатацию Учкурганского гидроузла (1967 г) на реке Нарын верх по течению от существующего сооружения к концу 60-х годов введена в эксплуатацию Токтогульское водохранилище, что способствовало зарегулировать водные ресурсы реки и принять конкретные меры по сбросу и забору воды в рассматриваемый гидроузел.

От Токтогульского водохранилища вниз по течению реки построены следующие гидроэлектростанции: Крупсайская, Ташкумырская, Шамалдысайкая, Учкурганская, которые все расположены на территории соседней Киргизской республики.

С целью обеспечения водой БАК (которая введена в эксплуатацию 1970 х годах), как отмечено выше конструкция Учкурганского гидроузла претерпела изменению и забор воды вместо проектного (1962) $230 \text{ м}^3/\text{с}$ возросла до $430 \text{ м}^3/\text{с}$.

Естественно это способствовало к увеличению подвешенной площади к Учкурганскому гидроузлу, к настоящему времени она составляет более 300 тыс. га.

Для вышеуказанной подвешенной площади в соответствии с КМК 2.06.01-97 таб № 3 Учкурганский гидроузел относится к 1 классу, а не к III-му как это было принято проектом 1962 г.

С целью обеспечения устойчивости сооружения и проверки пропускной способности нами проведены гидрологические расчеты по многолетним максимальным расходам реки Нарын, начиная с 1910 года по Учкурганскому гидропосту.

Расчетная ежегодная вероятность максимальных расходов воды, пропуск которых должен быть обеспечен в нормальных и в чрезвычайных условиях эксплуатации, устанавливается от класса капитальности сооружения.

При 1 классе капитальности расчетная вероятность превышения максимальных расходов воды в проектах будет равна: для нормальных условий эксплуатации-0,1 %

Для чрезвычайных условий эксплуатации-0,01 %

Суммарных водозабор в Левобережный и Правобережный регуляторы составляет $430 \text{ м}^3/\text{с}$. За вычетом потребления воды в регуляторы, в нижнем бьефе плотины расход реки Нарын при 0,1 % и 0,01 % обеспеченности соответственно равен: $3438 \text{ м}^3/\text{с}$ и $4149 \text{ м}^3/\text{с}$.

Определение горизонтов воды в верхнем бьефе плотины при прохождении максимальных расчетных расходов воды на реке. Нарын.

Плотина состоит из 12 пролетов по 10 м.

Ширина бычков по 2,0 м.

Расходы реки Нарын;

При нормальных условиях эксплуатации: $3878-430=3448 \text{ м}^3/\text{с}$;

При чрезвычайных условиях эксплуатации: $4589-430=4159 \text{ м}^3/\text{с}$.

Отметки горизонтов воды в нижнем бьефе плотины при:

нормальных условиях эксплуатации-484,9 м;

чрезвычайных условиях эксплуатации-485,3 м.

На основании проведенных гидрологических расчётов с учетом проверки пропускной способности гидроузла нами была произведена нивелирная съемка поперечного сечения реки Нарын соответственно на 10,15 и 24 км. От Учкурганского гидроузла в низ по течению.

Исследования показали, что площадь затопляемых земель в нижнем бьефах гидроузла попадающих в случае аварии сооружения составляет 1960 га. Зона затопления нижнего бьефа от гидроузла вниз по течению реки по длине составляет 28 км и по ширине в среднем 150-200 м по обеим берегам реки Нарын. Наносимый ущерб народному хозяйству в денежном выражении составляет 4,2 млрд сумов.

В случае прорыва Учкурганского гидроузла при максимальном расходе воды, вода выходит из своего русла и поймы, будет протекать, затапливая и разрушая искусственно построенных дамб, слева:

11 000 га земли под сельхоз-угодья и животноводческую ферму Учкурганского района Наманганской области. При этом, нанеся большой ущерб народному хозяйству нашей страны.

На основе вышеизложенных исследований нами приведены основные мероприятия по обеспечению безопасности ГТС:

-качественная подготовка технического персонала гидроузла по эксплуатации:

-работоспособность всех основных затворов и технических устройства гидроузла:

-оперативность ведения учета воды по реке Нарын;

-разботтоспособность всех локальных систем оповещения:

-в водоборной плотине предусмотреть 1-2 пролета автоматического действия;

-границы территории гидроузла должна строго охраняться силами УВД, с учетом запрета движения транспортных средства и пешеходов по мосту, расположенной в притык со службеным мостом водосбросной плотины и левобережного регулятора.

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ЦИФРОВАЯ ИДЕНТИФИКАЦИЯ И БЕЗОПАСНОСТЬ: РОЛЬ БЛОКЧЕЙНА И ДРУГИХ ТЕХНОЛОГИЙ В ОБЕСПЕЧЕНИИ ПРОЗРАЧНОСТИ И БЕЗОПАСНОСТИ ТОРГОВЫХ ОПЕРАЦИЙ

***Аннотация:** В этой статье исследуется важность блокчейна и других современных технологий для удовлетворения растущих требований прозрачности и безопасности торговых операций в цифровом мире. В статье подробно анализируются механизмы аутентификации цифровой идентичности, обеспечения прозрачности и повышения безопасности с помощью технологии блокчейн, методов криптографического сокрытия и других связанных технологий. В статье также рассматривается практическое применение этих подходов, их влияние на торговые операции и перспективы дальнейшего развития. Основное внимание уделяется интеграции этих технологий в мировую экономику, потенциальным преимуществам и проблемам, включая затраты на сеть, конфиденциальность данных и широкое внедрение технологий.*

***Ключевые слова:** Цифровая идентичность, безопасность, блокчейн, криптографическое сокрытие, торговые операции, прозрачность, безопасность, мировая экономика, современные технологии.*

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DIGITAL IDENTITY AND SECURITY: THE ROLE OF BLOCKCHAIN AND OTHER TECHNOLOGIES IN ENSURING TRANSPARENCY AND SECURITY OF TRADE OPERATIONS

***Abstract:** This article explores the importance of blockchain and other modern technologies to meet the growing demands for transparency and security of trade operations in the digital world. The article analyzes in detail the mechanisms for authenticating digital identity, ensuring transparency and enhancing security using blockchain technology, cryptographic hiding methods and other related technologies. The article also discusses the practical application of these approaches, their impact on trade operations and prospects for further development. The main focus is on the integration of these technologies into the global economy, potential benefits and challenges, including network costs, data privacy and widespread adoption of technologies. **Keywords:** Digital identity, security, blockchain, cryptographic concealment, trading operations, transparency, safety, global economy, modern technologies.*

Введение. В эпоху цифровизации торговые операции широко переносятся на электронные платформы. Это, в свою очередь, создает новые проблемы безопасности и прозрачности. Технология блокчейн и другие современные технологии играют важную роль в поиске эффективных ответов на эти проблемы. В этой статье анализируется важность блокчейна и других технологий в обеспечении цифровой идентичности и безопасности, а также рассматривается их потенциал в повышении прозрачности и безопасности торговых операций.

Сегодня, в зависимости от объема операций, осуществляемых через электронную торговлю, торговые операции широко оцифровываются. Однако эта оцифровка создает проблемы безопасности и прозрачности. Транзакции, выполняемые с помощью криптографии или других технологий, вызывают проблемы с анонимностью и идентификацией. С другой стороны, отсутствие прозрачности снижает доверие и взаимную выгоду между людьми.

Основная часть. Блокчейн – это технология, используемая для децентрализованного и неизменного хранения данных. Он работает через сеть, состоящую из нескольких компьютеров, при этом каждый компьютер (нода) проверяет друг друга и передает новую информацию всем другим компьютерам в сети. В этой сети данные хранятся в виде блоков, и каждый блок имеет ссылку (хеширование) на ранее сохраненный блок. Таким образом, модификация каждого блока обновляется на всех компьютерах в сети, что обеспечивает безопасность данных.

Основными преимуществами технологии блокчейн являются:

- ✓ Децентрализованная структура: блокчейн не имеет единого центрального управления или базы данных. Каждый участник сети имеет равные права.
- ✓ Надежность: данные очень сложно изменить, и все участники сети подтверждают это.
- ✓ Безопасность: данные зашифрованы, и каждая транзакция хранится в блоках, что делает практически невозможным взлом или манипулирование данными.

Централизованные системы (например, базы данных): традиционные системы, как правило, централизованы и контролируются одним контроллером. В таких системах могут возникнуть проблемы с безопасностью и изменением данных, поскольку они хранятся в одной точке.

Облачные вычисления (Cloud computing): облачные технологии позволяют пользователям хранить и обрабатывать свои данные удаленно. Эти услуги предоставляются через большие серверы и позволяют быстро и эффективно обрабатывать очень большие объемы данных. Однако облачные вычисления централизованы, и данные хранятся в одном центре, что может отрицательно сказаться на безопасности.

Искусственный интеллект (ИИ): технологии искусственного интеллекта позволяют машинам самообучаться и воспроизводить умственную деятельность человека. Интеграция ИИ и блокчейна может использоваться,

например, для автоматической проверки транзакций и повышения безопасности.

Цифровая идентификация – это процесс идентификации личности в электронных системах. С помощью цифровой идентификации можно подтвердить подлинность личности, а также обеспечить безопасность при использовании различных электронных услуг. Эта технология играет важную роль не только в защите личных данных, но и в предоставлении услуг пользователям быстрым и безопасным способом. Отличительными преимуществами этого являются:

- **Безопасность:** электронное подтверждение подлинности личности предотвращает неправильное использование или кражу данных.
- **Скорость и эффективность:** благодаря цифровой идентификации доступ к услугам ускоряется, а эффективность систем управления повышается.
- **Удобство:** пользователи могут надежно аутентифицировать себя с помощью электронных средств идентификации, что обеспечивает безопасность их личной информации.

Технология блокчейн использует криптографические методы для создания цепочки блоков. Это децентрализованная среда программирования, обеспечивающая безопасность и прозрачность. Используя блокчейн:

Обеспечение прозрачности: все транзакции в блокчейне открыты и доступны. Это повышает уровень прозрачности и надежности торговых операций.

Повышение безопасности: благодаря криптографическим свойствам блокчейна транзакции имеют гораздо более высокий уровень безопасности.

Наряду с блокчейном технологии криптографического сокрытия и защиты данных также играют важную роль в укреплении цифровой идентичности и безопасности. Через них личность человека будет рассекречена и предотвратит появление ложной идентификации.

Развитие цифровой идентичности в Узбекистане в последние годы идет большими темпами. Реформы и проекты, реализуемые правительством в области цифровой трансформации, особенно усилились после реализации стратегии 2021 года "цифровой Узбекистан 2030". Эта стратегия направлена на развитие цифровой экономики и цифровизацию государственных услуг в Узбекистане. Также реализуются следующие инициативы:

- **Единая порталная система:** единый интерактивный портал государственных услуг, обеспечивающий доступ к государственным услугам в цифровом виде в Узбекистане (my.gov.uz) создан. Благодаря этой системе граждане получили возможность видеть и пользоваться различными государственными услугами.
- **Биометрические системы:** биометрические системы идентификации, включая технологии снятия отпечатков пальцев и сканирования лица, используются для аутентификации личности. Эти системы внедряются для дальнейшего повышения безопасности.

- Цифровые паспорта и ID-карты: в Узбекистане внедряется система биометрических цифровых паспортов и ID-карт, с помощью которых граждане могут электронно идентифицировать себя в государственных и других системах.

Технология	Роль в обеспечении прозрачности и безопасности	Преимущества	Недостатки
Блокчейн	Децентрализованное хранение данных, обеспечение неизменности записей	Прозрачность, безопасность от манипуляций, снижение рисков мошенничества	Высокие требования к вычислительным мощностям, масштабируемость
Смарт-контракты	Автоматизация и защита сделок на основе заранее заданных условий	Уменьшение числа ошибок и конфликтов, уменьшение затрат на посредников	Проблемы с юридической значимостью в некоторых странах
Биометрическая идентификация	Защита от подделки личных данных при идентификации участников торгов	Высокая степень защиты, уникальность данных	Требования к оборудованию и возможные проблемы с конфиденциальностью

График: Влияние технологий на безопасность и прозрачность торговых операций.

Также благодаря развитию системы "электронного правительства" граждане получили возможность отправлять свои заявления и запросы онлайн, отслеживать свой статус и пользоваться многими другими услугами.

- ✚ Различия между блокчейном и традиционными технологиями.
 - Хранение и безопасность данных: в блокчейне данные децентрализованы, и каждый участник сети проверяет данные. Это повышает безопасность системы. Однако другие технологии имеют центральную систему управления, и данные хранятся в одной точке, что увеличивает риск атаки хакеров.
 - Скорость и эффективность: в блокчейне может потребоваться много времени, чтобы подтвердить новую информацию и вставить ее в блоки. Облачные вычисления, с другой стороны, работают быстро и эффективно, но имеют проблемы с безопасностью.
 - Централизация и Децентрализация: в блокчейне нет централизации, все участники сети равны. Однако в традиционных системах есть центральное управление.

Система хеш-безопасности была введена для обеспечения безопасности блокчейна и повышения надежности активов. Хеш-это криптографическая функция, которая, как и отпечаток пальца, играет решающую роль в безопасности и целостности блокчейна. Предыдущий хэш ,представленный на рисунке, в котором хэш-ячейки идентифицирующе связаны друг с другом, – это хэш, который проверяет соответствие блока 1 и блока 2, связывая их, как

цепочку. Если данные изменяются, хеши блока 1 и блока 2 становятся несовместимыми, а цепочки между данными (те, которые связаны с помощью хешей) разрываются и становятся известными как подделка. Хеши играют решающую роль в безопасности и целостности блокчейна, их основными функциями являются:

1. Целостность данных: каждый блок в цепочке блоков содержит хэш заголовка предыдущего блока. Это создает цепочку блоков, в которой хэш каждого блока зависит от хэша предыдущего блока. Если кто-то изменит данные в предыдущем блоке, он изменит хэш, разорвет цепочку и покажет нарушение.

2. Безопасность блокчейна: использование криптографических хэшей помогает защитить блокчейн от различных атак. Изменение блока изменяет не только его хэш, но и хэши последующих блоков, что делает практически невозможным манипулирование всей цепочкой без обнаружения.

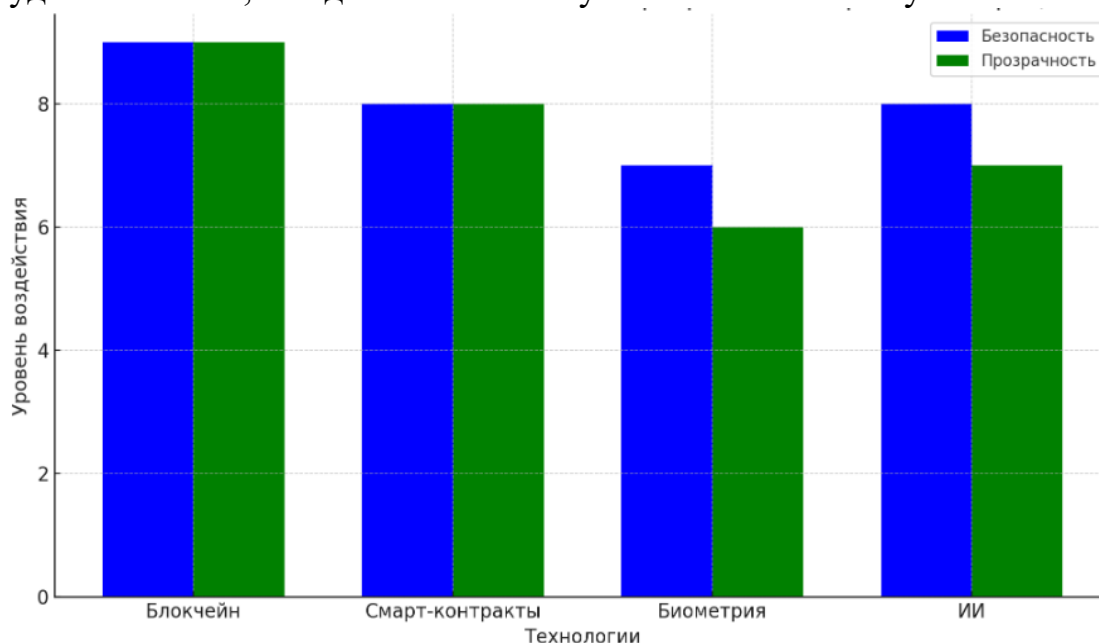
Технология блокчейн в настоящее время дает ряд преимуществ, в том числе:

1. Избегание централизации: блокчейн работает в децентрализованной сети, что снижает потребность в центральных органах власти, что повышает безопасность и прозрачность.

2. Безопасность: использование криптографических методов в блокчейне обеспечивает целостность и безопасность данных, делая их устойчивыми к мошенничеству и взлому.

3. Прозрачность: все транзакции, записанные в блокчейне, видны участникам сети, что обеспечивает прозрачность и подотчетность.

4. Неизменяемость: после того, как данные записаны в блокчейн, их трудно изменить, что делает Блокнот устойчивым к взлому.



Влияние технологий на безопасность и прозрачность торговых операций.

Результаты и обсуждения.

Результаты:

В этом исследовании была проведена всесторонняя оценка того, как цифровая идентификация и безопасность усиливаются с помощью блокчейна и других современных технологий, а также как обеспечить прозрачность торговых операций. Результаты исследования показали, что:

Технология блокчейн имеет большой потенциал в обеспечении аутентификации цифровой идентичности и прозрачности. Благодаря своим децентрализованным свойствам блокчейн значительно снижает риск подделки идентификационной информации. А открытость цепочки блоков и возможность отслеживать все транзакции в сети значительно повышают прозрачность торговых операций.

Криптографическое сокрытие и методы сокрытия данных еще больше повышают безопасность. С их помощью идентификационные данные защищаются от хакерских атак и сохраняется конфиденциальность. Однако у этих методов также есть свои ограничения.

Для эффективного применения систем цифровой идентификации необходимы соответствующие нормы и законодательство. При глобально интегрированном подходе важно обеспечить совместимость и повысить надежность систем цифровой идентификации.

При реализации учитывается множество факторов. Комплексное внедрение технологии, сетевые затраты, конфиденциальность данных, требования к питанию и многие другие проблемы усложняют процесс внедрения систем цифровой идентификации. Важно учитывать конкретные требования различных секторов (финансы, логистика, электронная коммерция) и предлагать гибкие решения.

Обсуждения:

Необходимость стандартизации и регулирования. Разработка и внедрение стандартов и законодательства во всем мире повысит безопасность и надежность систем цифровой идентификации и безопасности.

Решение проблем безопасности. Необходимо еще больше укрепить технологии криптографического сокрытия и снизить риск хакерских атак с помощью методов сокрытия данных.

Экономические аспекты. Необходимо эффективно управлять сетевыми затратами и требованиями к мощности, а также предлагать прикладные технологии по доступным ценам.

Открытость и прозрачность. Открытый характер технологии блокчейн помогает повысить доверие пользователей. Однако необходимо изучить, как можно управлять этой открытостью и способы предотвращения угроз.

Возможности и ограничения блокчейна.

- ❖ **Возможности:** технология Blockchain может широко использоваться в криптовалютах, защите личных данных и других областях. Это создает возможности для интеграции и работы с другими технологиями.

- ❖ Ограничения: основные ограничения блокчейна связаны с расширением сети и скоростью транзакций. Для хранения и обработки больших объемов данных требуется больше энергии.

Цифровая идентификация и безопасность имеют решающее значение для прозрачности и надежности торговых операций. Блокчейн и другие современные технологии имеют большой потенциал для решения этих проблем. Чтобы использовать их в полной мере, необходимо эффективно решать проблемы стандартизации, регулирования, безопасности и экономики. Исследования и разработки будут продолжать обеспечивать безопасность и эффективность цифровой идентичности.

Вывод. Блокчейн и другие технологии в цифровой идентификации и безопасности предоставляют возможности для эффективного поиска ответов на насущные проблемы. Благодаря их использованию торговые операции могут быть более прозрачными и безопасными. В будущем установление стандартов для разработки и использования систем цифровой идентификации может открыть большие возможности для торговых операций. Однако необходимы дальнейшие исследования и работа, чтобы учесть и устранить все проблемы, связанные с разработкой технологий и систем.

Чтобы понять различия между технологией блокчейн и другими технологиями, необходимо ознакомиться с их основными характеристиками и принципами работы. Преимущества блокчейна, такие как децентрализация, безопасность и надежность, показывают явные преимущества перед другими технологиями.

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ОСНОВНЫЕ ОСОБЕННОСТИ И ПРИНЦИПЫ ФОРМИРОВАНИЯ ФАРМАКОЛОГИЧЕСКИХ ТЕРМИНОВ

Аннотация

Данная статья рассматривает способы образования фармакологических терминов, их видоизменения, а также требования, предъявляемые к международным непатентованным наименованиям лекарственных средств

Ключевые слова

Действующее вещество, номенклатура, ограничение, потребитель, препарат, формулировка, эффект, процесс, заболевание

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MAIN FEATURES AND PRINCIPLES OF FORMATION OF PHARMACOLOGICAL TERMS

Annotation

This article Deals with the ways of forming pharmacological terms, their modification, as well as the requirements for international patented names of medicines

Keywords

Active substance, nomenclature, limitation, consumer, drug, formulation, effect, process, disease

Формирование фармакологических терминов – процесс, основанный на специфике медицинской и научной терминологии и связанный с теми требованиями, которые предъявляются к точности и информативности терминов в медицине и фармакологии.

Фармакологические термины часто унифицированы на международном уровне, чтобы обеспечить точное понимание и применение наименований препаратов, независимо от языка. Пример – Международная непатентованная система (INN), разработанная Всемирной организацией здравоохранения (ВОЗ). Международное непатентованное наименование (МНН) — уникальное наименование действующего вещества лекарственного средства, рекомендованное Всемирной организацией здравоохранения. МНН принципиально присваивается только одиночным, чётко определимым веществам, которые можно однозначно охарактеризовать химической

номенклатурой (или формулой). Например, препарат «Лоратадин» входит в число жизненно необходимых важнейших лекарственных препаратов. На 2001 год являлся наиболее назначаемым в мире противоаллергическим препаратом с 1994 года.

МНН

Другие непатентованные названия

Лоратадин (Loratadine)

Алерприв, Веро-Лоратадин, Клаллергин, Кларготил, Кларидол, Кларидол Аллерго, Кларисенс, Кларитин, Кларифарм, Кларифер, Кларотадин, Кларфаст, Лорано, Ломилан, Ломилан Соло, Лорагексал, Лоратадин, Лоратадин Штада, Лоратадин-ОВЛ, Лоратадин-Акрихин, Лоратадин-Тева, Лоратадин-Хемофарм, Лоратадин-Эко, Лотарен, Эролин

МНН

Другие непатентованные названия

Дипросалик

Акридерм, Белосалик, Бетанецин, Редерм, Редерм флюид, Сатава, Экзобета – С, Вегадерм Комби, Гентабе, Канизон Плюс, Комфодерм М2, Момейд – С, Полиактин ГК, Скимазол, Тетрадерм, Фармадерм ГК

Основные правила выбора МНН и принципы утверждения МНН изложены в специальном руководстве ВОЗ, последующих документах ВОЗ и могут быть кратко сформулированы в следующем виде:

- МНН не должны быть слишком длинными и трудными в произношении и написании;
- МНН не должны быть сходными в произношении и написании с наименованиями других находящихся в обращении лекарств;
- МНН должны отражать взаимосвязь с существующей классификацией лекарств. С этой целью при формировании наименований используют специальный перечень корневых основ;
- при выборе МНН следует избегать словесных элементов, способных вызвать ассоциативную связь ЛС с анатомическими, физиологическими терминами, определенным заболеванием или ожидаемым лечебным эффектом;
- для облегчения перевода МНН на другие языки следует избегать использования букв, транслитерация которых может вызвать затруднения.

Программа ВОЗ по выбору МНН применима только для ЛС, полученных методами химического синтеза и биотехнологии и имеющих определенную химически идентифицированную структуру молекулы и химическое научное название, зарегистрированное в международной

организации Chemical abstracts services . Поэтому в качестве МНН не могут быть рекомендованы наименования ЛС растительного и природного происхождения, гомеопатические средства.

Когда у фирмы заканчивается срок действия патента на действующее вещество (например, 12 лет в США, 25 лет в России), то другие компании могут производить данное лекарственное средство под собственными наименованиями. Такие лекарственные препараты называются дженериками.

Практически все латинские названия лекарственных средств - это существительные второго склонения среднего рода с окончанием - ium: *Analginum*. Форма родительного падежа таких существительных заканчивается на -i: *Analgini*. Ударение в таких терминах всегда ставится на предпоследний слог. Русские названия данных лекарственных средств представляют собой транслитерированные названия без окончания -ium: *анальгин*.

1. Некоторые латинские названия лекарственных средств второго склонения среднего рода заканчиваются на -ium. Они соответствуют русским названиям на -форм: *хлороформ* - *Chloroformium*. Форма родительного падежа таких существительных заканчивается на -ii: *Chloroformii* (первая i- конечная гласная основы). Ударение в таких терминах всегда ставится на третий слог с конца.

2. Немногочисленная группа импортных препаратов на -a: например, *Levodopa*, *Methylodopa*, склоняются по первому склонению.

3. Русские названия лекарственных средств с окончанием -за передаются на латинский язык существительными среднего рода: *глюкоза* - *Glucosum*, *лидаза* - *Lydasum* (но: исключения - *Asperasa*, *Gelatosa*).

Лекарственная форма	Лекарственное средство	Прилагательное
<i>Tabulettae</i>	<i>Diazolini</i>	
<i>Suppositorium</i>	" <i>Anaesthesolum</i> "	
<i>Solutio</i>	<i>Camphorae</i>	<i>oleosa</i>
Но:		
<i>Suppositorium rectale "Anusolum"</i>		

В многословных наименованиях лекарственных препаратов на первом месте пишется лекарственная форма: *solutio*, *unguentum*, *tincturae* т.д. На втором месте пишется название лекарственного средства в родительном падеже с прописной буквы: *Solutio Strophanthini*- *раствор строфантина*, *Unguentum Streptocidi*- *мазь стрептоцидовая* (латинские существительные-названия лекарственных веществ в родительном падеже могут переводиться на русский язык прилагательным).

Прилагательные в составе фармацевтических терминов пишутся в конце термина: *Solutio Lidocaini spirituosa*- *раствор лидокаина масляный* (однако после лекарственных форм *membranulae*- *плёнки*, *suppositorium*- *свеча* прилагательные пишутся непосредственно после названия лекарственных

форм, например: *Suppositorium rectale "Anusolum"*).

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АНАЛИЗ СТРАТЕГИИ РАЗВИТИЯ И ОЦЕНКА СТРАТЕГИЧЕСКОГО ПЛАНИРОВАНИЯ ПРЕДПРИЯТИЯ (НА ПРИМЕРЕ ООО «СПЕЦДОРТЕХ»)

Аннотация. В статье представлен анализ стратегии развития и системы стратегического планирования предприятия на примере ООО «Спецдортех». Выявлены ключевые проблемные зоны, влияющие на реализацию стратегических задач, и предложены направления их совершенствования.

Ключевые слова: стратегическое планирование, стратегия развития, анализ стратегии, SWOT-анализ, PEST-анализ, эффективность стратегии

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ANALYSIS OF DEVELOPMENT STRATEGY AND ASSESSMENT OF STRATEGIC PLANNING IN A COMPANY (A Case Study of LLC "Spetsdortekh")

Annotation. This article presents an analysis of the development strategy and strategic planning system of the company using the example of LLC "Spetsdortekh." Key problem areas affecting the implementation of strategic objectives are identified, and directions for their improvement are proposed.

Keywords: *strategic planning, development strategy, strategy analysis, SWOT analysis, PEST analysis, strategy effectiveness*

Актуальность анализа стратегии развития и оценки стратегического планирования предприятия обусловлена тем, что по результатам такого анализа обосновываются решения, направленные на совершенствование системы стратегического планирования и повышение ее эффективности. Это позволяет предприятию своевременно адаптироваться к изменениям рынка, минимизировать риски и использовать возможности для долгосрочного роста.

ООО «Спецдортех» занимается обустройством и облагораживанием придомовых территорий, выполняет работы по благоустройству, асфальтированию и дорожному строительству на территории Омска и Омской области [5]. Пример ООО «Спецдортех» актуализирует данное исследование, поскольку компания функционирует в отрасли, тесно связанной с государственной поддержкой и сезонными колебаниями спроса.

Автор Е. В. Степанов. в своей классификации стратегий развития организации выделяет пять типов стратегий: конкурентную, корпоративную, бизнес-стратегию, функциональную и операционную стратегии [1, с. 40]. Согласно классификации Е. В. Степанова, стратегия ООО «Спецдортех» также можно рассматривать как конкурентную, так как она фокусируется на интеграции внутренних возможностей компании с влиянием внешней среды.

Классификация стратегий развития, предложенная Е. О. Шаговиковой, основывается на уровнях управления в компании: «корпоративные стратегии, бизнес-стратегии, функциональные стратегии, операционные стратегии» [4, с. 110]. Действующая стратегия ООО «Спецдортех» относится к бизнес-стратегиям согласно классификации Е. О. Шаговиковой, поскольку она направлена на укрепление позиций компании в определенном сегменте рынка - строительстве и благоустройстве дорог [4]. В рамках этой стратегии ООО «Спецдортех» стремится обеспечить конкурентные преимущества за счет собственного производства материалов, участия в тендерах и диверсификации услуг, что соответствует цели завоевания позиций в конкретных рыночных нишах.

По классификации стратегий, предложенной Филиппом Котлером, действующая стратегия ООО «Спецдортех» относится к стратегиям концентрированного роста. Эта стратегия направлена на укрепление позиций компании на текущем рынке через развитие продукта и расширение рыночного присутствия. ООО «Спецдортех» фокусируется на увеличении объемов работ в сегменте дорожного строительства и благоустройства, привлекая новых клиентов за счет участия в тендерах и улучшения качества предоставляемых услуг. Элементы стратегии интегрированного роста также присутствуют, поскольку компания использует вертикальную интеграцию за счет собственного производства асфальтобетонных смесей и других строительных материалов. Таким образом, действующая стратегия ООО «Спецдортех» сочетает стратегии концентрированного и интегрированного

роста по Ф. Котлеру, что позволяет компании укреплять свои позиции на основном рынке и контролировать ключевые элементы производственного процесса.

Успех в достижении стратегических целей и реализации стратегии развития во многом определяется качеством ее планирования, поэтому стратегическое планирование становится основой для достижения устойчивого развития и конкурентоспособности на рынке.

Н. А. Тарханова, А. А. Тимошко, Н. А. Меценко считают, что стратегическое планирование – это «процесс разработки стратегии предприятия на основе стратегического анализа, исследования внутренних и внешних факторов, способствующих достижению, развитию, и капитализации его конкурентных преимуществ» [2, с. 47]. От качества стратегического планирования зависит эффективность реализации стратегии развития предприятия, поэтому необходимо провести анализ системы стратегического планирования в целях ее совершенствования.

Оценка критериев системы стратегического планирования ООО «Спецдортех», согласно методике авторов С. А. Филина, А. Б. Ланчакова, Ж. М. Сейсенбаевой и К. В. Большаковой, представлена в таблице 1 [3].

Таблица 1 – Оценка критериев системы стратегического планирования ООО «Спецдортех»

Критерий	Состояние	Баллы
Аппарат управления	Нет выделенного отдела для стратегического планирования, функции выполняются директором.	1
Маркетинговые исследования	Исследования проводятся нерегулярно, охватывают только текущие рыночные условия и конкурентов.	2
Маркетинговые коммуникации	Преобладает использование стандартных каналов (сайт, контекстная реклама), инновационные методы отсутствуют.	2
Периодизация мероприятий	Планирование проводится в краткосрочной и среднесрочной перспективе, долгосрочные планы отсутствуют.	2
Методы анализа	Используются PEST и SWOT-анализы, однако применяются нерегулярно.	2
Итого		9

Итоговая оценка: 9 из 15 баллов (60%). Эффективность стратегического планирования оценивается как средняя.

Таким образом, оценка системы стратегического планирования ООО «Спецдортех» по методике С. А. Филина, А. Б. Ланчакова, Ж. М. Сейсенбаевой и К. В. Большаковой показала, что эффективность данной системы находится на среднем уровне, получив 9 баллов из 15 возможных (60%). Проблемные зоны включают отсутствие четкого аппарата управления стратегическим планированием, ограниченное использование инновационных маркетинговых методов и недостаточную ориентацию на долгосрочные перспективы. Для повышения эффективности стратегического планирования необходимо развивать регулярные маркетинговые

исследования, внедрять инновационные методы продвижения, а также интегрировать долгосрочные цели в стратегический процесс. Устранение этих недостатков позволит ООО «Спецдортех» укрепить свои позиции на рынке и создать устойчивую основу для дальнейшего развития.

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РЕЗУЛЬТАТЫ МНОГОКОМПОНЕНТНОГО АНАЛИЗА ПЛАСТОВОЙ ВОДЫ, ОТБОРАННОЙ СКВАЖИНЫ №12 МЕСТОРОЖДЕНИЯ МИНГБУЛАК

Аннотация

Основное назначение системы водоснабжения при поддержании пластового давления - добыть нужное количество воды, пригодной для закачки в пласт, распределить ее между нагнетательными скважинами и закачать в пласт.

Ключевые слова: водоснабжения, утилизация, высокоминерализованной, содержание кальция, пластовая вода, концентрация.

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RESULTS OF MULTICOMPONENT ANALYSIS OF PRODUCED WATER, SELECTED WELL № 12 OF THE MINGBULAK FIELD

Annotation

The main purpose of the water supply system while maintaining reservoir pressure is to extract the required amount of water suitable for injection into the reservoir, distribute it between injection wells and pump it into the reservoir.

Key words: water supply, recycling, highly mineralized, calcium content, formation water, concentration.

Проектируемая система водоснабжения должна предусматривать рост обводненности продукции скважин и необходимость утилизации всех так называемых промышленных сточных вод, включая ливневые, попутные, воды установок по подготовке нефти и др.

Для соблюдения мер по охране природы и окружающей среды система водоснабжения в любом случае должна предусматривать 100%-ную утилизацию сточных вод и работу всей системы ППД по замкнутому технологическому циклу.

Это усложняет и несколько удорожает систему водоснабжения, так как возникает необходимость специальной подготовки сточных вод, очистки их от нефтепродуктов и взвеси, борьбы с возрастающей коррозией технологического оборудования и водоводов. Однако сточные воды, как

правило, содержащие ПАВы, вводимые на установках по обезвоживанию и обессоливанию нефти, обладают улучшенными отмывающими и нефтewытесняющими способностями, что должно привести к увеличению нефтеотдачи пласта.

Результаты многокомпонентного анализа состава пластовой воды, отобранной скважины № 12 месторождения Мингбулак приведены в **таблице №1**.

Таблица 1

Дата отбора проб	Ионы, mg/l / mol/l						Ж _{общ} , mol/l	Минер-я, mg/l	pH	Плотность, g/cm ³
	Cl ⁻	SO ₄ ²⁻	HCO ₃ ⁻	Ca ²⁺	Mg ²⁺	Na ⁺ +K ⁺				
31.03.2024 г.	292545,0 8252,3	2781,3 57,94	2225,7 3,7	7414,8 370,0	1851,3 152,37	186998,0 7791,6	522,37	591083,0	6,2	1,198
14.04.2024 г.	239355,0 6751,9	438,4 9,13	183,0 3,0	360,0 17,96	118,2 9,73	161672,3 6736,34	27,69	479948,7	5,7	1,208
24.04.2024 г.	224249,0 6325,78	607,0 12,65	231,8 3,8	6613,2 330,0	2102,1 173,0	140141,2 5839,22	503,0	450169,5	5,8	1,201

По результатам анализа пластовая вода является высокоминерализованной (591,1 g/l), преобладающими концентрациями ионов хлора и щелочных металлов (292,5 g/l и 187,0 g/l), Содержание кальция (7,4 g/l) значительно преобладает над магнием (1,85 g/l).

По химическому составу вода является жесткой (522,4 mol/l), реакция воды слабокислая (pH 6,2).

Величины коэффициентов $r(\text{Na}^+/\text{Cl}^-) < 1$ и $r(\text{Cl}^- - \text{Na}^+)/\text{Mg}^{2+} > 1$ показывают, что вода относится к хлоркальциевому типу (по классификации В.А.Сулина), значение сульфат-хлорного коэффициента низкое ($r(\text{SO}_4^{2-} \cdot 100/\text{Cl}^-) < 1$). Пластовая вода относится к рассолам $r(\text{Ca}^{2+}/\text{Na}^+) < 0,2$, $r(\text{Ca}+\text{Mg}/\text{Na}) < 0,2$.

После промывки пластовая вода остается высокоминерализованной (479,9 g/l), преобладающими концентрациями ионов хлора и щелочных металлов (239,4 g/l и 161,7 g/l), Содержание кальция (0,36 g/l) значительно преобладает над магнием (0,12 g/l). Вода жесткая (27,69 mol/l), реакция воды слабокислая (pH 5,7).

По гидрохимическим показателям пластовая вода относится к хлоркальциевому типу $r(\text{Na}^+/\text{Cl}^-) < 1$ и $r(\text{Cl}^- - \text{Na}^+)/\text{Mg}^{2+} > 1$ (по В.А.Сулину), значение сульфат-хлорного коэффициента низкое ($r(\text{SO}_4^{2-} \cdot 100/\text{Cl}^-) < 1$) и вода относится к рассолам $r(\text{Ca}^{2+}/\text{Na}^+) < 0,2$, $r(\text{Ca}^{2+}+\text{Mg}^{2+}/\text{Na}^+) < 0,2$.

Пластовая вода, отобранная 24.04.2021 г., является высокоминерализованной (450,0 g/l), преобладающими концентрациями ионов хлора и щелочных металлов (224,2 g/l и 140,1 g/l), Содержание кальция (6,6 g/l) значительно преобладает над магнием (2,1 g/l).

Провели сравнительный анализ состава речной воды и воды скважины №5 месторождения Мингбулак, отобранные 24.04.2021г. Результаты многокомпонентного анализа приведены в **таблице №2**.

Таблица 2

Место отбора проб	Ионы, mg/l / mol/l						Ж _{общ} , mol/l	Минер-я, mg/l	pH	Плотность, g/cm ³
	Cl ⁻	SO ₄ ²⁻	HCO ₃ ⁻	Ca ²⁺	Mg ²⁺	Na ⁺ +K ⁺				
Вода из скв. №5	4521,2 127,54	165,8 3,44	253,2 4,15	37,6 1,88	129,1 10,63	2943,4 122,64	12,51	9880,4	7,5	1,000
Река Сырдарья	452,1 12,75	193,0 4,02	274,5 4,5	75,2 3,75	91,1 7,5	240,6 10,02	11,25	1839,2	7,5	1,000

По результатам анализа вода из скважины №5 является среднеминерализованной (9,9 g/l), преобладающими концентрациями ионов хлора и щелочных металлов (4,5 g/l и 2,9 g/l), Содержание ионов магния (0,13 g/l) значительно преобладает над ионами кальция (0,04 g/l).

Вода реки Сырдарья слабоминерализованная (1,8 g/l), преобладающими концентрациями ионов хлора и щелочных металлов (0,5 g/l и 0,2 g/l), Содержание ионов магния (0,09 g/l) преобладает над ионами кальция (0,075 g/l).

По химическому составу обе пробы воды являются жесткими (12,5 mol/l и 11,25), реакция вод слабощелочная (pH 7,5).

Величины коэффициентов $r(\text{Na}^+/\text{Cl}^-) < 1$ и $r(\text{Cl}^- - \text{Na}^+)/\text{Mg}^{2+} < 1$ показывают, что вода из скважины № 5 и реки Сырдарья относятся к хлормagneиевому типу (по классификации В.А.Сулина), значение сульфат-хлорного коэффициента высокое ($r(\text{SO}_4^{2-} \cdot 100/\text{Cl}^-) > 1$).

Выводы

1. Эффект промывки виден по всем показателям. Уменьшилась минерализация (от 591,1 g/l до 479,9 g/l и 450,0 g/l), содержание хлоридов (от 292,5 g/l до 239,4 g/l и 224,2 g/l), ионов щелочных металлов (от 187,0 g/l до 161,7 g/l и 140,1 g/l). Значительно уменьшились содержание сульфат ионов (от 2,78 до 0,44 g/l и 0,6 g/l) и гидрокарбонатов (от 2,23 до 0,18 g/l и 0,2 g/l).

2. В всех случаях пластовая вода относится к высокоминерализованным рассолам, хлоркальциевого типа. Реакция вод слабокислая (pH 6,2, pH 5,7 и 5,8). Высокоминерализованные рассолы существенно влияют на образование малорастворимых солей.

3. Как видно из таблицы 2 использование речной воды на много эффективнее чем воды со скважины. Необходимо учитывать, что в слабокислых растворах сульфат-ионы находятся в растворённом состоянии, повышение pH среды может сместить ионное равновесие пластовой воды в сторону выпадения сульфатных солей.

Рекомендации

1. Рекомендуются для закачки использовать низкоминерализованную слабокислую (pH 5-6,5) воду.

Использованные источники:

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ПОВЫШЕНИЕ КАЧЕСТВА ДВУХЪЯРУСНОЙ ВСПАШКИ ПУТЕМ УЛУЧШЕНИЯ ПАРАМЕТРОВ ДОЛОТА ЛЕМЕХА

***Аннотация:** В статье отмечается, что увеличение длины носка долота лемеха двухъярусного плуга, кроме обеспечения заглубляемости лемехов, разрушает плужную подошву, вовлекает в активный биологический процесс подпахотный горизонт почвы. Долото с вылетом носка 90 мм увеличивает глубину хода плуга по сравнению с серийными лемехами на 2,3 см, при этом показатель устойчивости и среднеквадратичное отклонение уменьшаются соответственно на 21,9% и 15,4%.*

Выявлено, что вспаханное поле у новых производственных лемехов на 80% выполняется качественно, а у экспериментальных лемехов эта величина равна 96%, т.е. всего 4% вспаханного поля имеет глубину вспашки менее установленного допуска, а у изношенных лемехов: производственные лемеха после 14 га качественную работу выполняют только на 42% вспаханного поля. Тогда как у экспериментальных после наработки 30 га оно составляет 89%. У первого - 58%, а у второго - 11% вспаханной площади, глубина вспашки меньше 28 см.

***Ключевые слова:** долото, лемех, двухъярусный плуг, заглубляемость, плужная подошва, подпахотный горизонт, почва, глубина вспашки, установленный допуск, отклонение.*

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INCREASING THE QUALITY OF TWO-TIER PLOWING BY IMPROVING THE PARAMETERS OF THE SHARE BIT

***Annotation:** The article notes that increasing the length of the toe of the ploughshare bit of a two-tier plow, in addition to ensuring the depth of the ploughshares, destroys the plow sole and involves the subsoil horizon in the active biological process. A chisel with a toe reach of 90 mm increases the depth of the plow by 2.3 cm compared to standard ploughshares, while the stability index and standard deviation are reduced by 21.9% and 15.4%, respectively.*

It was revealed that the plowed field with new production plowshares is 80% high quality, and for experimental ploughshares, this value is 96%, i.e. only 4% of the plowed field has a plowing depth less than the established tolerance, and for worn-out ploughshares: production ploughshares after 14 hectares perform quality work only on 42% of the plowed field. Whereas for the experimental ones after operating 30 hectares it is 89%. In the first 58%, and in the second 11% of the plowed area, the plowing depth is less than 28 cm.

Key words: *chisels, ploughshare, two-tier plow, depth, plow base, subsurface horizon, soil, plowing depth, established tolerance, deviation.*

Введение. Как известно, в Узбекистане в начале осени выпадает меньше осадков, а поливы, начиная с середины августа, прекращаются. В связи с этим резко ухудшаются условия работы пахотных агрегатов [1-3]. Поэтому, особенно важно хорошее заглубление почвообрабатывающей машины при обработке сухих тяжелых почв и при обработке уплотненного подпахотного горизонта [4,5].

Цель исследования. Изучение заглубляемости долот и лемехов почвообрабатывающих машин в зависимости от их геометрических параметров.

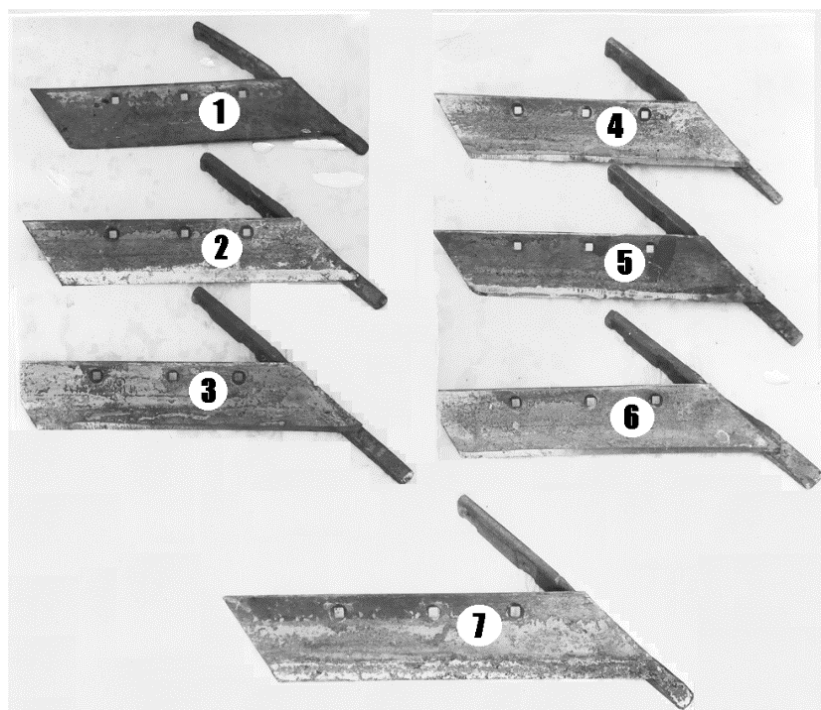
Результаты исследования и их обсуждение. Параметры долот (вылет носка, ширина, углы заточки, клина и др.) при заглублении имеют важное значение [6-10]. Эксперименты с различными значениями вылета носка (рис.1 и табл.1) долота показали, что в зависимости от величины последнего способность плуга к заглублению значительно изменяется, при этом распределение глубины обработки при различных вылетах носка долота подчиняются нормальному закону. Критерии согласия эмпирических и теоретических распределений составляют $P(\lambda)=0,18...0,92$ (табл. 1) [11,12].

Выявлено, что долота с вылетом носка 90 мм увеличивают глубину хода плуга по сравнению с серийными лемехами на 2,3 см, при этом показатель устойчивости и среднеквадратичное отклонение уменьшаются соответственно на 21,9% и 15,4%), (рис.2,3). Это объясняется тем, что серийные долота с вылетом носка 45 мм имеют толщину кромки лезвия 4 мм, а у экспериментального она равна 1 мм, и в 2 раза более длинный носок. Его долото с более острой формой обеспечивает лучший забор глубины и ее сохранение в процессе работы.

Увеличение длины носка долота до 120 мм (как видно из графика) не дает существенного увеличения глубины вспашки по сравнению с долотом, имеющим длину носка 90 мм. Устойчивость хода и среднеквадратичное отклонение при этом не изменяются.

В результате проведенных работ выявили, что высокоресурсные лемеха как новые, так и изношенные, обеспечивают устойчивую работу плуга. Они имеют лучший коэффициент вариации, чем серийные (рис.4). Серийные лемеха после наработки на лемех 9 га теряют способность к устойчивой работе (см. рис.4). Коэффициент вариации у них возрос по сравнению с

новыми на 28%, причем, выбраковочная величина коэффициента вариации у серийных лемехов, как видно из графика, составляет 10... 11%, а у экспериментального лемеха после наработки 40 га этот показатель вырос только на 13,4%. Глубина вспашки плугом уменьшилась по сравнению с заданной глубиной на 2,0 см.



1, 2, 3–лемеха, имеющие нижнюю наплавку шириной 30 мм с вылетом носка соответственно 45, 60, 120 мм; 4, 5, 6–лемеха с нижней наплавкой, вылетом носка долота 90 мм и шириной соответственно 20, 30, 40 мм; 7–лемех с верхней дифференцированной наплавкой лезвия лемеха и носка долота.

Рис.1. Варианты экспериментальных лемехов.

Причиной нарушения равномерности глубины хода плуга является непрерывное увеличение ширины и угла затылочной фаски носка долота серийного лемеха. Результаты исследований показали, что применение лемехов с вылетом носка долота 90 мм способствует лучшему заглублению и более устойчивому ходу плуга по глубине до предельного износа долота по длине и лемехов по ширине. Это очень важно при вспашке уплотненного подпахотного горизонта в зоне хлопкосеяния.

Таблица 1

Заглубляемость лемеха в зависимости от геометрических параметров носка долота.

Вылет носка долота, мм	Статистические показатели						Критерий Колмогорова, $P(\lambda)$
	$M(a)$	σ , см	V , %	$S_{\bar{x}}$	$S_{\bar{x}\%}$	$\bar{x} \pm t_{05} \cdot S_{\bar{x}}$	
$L_1=0$	27,5	3,40	12,40	0,32	1,18	26,86...28,14	0,18
$L_2=30$	28,6	2,71	9,5	0,27	0,95	28,10...29,18	0,54
$L_3=45$	29,2	2,84	9,7	0,28	0,96	28,75...29,75	0,92
$L_4=60$	30,5	2,67	8,7	0,27	0,87	30,03...31,09	0,27
$L_5=90$	31,5	2,43	7,7	0,24	0,77	31,06...32,02	0,18
$L_6=120$	31,5	2,43	7,7	0,24	0,69	31,06...32,02	0,18
$L_7=130$	31,4	2,50	8,0	0,25	0,8	30,90...31,90	0,86

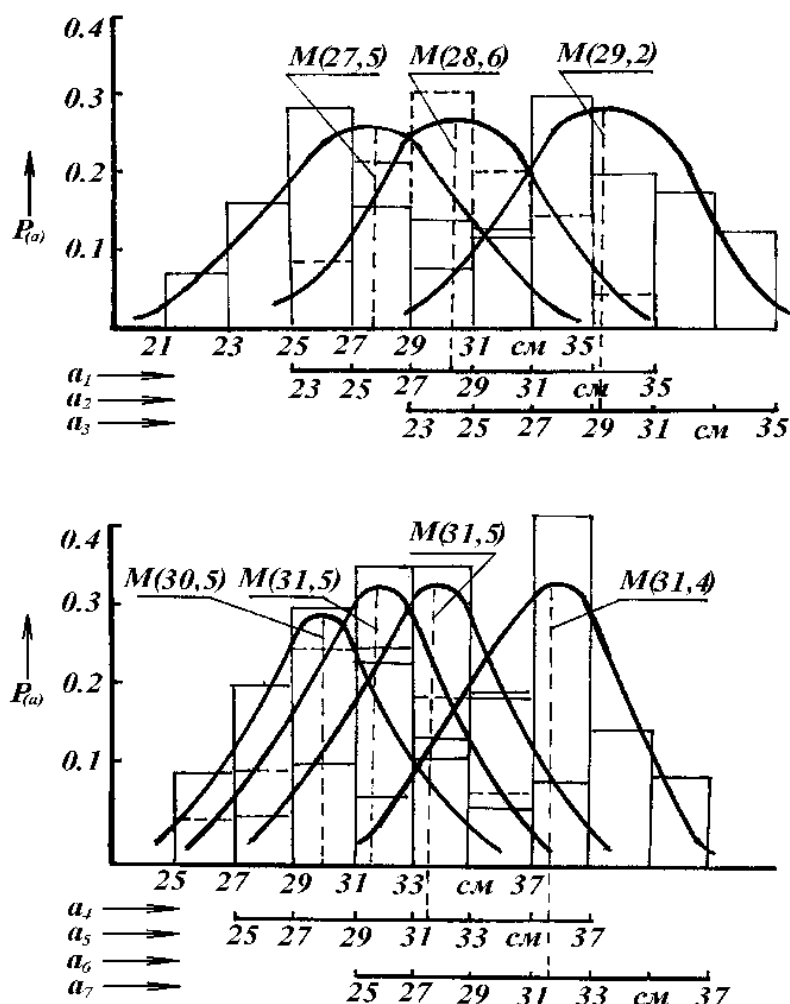


Рис. 2. Статистические показатели изменения глубины обработки. $a_1, a_2, a_3, a_4, a_5, a_6, a_7$ соответственно при $L=0, 30, 45, 60, 90, 120, 130$ мм.

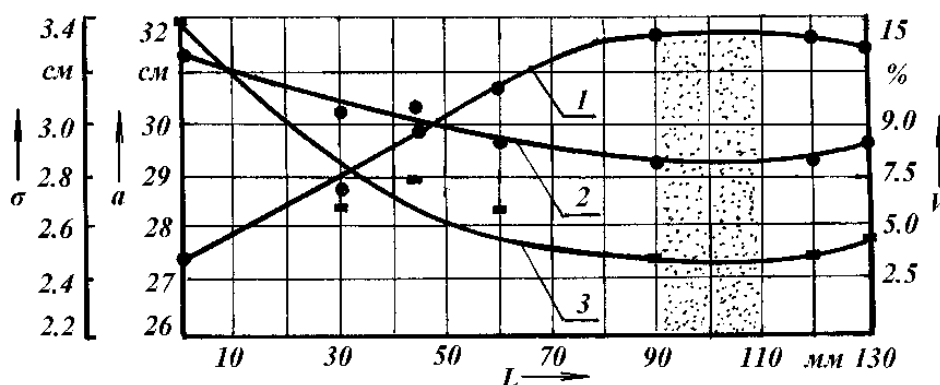
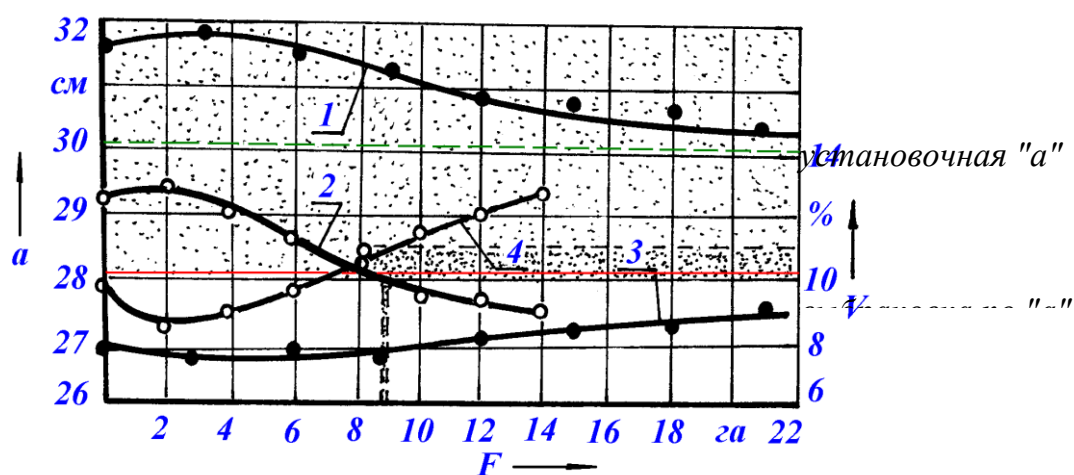


Рис. 3. Влияние вылета носка долота плуга на глубину вспашки (1), устойчивость хода (2) и на среднеквадратичное отклонение (3).

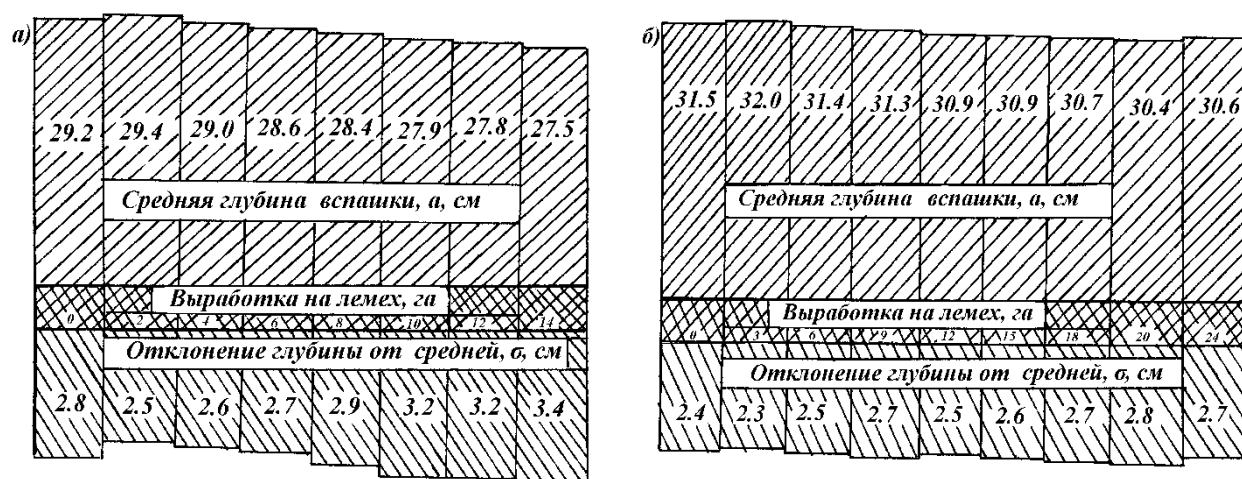
Изучение влияния степени затупления лемехов корпуса плуга на среднюю глубину (рис.5,6) при работе с серийными и экспериментальными лемехами показало, что в начале работы серийные лемеха, как и экспериментальные, выдерживают глубину вспашки в допустимых пределах, но с некоторыми отклонениями. Отклонения у экспериментального лемеха более стабильны, что можно объяснить геометрической формой носка долота, которое обеспечивает хороший забор глубины и более устойчивый ход (рис.5, б). По мере затупления лезвия лемеха глубина вспашки уменьшается, а разброс ее значений относительно средней глубины вспашки увеличивается (см. рис.5). Это положение более ярко иллюстрировано на рис.6, в, г, где видно, что серийные лемехи седьмой степени изношенности ($F=14$ га) имеют траекторию движения в пределах глубины обработки 23...29 см, что по агротехническому требованию недопустимы.



1, 3 – экспериментальный лемех; 2, 4 – серийный лемех;
Рис. 4. Зависимость глубины вспашки (1, 2) и равномерности хода плуга (3, 4) от наработки.

Как видно, (рис.6, г) экспериментальные лемехи восьмой степени изношенности ($F=30$ га), в основном, имеют траекторию движения в пределах глубины 28...32 см, что удовлетворяется требованиями агротехники [13,14].

Для $\sigma = \pm 2$ см колебания глубины вспашки в допустимых пределах составит 28...32 см. Установлено, что 64% всех размеров у серийных лемехов соответствует этому пределу. Величины глубины более 32 см и менее 28 см составляют соответственно 16 и 20%. У экспериментальных лемехов эти величины равны соответственно 55%, 41% и 4%.



а – серийный лемех; б –

экспериментальный лемех.

Рис.5. Влияние степени затупления лезвия лемеха на глубину вспашки.

Если учесть, что уменьшение глубины менее 28 см отрицательно сказывается на качестве работы и наоборот увеличение ее более 32 см положительно, тогда сможем сказать, что вспаханное поле у новых производственных лемехов на 80% выполнено качественно, а у экспериментальных лемехов эта величина равна 96%, т.е. всего 4% вспаханного поля имеет глубину вспашки менее установленного допуска.

Изучение изменения глубины вспашки у изношенных лемехов показало, что производственные лемеха после 14 га качественную работу выполняют только на 42% вспаханного поля. Тогда как у экспериментальных, после наработки 30 га, она составляет 89%. У первого 58%, а у второго 11% вспаханной площади глубина вспашки меньше 28 см.

Выводы. В заключении можно отметить, что долото с вылетом носка 90 мм увеличивает глубину хода плуга по сравнению с серийными лемехами на 2,3 см, при этом показатель устойчивости и среднеквадратичное отклонение уменьшаются соответственно на 21,9% и 15,4%. Вспаханное поле у новых производственных лемехов на 80% выполняется качественно, а у экспериментальных лемехов эта величина равна 96%, т.е. всего 4% вспаханного поля имеет глубину вспашки менее установленного допуска, а у изношенных лемехов: производственные лемеха после 14 га качественную работу выполняют только на 42% вспаханного поля.

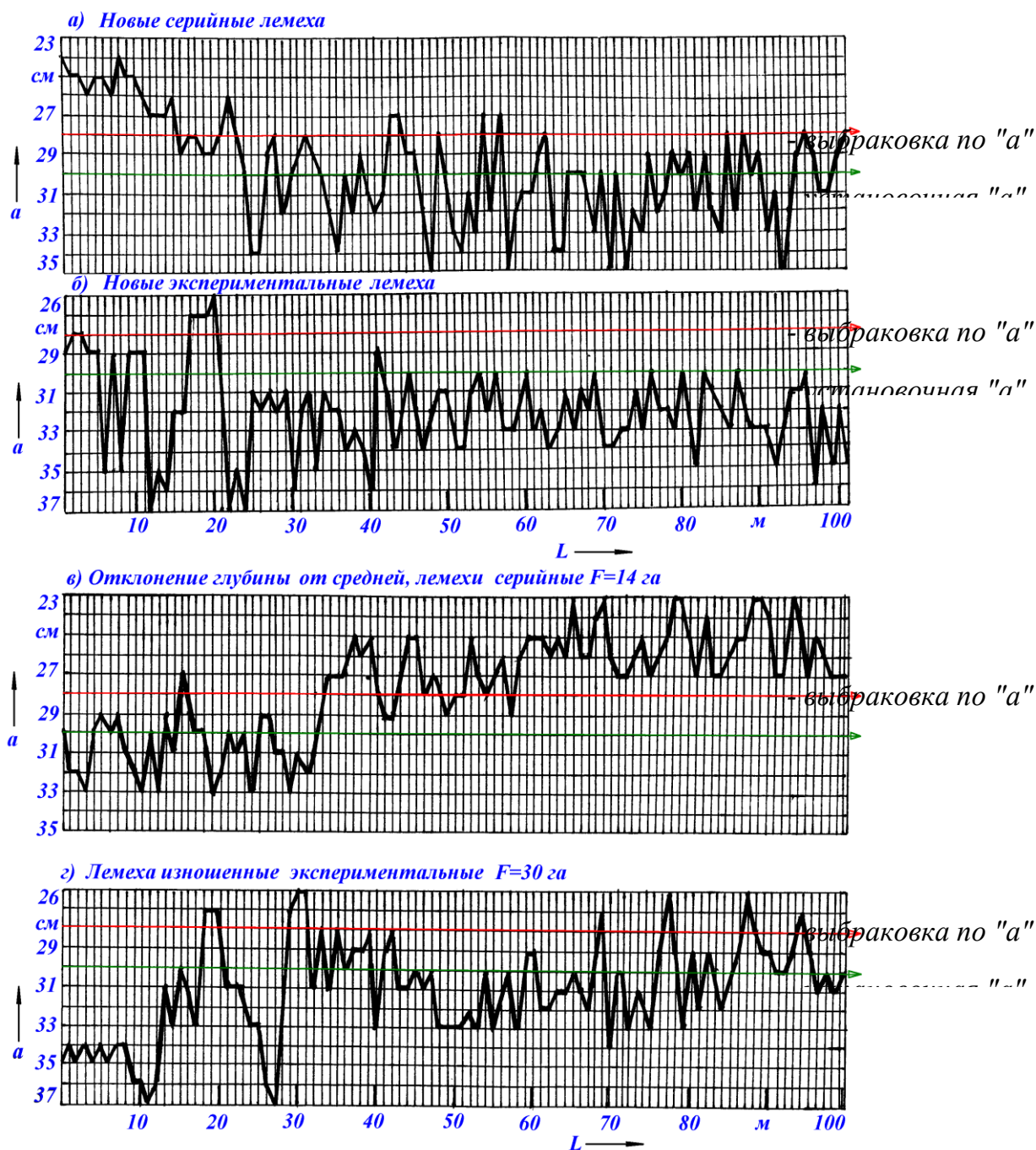


Рис.6. Отклонение глубины вспашки при работе с новыми (а, б) и изношенными (в, г) лемехами.

Тогда как у экспериментальных после наработки 30 га она составляет 89%. У первого 58%, а у второго 11% вспаханной площади глубина вспашки меньше 28 см.

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ПЕРЕЧЕНЬ РЕМОНТНЫХ РАБОТ ПО ВИДАМ БУРОВОГО И ЭНЕРГЕТИЧЕСКОГО ОБОРУДОВАНИЯ

Аннотация. В данной статье приводятся сведения о ремонтных работах в бурении и нормах времени на ремонтные работы, а также перечень ремонтных работ по видам бурового и энергетического оборудования.

Ключевые слова. Буровая лебедка, буровой насос, ротор, вертлюг, талевый блок, крюкоблок, кронблок, трансмиссия, пневмосистема, глиномешалка, кран 12КП-3, превентор, вышка и привышечные сооружения, пневмоклинья, пневмораскрепитель, сварочные и прочие работы.

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LIST OF REPAIR WORK BY TYPE OF DRILLING AND POWER EQUIPMENT

Annotation. This article provides information about repair work in drilling and time standards for repair work, as well as a list of repair work by type of drilling and power equipment.

Keywords. Drawworks, mud pump, rotor, swivel, traveling block, hook block, crown block, transmission, pneumatic system, clay mixer, 12KP-3 crane, preventer, tower and support structures, pneumatic wedges, pneumatic releaser, welding and other works.

При расчёте нормативной продолжительности проводки скважин учитываются затраты времени на выполнение работ (независимо от того, кто их проводит), связанных:

- с ремонтом оборудования, инструмента и приспособлений;
- с проверкой исправности оборудования, инструмента и приспособлений;
- с ремонтом ограждений, лестниц, каркасов укрытий и т.п.;
- с техническим обслуживанием оборудования, рабочих мест (смазка, регулировка, чистка и т.п.);

К ремонту оборудования, инструмента и приспособлений относятся работы по смене или приведению в работоспособное состояние их отдельных узлов и деталей [5,6].

Буровая лебедка. Проверка тормозной системы, ремонт тормозных тяг, и коромысла; смена изношенных цепей и отдельных звеньев цепных передач; смена и ремонт тормозных лент и тормозных колодок; смена подшипников валов, смена шинно-пневматических муфт и валов; проверка крепления лебедки и её центрирование; смена пульта управления и т.п.

Буровой насос. Смена клапанов, поршней, штоков, цилиндрических втулок, прокладок, предохранительных диафрагм, виккелей, проводных ремней, сальников и сальниковых коробок, манометров. Центрирование и крепление насоса; подкачка воздуха и виккели и т.п. [1,2].

Ротор. Смена цепной передачи или отдельных звеньев цепи, смена промежуточного (карданного) вала, подшипника и т.п.

Вертлюг. Смена сальника, прокладок, втулок и т.п.

Галевый блок, крюкоблок, кронблок. Смена секций шкивов; смена и ремонт направляющих, стопора, пружин стопора. Проверка изношенности желобов шкивов. Выправление кожуха. Проверка и докрепление крепёжных деталей и т.п.

Двигатель внутреннего сгорания. Смена навесных агрегатов двигателя, турботрансформатора. Промывка масляного фильтра, маслопроводов, фильтра тонкой очистки. Смена масла, очистка кассет и бункера от грязи. Проверка напряжения аккумуляторов и плотности электролита. Проверка крепления топливного насоса, генератора, водопомпы, венца маховика. Смена форсунок. Установка угла опережения подачи топлива. Промывка водяной системы, удаление накипи. Докрепление выхлопных труб, коллекторов. Центрирование двигателя и т.п.

Трансмиссии. Смена валов, шинно-пневматических муфт, приводных ремней, подшипников. Центрирование, докрепление и т.п.

Пневмосистема. Смена кранов, манометров, прокладок, шлангов, клапанов и т.п.

Электрооборудование. Смена предохранителей, электроламп, электропроводов, масляных выключателей, магнитных пускателей. Изоляция проводов, зачистка контактов. Продувка коллекторов и щеткодержателя от пыли, смена щеток, зачистка коллектора. Центрирование электродвигателя, проверка и крепление контура заземления и т.п.

Глиномешалка. Смена и ремонт ведущей и ведомой шестерни, лопастей, шкива привода, подшипников. Ремонт спускного клапана, решетки (сетки) люка, механизма для загрузки глины и т.п. Всасывающие и нагнетательные трубы и шланги. Смена фланцев, прокладок. Смена деталей задвижек. Ремонт и регулировка пневмозадвижек дистанционного управления и т.п. [7,8,9,10].

Кран 12КП-3. Смена редуктора, троса, тормозных колодок; регулировка храповой муфты и т.п.

Превентор. Смена предохранительных диафрагм, плашек, цепей, задвижек и т.п. [1,2,3,4].

Вышка и привышечные сооружения. Смена и ремонт полов, лестниц, перил и ограждений. Смена предохранительного пояса и амортизатора помощника бурильщика. Смена пальцев для установки свечей и т.п.

Механизмы, применяемые при спуско-подъёмных операциях. Элеваторы. Смена пружины и защелки. Машинные ключи. Смена сухарей, челюстей, канатов, АКБ, ПБК. Смена кранов управления, воздушных шлангов, сухарей на челюстях, кулачков, пружин, пневмодвигателей, крана перекрытия воздуха, прокладок цилиндра, челюстей, штоков и т.п.

Пневмоклинья. Смена и ремонт крана управления, подъемной вилки, сухарей, шлангов, штока поршня и т.п.

Пневмораскрепитель. Смена поршня, прокладок, сальников, тросов и т.п.

Сварочные работы. Ремонт ограждений, перил, кожухов, каркасов, лестниц. Приварка ручек к машинным ключам и элеваторам. Заварка трещин в трубопроводах и т.п.

Прочие работы. Смена сальниковых уплотнений центробежных и шламовых насосов, пальцев полужестких соединений с двигателями, сеток вибросита. Смена задвижек, шлангов, прокладок, вентилях пароводопровода. Смена трубок и тройников гидравлического индикатора веса и т.п.

Таблица №1. Нормативы на ремонтные работы, %

Нормативная продолжительность бурения скважин, сутки	Привод буровых установок	
	электрический	Дизельный и дизельэлектрический
До 20	3,3	4,4
40	5,0	5,0
60	5,0	6,4
80	6,6	6,4
120	7,0	7,0
Свыше 120	8,0	8,0

1. Норма времени на выполнение работ по профилактике и ремонту бурового оборудования и инструмента определяется по нормативам в процентах от нормативной продолжительности бурения скважин без учета времени на приём-сдачу смен и ожидание затвердения цемента (ОЗЦ) в скважине [14,15,16,17,18].

2. При бурении скважин в районах Крайнего Севера и местностях приравненных к ним норматив увеличивается на 2,0%.

3. При бурении скважин буровыми установками с газотурбинным приводом разрешается устанавливать местные нормативы с утвержденном вышестоящей организацией.

4. При бурении глубоких и сверхглубоких скважин норматив для отдельных интервалов принимается такой же, какой определен для всей скважины [14,15,16,17,18].

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РАСЧЁТ УКРУПНЕННЫХ НОРМ ВРЕМЕНИ НА БУРОВЫЕ РАБОТЫ С ПРИМЕНЕНИЕМ ЭВМ

Аннотация. В данной статье приводятся сведения о расчётах укрупненных норм времени на буровые работы, а также с применением электронно-вычислительных машин.

Ключевые слова. Норма времени, нормативная карта, местные элементные нормы времени, спуско-подъёмные операции, надбавки к нормам времени, наращивание инструмента

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CALCULATION OF ENGRADED TIME STANDARDS FOR DRILLING OPERATIONS USING COMPUTER

Annotation. This article provides information on the calculation of aggregated time standards for drilling operations, as well as with the use of computers.

Keywords. Time standard, standard map, local elemental time standards, hoisting operations, allowances to time standards, tool build-up

Укрупненные нормы времени на буровые работы используется отделом труда бурового предприятия при определении нормативной продолжительности бурения каждой скважины, при составлении нормативных карт, а также при расчёте сдельной заработной платы рабочим буровых бригад. По сравнению с нормированием по элементным нормам времени, приведенным в действующем сборнике единых норм времени на бурение скважин и в сборниках местных норм на буровые работы, применение укрупненных норм позволяет примерно в 4 – 6 раз ускорить и упростить составление нормативных карт за счёт отказа от производства расчётов по каждому элементу в отдельности.

Исходные технико-экономические данные представляются отделом труда и производственно-техническим отделом бурового предприятия. На основании полученных от бурового предприятия технико-технологических данных работники НИС (научно-исследовательский состав) выбирают соответствующие заданным условиям единые или местные (при отсутствии

единых) элементные нормы времени, с использованием которых ведется расчёт укрупненных норм времени.

Трудоёмкость расчёта 1 варианта нормативного времени на 1 рейс инструмента и таблиц норм времени на спуско-подъёмные операции в зависимости от компоновки бурильной колонны и глубины скважины при традиционных методах расчёта составляет 1 – 3 чел.-дн.

Расчёт укрупненных норм времени на буровые работы с помощью ЭВМ (электронно-вычислительных машин) дает возможность:

а) устранить затраты ручного труда на расчёт нормативного времени на 1 рейс инструмента и спуско-подъёмные операции, составляющие 600 – 700 чел.-дн. в год.

б) свести к минимуму ошибки в расчётах, что повысит точность начисления заработной платы буровым бригадам.

Требования к программе сводятся к следующему:

в) расчёт нормативного времени на 1 рейс производится с точностью до 2 знаков после запятой;

г) расчёт нормы времени на спуско-подъёмные операции производится в часах с точностью до 3 знаков после запятой;

д) расчёт среднего количества поднимаемых и спускаемых свечей производится с точностью до 1-го знака после запятой.

Задача расчёта укрупненных норм времени на буровые работы относится к системе нормативного обеспечения АСПР НП.

Укрупненные нормы времени, включающие в себя указанные элементные нормы, рассчитываются на 1 рейс для различных глубин скважины (через 100 м, а при глубине скважины 1500 м и больше – через 50 м), а затем относятся на 1 м проходки исходя из различных величин проходки на долото за 1 рейс инструмента.

В программе и в форме представления исходных данных зарезервирована возможность дополнительного учёта:

а) нормы времени на работы, нормируемые в зависимости от количества рейсов;

б) надбавки к нормам времени на спуск и подъём бурильных свечей;

в) надбавки к нормам времени на подъём бурильных свечей.

В случае отсутствия необходимости в учёте каких-либо норм, и надбавок они должны задаваться равными нулю.

Помимо укрупненных норм времени на 1 м проходки рассчитываются и выдаются заказчику:

а) нормативное время на 1 рейс инструмента (по работам, нормируемым в зависимости от количества рейсов), рассчитываемое для середины каждого 100-метрового интервала глубин (или 50-метрового интервала глубин, если глубина скважины равна или больше 1500 м);

б) нормативное время на промывку скважины перед подъёмом инструмента, рассчитываемое для середины каждого 100-метрового

интервала глубин (или 50-метрового интервала глубин, если глубина скважины равна или больше 1500 м);

в) нормативное время на наращивание инструмента и промывку скважины перед наращиванием, отнесенное на 1 м проходки и рассчитываемое для середины каждого 100-метрового интервала глубин (или 50-метрового интервала глубин, если глубина скважины равна или больше 1500 м);

г) нормативное время на спуск свечей (с учётом надбавок), количество которых изменяется через одну от минимальной до максимальной заданной глубины скважины;

д) нормативное время на подъём свечей (с учётом надбавок), количество которых изменяется через одну от минимальной до максимальной заданной глубины скважины.

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ПРОИСХОЖДЕНИЕ ПОНЯТИЯ РЕЧЕВОГО ЖАНРА.

Аннотация:

В современной лингвистике теория РЖ, один из которых описывается в нашем исследовании, - активно разрабатываемое научное направление. Для него характерно изучение языка в связи с коммуникативными намерениями говорящего и в связи с теми стратегиями, которые избирает говорящий для достижения своих целей. При этом язык рассматривается как средство общения, неразрывно связанное с культурой народа, говорящего на этом языке.

Хотя важность проблематики теории РЖ очевидна, многие РЖ или не описаны, или описаны недостаточно полно. Следует отметить также, что в исследованиях по теории РЖ только в последние два-три десятилетия возникает задача выявить те правила, которые связаны с условиями функционирования РЖ в конкретных национальных культурах.

Ключевые слова: речевой жанр, термин, благодарность, автор, адресат.

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ORIGIN OF THE CONCEPT OF SPEECH GENRE

***Abstract:** In modern linguistics, the theory of speech genres, one of which is described in our study, is an actively developing scientific direction. It is characterized by the study of language in connection with the communicative intentions of the speaker and in connection with the strategies that the speaker chooses to achieve his goals. In this case, language is considered as a means of communication, inextricably linked with the culture of the people speaking this language. Although the importance of the problems of speech genre theory is obvious, many speech genres are either not described or are not described fully enough. It should also be noted that in studies of speech genre theory only in the last two or three decades the task has arisen to identify those rules that are associated with the conditions of functioning of speech genres in specific national cultures.*

***Key words:** speech genre, term, gratitude, author, addressee*

Одна из важных проблем прагматики касается единиц, из которых состоит коммуникация. На начальном этапе прагматических исследований

использовалось понятие речевого акта. Однако в последние десятилетия многие ученые стали обращаться и к другому понятию - речевому жанру. Понятие речевого жанра в русской филологии начало использоваться еще в 30-е годы XX века для обозначения единиц речевого общения. О таких терминах можно найти упоминания в работах В.В. Виноградова, Л. Якубинского, Б. Эйхенбаума и других известных филологов того времени. По М.М. Бахтину, речевой жанр (РЖ) представляет собой "относительно устойчивый тип высказываний", который характерен для определенной "сферы использования языка". В рамках РЖ могут быть учтены "короткие реплики бытового диалога..., бытовой рассказ, письмо (во всех его формах), ... различные деловые документы (чаще стандартные), репертуар публицистических выступлений, а также различные научные выступления и все литературные жанры (от поговорки до многотомного романа)"¹. Бахтин отмечает: "Пока нет никакой номенклатуры устных речевых жанров, и даже пока не ясен принцип такой номенклатуры"¹. Однако Бахтин делит РЖ на первичные (простые) и вторичные (сложные). Первичные связаны с "непосредственным речевым общением" и относятся к "бытовой жизни", а вторичные возникают в условиях более сложного и организованного культурного общения, преимущественно письменного¹.

В процессе формирования жанры способны включать в себя различные первоначальные формы. Знакомство с произведениями этого выдающегося русского исследователя убеждает в том, что он учитывал такие характеристики жанра, как его принципиальная диалогичность, цельность, целенаправленность, смысловая завершенность и отношение к другим высказываниям.

Интерес к понятию жанра пробуждается в связи с активным развитием теории речевой коммуникации во второй половине XX века. Возвращение к проблеме, поставленной в первой трети этого столетия, предполагает осмысление данной проблемы в контексте конкретных задач, актуальных в настоящее время. Одной из важнейших задач, на которую обращают внимание исследователи, является определение жанра и его основных характеристик, выявление первоначальных жанров и составление описаний отдельных жанров⁴.

Мы считаем, что этот список должен быть дополнен задачей сравнительного изучения жанров одного типа в разных языках.

Определение жанра

Таким образом, необходимость представления особой речевой единицы, образованной в повседневном общении в виде того или иного жанра, была очевидной уже для Бахтина (см. цитаты этого автора). Бахтин указывает на такие важные характеристики первоначального жанра, как связь с определенной коммуникативной ситуацией, принадлежность одному говорящему, ориентированность на адресата и наличие ответной реакции. Однако в целом концепция жанра у Бахтина осталась незавершенной.

В настоящее время возрастающий интерес к данной проблеме выражается в попытках исследователей предложить способы представления отдельных жанров. Так, А. Вежицкая предлагает моделировать жанр "при помощи последовательности простых предложений, выражающих мотивы, интенции и другие психические действия говорящего, определяющие данный тип высказывания"².

Т.В. Шмелева⁴, характеризуя жанр, использует следующие признаки (автор называет их пунктами анкеты):

а) коммуникативная цель жанра. Этот признак, в соответствии с уже сложившейся традицией, определяется как конституирующий жанр: учет различий коммуникативной цели позволяет автору разграничить 4 основных типа жанров (информативные, оценочные, императивные и этикетные);

б) образ автора, характеризуемый такими признаками, как авторитет и ряд других статусных и ситуативных черт говорящего;

в) образ адресата, влияющего на "поведение" автора (в частности, этикетные жанры базируются на предположении, что адресат знаком с этикетом и принимает его);

г) содержание, или диктум (так называет Шмелева "событийную основу высказывания", требующую учета при рассмотрении того или иного жанра). В частности, связь диктума со временем события может различаться в разных жанрах, например, воспоминание, обращенное к прошлому, и прогноз, ориентированный на будущее. Диктум может быть связан с личной сферой автора или адресата, например, извинение или поздравление. Также следует учитывать и количество событий в диктуме (например, рассказ предполагает сценарий из ряда событий, в то время как поздравление, извинение и соболезнование основаны на одном событии).

д) Фактор прошлого является важным аспектом, позволяющим различать жанры, которые имеют прошлое и которые его не имеют. Например, ответ является реакцией на предшествующее высказывание и, следовательно, имеет прошлое, в то время как сообщение не обязательно имеет прошлое.

е) Фактор будущего связан с возможностью определенной коммуникативной реакции. Один из ключевых аспектов теории речевых актов - перлокуция, или перлокутивный эффект, который отражает реакцию адресата на высказывание. Речевое действие считается успешным, когда достигается эффект, хотя он не всегда является обязательным. Важно отметить различие между будущим событийным и коммуникативным, то есть между ответной речевой реакцией и самим перлокутивным эффектом. Речевая реакция представляет собой существенную характеристику, заложенную в определенный жанр (например, вопрос - ответ, просьба или приглашение - согласие/отказ и т.д.). Перлокутивный эффект - это реализация цели жанра, его результат, а отсутствие необходимого эффекта может свидетельствовать о неуспешности речевого действия.

ж) Языковая форма речевого жанра включает грамматические и лексические средства, используемые в нем, а также языковые клише и формулы. Описание языковых аспектов конкретного жанра предполагает учет метаединицы, определяющей данный жанр. Полное описание языковых особенностей каждого конкретного жанра требует выявления особенностей не только прямых, но и косвенных речевых жанров (об этом будет сказано далее).

Предлагаемая Т.В. Шмелевой схема рассмотрения речевых жанров является базовой при анализе русского жанра благодарности.

Е.А. Земская считала тип коммуникации (официальный/неофициальный), его вид (личная/публичная), цель, количество участников, характеристики адресанта (статусные и гендерные) и обращение к адресату или его отсутствие, а также активность/пассивность адресата характеристиками, влияющими на характер жанра.

М.Ю. Федосюк, в отличие от некоторых других авторов, рассматривает речевые жанры как "относительно устойчивые типы текстов, а не высказываний". Мы разделяем эту точку зрения и называем речевые жанры микротекстами. Мы различаем элементарные и комплексные жанры. Например, похвала, приветствие, благодарность могут быть интерпретированы как микротексты, отражающие определенный речевой жанр. Комплексные жанры могут включать составляющие, которые представляют собой элементарные жанры.

Для характеристики речевых жанров важен еще один параметр: речевая единица может быть создана из реплик одного говорящего (монологический жанр) или реплик разных участников речевого общения (диалог).

«Речевая коммуникация и важнейшие составляющие. Принципы успешного общения»

Поскольку главным назначением речевой коммуникации является передача информации и восприятие смысла, заключенного в высказываниях, необходимо учесть факторы, которые оказывают влияние на этот обмен. Некоторые из этих факторов считаются принципами эффективного коммуникативного взаимодействия и являются обязательными для всех участников диалога. Эти принципы представлены коммуникативными постулатами, сформулированными Г. Грайсом, а именно основным принципом сотрудничества и четырьмя его частными проявлениями:

- принцип количества (необходимость достаточно информативных высказываний);
- принцип качества (утверждения должны быть истинными);
- принцип отношения, или релевантности (высказывания должны соответствовать теме разговора);
- принцип способа (высказывания должны быть ясными и однозначными, а также лаконичными)³.

Эти принципы помогают установить связь между целями говорящего, его интересами, оценкой ситуации общения и другими нелингвистическими факторами.

На простом уровне они показывают, что говорящий должен действительно иметь в виду то, что он или она говорит. Извинения или обещания могут принести с собой загадку искренности. Нельзя с абсолютной уверенностью сказать, насколько говорящий искренен в своих словах. Подлинное намерение извиниться или сделать обещание не предоставляет гарантии долгосрочно сохранять отношение прощения или выполнить обещание. Некоторые речевые акты, такие как клятва или клятва, приобретают искренность благодаря свидетелям, присутствующим на момент произнесения. Однако невозможно подтвердить, что человек, который дал обещание, действительно не собирался его выполнить.

Еще более сложная ситуация возникает в классе, когда учитель задает вопрос, но ученик предполагает, что учитель уже знает ответ и, следовательно, неискренен в своем вопросе.

Мы также можем юмористически использовать наше понимание искренности в ситуациях, когда мы просим кого-то сделать невозможное или обещаем себе выполнить то, что кажется невозможным: «Может, ты сегодня сделаешь погоду солнечной?»

Локутивные, иллокутивные и перлокутивные акты представляют собой три основных элемента, которые служат для создания и проявления речевого акта. Leech кратко определяет их следующим образом:

локутивный акт: выполнение акта произнесения чего-либо

иллокутивный акт: совершение акта высказывания чего-либо

перлокутивный акт: выполнение действия посредством произнесения чего-либо³⁹.

Локутивный акт можно рассматривать как простое произнесение некоторых слов на определенном языке, в то время как иллокутивный и перлокутивные акты передают слушателю более сложное сообщение. Иллокутивный акт сообщает о намерениях говорящего, стоящих за речевым оборотом, а перлокутивный акт раскрывает эффект, который говорящий хочет произвести на слушателя. Это можно продемонстрировать на простом примере: Не могли бы вы закрыть дверь, пожалуйста?

Поверхностная форма, а также локутивный акт этого высказывания есть вопрос с ясным содержанием (Закрой дверь). Иллокутивный акт передает просьбу со стороны говорящего, а перлокутивный акт выражает желание говорящего, чтобы слушающий пошел и закрыл дверь. Но отдельные элементы не всегда можно так легко разделить.

Этот компонент речевого акта, пожалуй, наименее неоднозначен. Бах и Харниш, комментируя работу Остина, отмечают, что Остин различает три аспекта локутивного акта. Остин утверждает, что сказать что-либо значит:

А. Всегда произносить определенные звуки (фонетический акт).

В. Всегда произносить определенные слова или фразы (фатикакт).

С. Обычно использовать это предложение или его элементы с определенным "смыслом" и "отсылкой", которые вместе эквивалентны исходному "смыслу" (ретический акт).

Сирл даже полностью отвергает разделение Остина и предлагает вместо него свое. Серл предупреждает, что ретический акт Остина есть не что иное, как переформулированное описание иллокутивного акта, и поэтому он предлагает другой термин, так называемый пропозициональный акт, выражающий пропозицию (нейтральная фраза без иллокутивной силы).

Другими словами, предложение есть содержание высказывания. Wardhaugh предлагает это объяснение. Пропозициональные акты — это те вопросы, которые имеют отношение к референции и предикату: мы используем язык, чтобы сослаться на материи в мире и делать предсказания о таких материях. Пропозициональные акты не могут происходить в одиночку, так как речевой акт не был бы полным.

Речевые акты и пропозициональные акты неразрывно связаны с теорией речевых актов, однако иллокутивные акты представляют собой главную сферу интереса лингвистов. Их исследование является наиболее важной задачей.

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ИСПОЛЬЗОВАНИЕ МЕТОДА ИМИТАЦИИ НА КОРРЕКЦИОННЫХ ЗАНЯТИЯХ С ДЕТЬМИ РАС

Аннотация: В данной статье представлены особенности педагогический подхода, основанный на подражании действиям, жестам, звукам или поведению других людей. Этот метод активно используется в различных областях психологии и педагогики, в том числе в коррекционной работе с детьми, особенно с расстройствами аутистического спектра (РАС), где он помогает развивать социальные, коммуникативные и когнитивные навыки. Через имитацию дети учатся усваивать новые формы поведения, а также взаимодействуют с окружающим миром и людьми.

Ключевые слова: методика коррекционной работы с детьми с расстройством аутистического спектра, метод имитации, социализация, формы поведения, коммуникация.

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USE OF THE IMITATION METHOD IN CORRECTIONAL CLASSES WITH CHILDREN WITH ASD

Abstract: This article presents the features of a pedagogical approach based on imitation of actions, gestures, sounds or behavior of other people. This method is actively used in various fields of psychology and pedagogy, including in correctional work with children, especially with autism spectrum disorders (ASD), where it helps to develop social, communicative and cognitive skills. Through imitation, children learn to assimilate new forms of behavior, as well as interact with the outside world and people.

Keywords: methods of correctional work with children with autism spectrum disorder, imitation method, socialization, forms of behavior, communication.

Расстройства аутистического спектра (РАС) — это группа нейробиологических расстройств, которые затрудняют развитие социальных, коммуникативных и поведенческих навыков у детей. Эти особенности могут выражаться в разнообразных формах и сильно различаться по степени выраженности. Однако, несмотря на индивидуальные различия, дети с РАС часто сталкиваются с трудностями в взаимодействии с окружающими, выражении эмоций и адаптации к изменяющимся условиям жизни.

Коррекционные занятия, направленные на развитие социальных и коммуникативных навыков, являются важной частью работы с детьми с

аутизмом. В последние годы методика имитации занимает одно из центральных мест среди эффективных техник, применяемых для улучшения взаимодействия таких детей с окружающим миром. Метод имитации основывается на повторении действий или поведения, которые выполняет другой человек, что помогает ребенку научиться реагировать в различных ситуациях и развивать необходимые для общения навыки.

Целью данной статьи является рассмотрение метода имитации как одного из эффективных подходов в коррекционной работе с детьми с расстройствами аутистического спектра.

Метод имитации основан на способности человека повторять действия, звуки, движения или поведение другого человека. Это естественный способ обучения, который активно используется в раннем возрасте для освоения речи, моторики и социальных навыков. Для детей с РАС имитация является мощным инструментом развития, поскольку она помогает ребенку овладеть необходимыми навыками для адаптации в социальном мире.

Наиболее эффективно метод имитации используется для:

Развития социальной активности и установления контакта с окружающими.

Обучения базовым коммуникативным навыкам, таким как взгляд, жесты, голос.

Формирования базовых навыков самообслуживания (например, кормление, уборка).

Освоения элементов ролевых игр и взаимодействий с окружающими.

Психологи, работающие с детьми с аутизмом, утверждают, что способность к имитации является важным предвестником более сложных форм обучения и социальной адаптации. Через имитацию дети учат не только вербальные, но и невербальные формы общения, а также развивают социальные и когнитивные навыки.

На коррекционных занятиях с детьми с РАС метод имитации может быть интегрирован в различные виды деятельности, включая игры, упражнения, простые повседневные задачи и ролевые игры.

Примеры упражнений:

Повторение движений — педагог выполняет простое движение (например, хлопает в ладоши или машет рукой), и ребенок должен повторить это действие.

Повторение звуков и слов — педагог произносит слова или звуки, и ребенок пытается их воспроизвести.

Ролевые игры — педагог и ребенок могут разыгрывать сцены из повседневной жизни (например, игру в магазин), где ребенок имитирует поведение взрослого.

Таким образом, через игру и повторение ребенок учится реагировать на различные ситуации, понимая, что именно нужно сделать, чтобы взаимодействовать с окружающими.

Методы имитации, используемые в коррекционной работе с детьми с расстройствами аутистического спектра (РАС), основываются на принципе повторения и подражания действиям, звукам или поведению другого человека. Эти методы направлены на развитие социальных, коммуникативных и когнитивных навыков у детей, что является важным для их адаптации в социальной среде.

Давайте рассмотрим основные методы имитации, которые могут быть применимы в работе с детьми с РАС.

1. Имитация движений и жестов

Это один из самых базовых методов имитации, который используется для развития моторики и формирования первых социальных взаимодействий. В процессе работы ребенок учится повторять физические действия, такие как:

Хлопание в ладоши.

Поднятие рук.

Кивание головой.

Махание рукой.

Пример: Взрослый выполняет какое-то движение (например, хлопает в ладоши), а ребенок должен повторить это действие. Начинать можно с простых движений, постепенно усложняя их.

Цели метода:

Развитие моторных навыков.

Создание связи между действием и его социальным контекстом (например, приветствие).

Установление контакта и внимание.

2. Имитация звуков и слов

Этот метод используется для развития речевых навыков и понимания общения через звуки и слова. Задача ребенка — повторить за взрослым произнесенные звуки, слоги, а затем и слова.

Пример: Педагог произносит звуки (например, "аа", "уу") или простые слова (например, "мама", "дай") и просит ребенка повторить их. Это может включать как звукоподражание (например, имитация звуков природы или животных), так и повседневную речь.

Цели метода:

Развитие речи и звукового восприятия.

Обучение взаимодействию через вербальные сигналы.

Формирование основ словесного общения.

3. Имитация действий с предметами

Этот метод включает подражание действиям с различными предметами и игрушками. Например, дети учат пользоваться игрушками или предметами быта, повторяя действия взрослого. Это помогает детям научиться взаимодействовать с окружающим миром и осваивать базовые навыки самообслуживания.

Пример: Взрослый показывает, как собирать кубики или как налить воду в чашку, а ребенок должен повторить эти действия.

Цели метода:

Развитие навыков самообслуживания.

Освоение базовых повседневных действий (например, как использовать ложку, стакан).

Развитие моторной координации и ориентации в пространстве.

4. Имитация эмоциональных выражений

Данный метод направлен на развитие способности ребенка распознавать и выражать эмоции. Педагог может показывать различные выражения лиц, например, радость, удивление, грусть, и ребенок должен их повторить.

Пример: Педагог улыбается, и ребенок также должен улыбнуться. Или педагог изображает грусть, а ребенок должен попытаться изобразить грусть на своем лице.

Цели метода:

Развитие социальной эмпатии.

Помощь в понимании и выражении эмоций.

Улучшение способности к невербальному общению.

5. Ролевые игры с элементами имитации

Ролевые игры — это одна из наиболее сложных и многогранных форм имитации, которая используется для развития социальных навыков и когнитивных способностей. В таких играх дети повторяют поведение взрослых в различных социальных ситуациях, моделируя реальную жизнь.

Пример: Игра в магазин, где ребенок имитирует покупателя или продавца, выполняя действия, которые он видел у взрослых. Или игра в семью, где ребенок может играть роль мамы, папы, ребенка и т.д.

Цели метода:

- Развитие социальной компетентности.
- Овладение навыками взаимодействия с окружающими.
- Обучение ролевым моделям поведения в реальных жизненных ситуациях.

6. Методика «Подражание и пошаговое руководство»

Это более сложная форма имитации, при которой педагог пошагово обучает ребенка конкретному навыку или действию, начиная с простых шагов и постепенно переходя к более сложным. Ребенок повторяет действия, постепенно овладевая более сложными заданиями.

Пример: Если ребенок не умеет застегивать пуговицы, педагог сначала показывает, как это делается, затем помогает ребенку проделать каждый шаг, а в конечном итоге ребенок сам может застегнуть пуговицу.

Цели метода:

Формирование новых навыков через пошаговое повторение.

Развитие самостоятельности.

Укрепление уверенности в себе.

7. Метод имитации с использованием визуальных и аудиовизуальных стимулов

Для детей с аутизмом, которые могут иметь сенсорные особенности, использование различных визуальных и аудиовизуальных стимулов может быть особенно эффективным. Например, использование видеозаписей с примерами социального взаимодействия или мультфильмов с диалогами и жестами помогает детям понять, как следует вести себя в разных социальных ситуациях.

Пример: Показ видеозаписи, где дети взаимодействуют друг с другом, и затем ребенок повторяет за ними, выполняя те же жесты или слова.

Цели метода:

Помощь в освоении социальных норм через визуальные примеры.

Развитие внимания и восприятия.

Улучшение понимания и воспроизведения сложных социальных взаимодействий.

Преимущества методов имитации в работе с детьми с РАС

Развитие социальных навыков. Метод имитации способствует развитию способности ребенка к социальному взаимодействию и распознаванию социальных сигналов.

Улучшение речевых и коммуникативных навыков. Через повторение звуков и слов дети могут научиться вербальному общению.

Развитие моторных навыков. Повторение движений и действий помогает улучшить координацию и моторные навыки.

Повышение уверенности и самостоятельности. Когда ребенок начинает успешно повторять действия и достижения, он чувствует себя более уверенно в своем окружении.

Методы имитации являются важными инструментами в коррекционной работе с детьми с расстройствами аутистического спектра. Они помогают развивать ключевые навыки, такие как общение, социальные взаимодействия, моторика и эмоциональные реакции. Применяя различные методы имитации, специалисты могут существенно улучшить качество жизни детей с аутизмом, обеспечив им возможность взаимодействовать с окружающим миром и быть частью социальной среды. Он помогает развивать ключевые социальные и коммуникативные навыки, стимулирует к обучению через подражание и способствует лучшей адаптации ребенка в обществе. Важно учитывать, что каждый ребенок с РАС уникален, и использование этого метода требует индивидуального подхода, гибкости и терпения со стороны специалистов и родителей.

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СНИЖЕНИЕ ИЛИ УСТРАНЕНИЕ БЕЗРАБОТИЦЫ, ЭФФЕКТИВНОСТЬ ГОСУДАРСТВЕННЫХ МЕР

***Аннотация.** В данной статье рассмотрены роль государства в регулировании экономики, роль государства в регулировании экономики, участие малого бизнеса и развитие предпринимательства в экономическом развитии мировой экономики, а также теоретические и практические взгляды признаются.*

***Ключевые слова:** Уровень бедности, ловушка бедности, бедность, меры по сокращению бедности.*

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REDUCING OR ELIMINATING UNEMPLOYMENT, THE EFFECTIVENESS OF GOVERNMENT MEASURES

***Abstract.** In this article, the role of the state in the regulation of the economy, the role of the state in the regulation of the economy, the participation of small business and the development of entrepreneurship in the economic development of the world economy, and the theoretical and practical views are recognized.*

***Key words:** Poverty rate, poverty trap, poverty, measures to reduce poverty.*

Введение. В Узбекистане развитие малого бизнеса и частного предпринимательства определено как важное направление для обеспечения социально-экономического развития. Для развития этой деятельности сформирована прочная законодательная политика, создана надежная правовая база, которая постоянно совершенствуется. Государство предоставляет льготы и преференции для развития малого бизнеса и предпринимательства, а также систематически оказывает помощь в вопросах технической и технологической переоснащенности и модернизации производства. Эти меры способствуют сокращению бедности.

Сокращение бедности осуществляется государством, при этом проводятся системные меры в таких направлениях, как увеличение доли малого бизнеса и частного предпринимательства в валовом внутреннем продукте и обеспечении занятости, улучшение технологической структуры, удовлетворение потребностей в кредитных ресурсах и создание благоприятной деловой среды. В результате таких важных реформ к концу

2024 года доля малого бизнеса и частного предпринимательства в валовом внутреннем продукте составит 58,9%, в объеме промышленной продукции 40,6%, в объеме сельскохозяйственной продукции 98,4%, а в объеме инвестиций в основной капитал 35,8%.

Занятая часть населения составляет 77,9% в данном секторе. Для сокращения бедности важно совершенствовать механизмы развития малого бизнеса и предпринимательства, повышать эффективность этих процессов, создавать благоприятную деловую среду для малого бизнеса, эффективно использовать механизмы денежно-кредитного регулирования, усиливать его участие во внешнеэкономической деятельности, создавать новые рабочие места и повышать доходы населения. Ключевым является также полное использование возможностей для сокращения бедности через внедрение инновационных идей и технологий на практике.

В странах, находящихся в условиях экономической стабилизации, никому не секрет, что часть населения не может полностью удовлетворить свои материальные и духовные потребности из-за низких доходов.

Бедность это специфическое состояние материального обеспечения людей, когда доходы индивида или семьи не позволяют сохранить уровень потребления, необходимый для социального существования. Этот слой населения называется бедными. Уровень доходов населения и степень бедности можно определить с помощью выборочного наблюдения и нормативного метода. При выборочном методе семья считается бедной, если ее доходы в несколько раз ниже среднего дохода по стране. В частности, в Узбекистане также используется нормативный метод для определения бедности. В этом методе определяется стоимость набора жизненно необходимых продуктов, товаров и услуг. Эта стоимость формирует потребительский бюджет. Доход, соответствующий минимальному потребительскому бюджету или его части (50% и более), называется чертой бедности.

26 марта 2020 года было принято постановление Президента Республики Узбекистан «О создании Министерства экономического развития и сокращения бедности Республики Узбекистан и организации его структурных подразделений», а также 3 декабря 2021 года — постановление «О мерах по организации деятельности помощников хокимов в вопросах развития предпринимательства в местах, обеспечения занятости населения и сокращения бедности».

Согласно этому постановлению, с 1 января 2022 года в каждом городе, селе, ауле и каждом махалле была введена должность помощника хокима района (города) по вопросам развития предпринимательства, обеспечения занятости населения и сокращения бедности. Введение системы помощников хокимов знаменует собой резкий поворот в политике нашей страны по борьбе с бедностью.

8 июня 2020 года было принято постановление Президента Республики Узбекистан «О мерах по упрощению государственного регулирования

предпринимательской деятельности и самозанятости». Целью данного постановления является более широкое вовлечение населения в предпринимательскую деятельность и создание дополнительных условий для осуществления легальной трудовой деятельности.

Согласно этому документу, с 1 июля 2020 года список видов деятельности (работ, услуг), которыми могут заниматься самозанятые лица, увеличился до 67, и их доходы не подлежат налогообложению. Для регистрации самозанятости не требуется обращаться в налоговые органы. Эти меры играют важную роль в сокращении бедности.

В нашей стране регистрация видов деятельности осуществляется через специальное мобильное приложение или личный кабинет налогоплательщика. Формируется матричный штрих-код (QR-код) в качестве подтверждения регистрации. Теперь процедура выдачи временных трудовых удостоверений отменяется. Многие граждане не могли выйти на пенсию из-за отсутствия стажа, хотя достигли пенсионного возраста, занимаясь самозанятостью.

Самозанятые граждане уплачивают социальный налог в размере не менее 50% от базового расчетного размера (в 2020 году это составляло 111 500 сум, а сейчас эта сумма увеличилась), и эта сумма полностью направляется в внебюджетный Пенсионный фонд. На основе этого определяется размер дохода для расчета пенсии для индивидуальных предпринимателей.

Например, рабочий, занимающийся такими работами, как вспашка земли или грузоперевозки, может оказаться из бедной семьи. С возрастом он может потерять трудоспособность, не сможет работать и снова станет нуждающимся.

По этой причине гражданам объясняется, что при регистрации самозанятости через специальное мобильное приложение или личный кабинет налогоплательщика, если в 2023 году уплатить социальный налог в размере 111,5 тысячи сумов, это будет засчитано как трудовой стаж и учтется при выходе на пенсию в будущем. Подобные примеры встречаются в повседневной жизни довольно часто.

Кроме того, в последние годы в нашей стране была внедрена совершенно новая система адресной помощи для женщин, молодежи и граждан, нуждающихся в социальной защите, с тяжелыми условиями жизни, безработных и не имеющих профессии, которые нуждаются в правовой и морально-психологической поддержке.

В частности, 28 апреля 2021 года было принято постановление Кабинета Министров Республики Узбекистан № 250 «О дополнительных мерах по социальной поддержке семей, нуждающихся в материальной помощи, женщин и молодежи». В соответствии с ним в Узбекистане была создана новая система адресной помощи, организующая индивидуальную и систематическую работу с каждым человеком, включающая «Темир дафтар», «Дафтар айоллар» и «Дафтар ёшлар».

По гражданам, внесенным в "Темир дафтар", предусмотрены следующие меры:

- обеспечение занятости;
- помощь в использовании приусадебного хозяйства как источника дохода;
- привлечение к предпринимательству;
- материальная помощь и медицинское обслуживание.

"Ёшлар дафтари" — это адресный список, в который включаются молодые люди в возрасте от 18 до 30 лет, нуждающиеся в социально-правовой и психологической поддержке, а также стремящиеся к получению знаний и профессиональных навыков, и являющиеся безработными. Для граждан, внесенных в "Ёшлар дафтари", предусмотрены:

- обучение навыкам профессий и предпринимательства;
- обеспечение занятости;
- привлечение к предпринимательству;
- организация безопасной, упорядоченной и легальной трудовой миграции за границей;
- оплата ежегодных учебных расходов для детей из нуждающихся семей в высших учебных заведениях страны на платной основе;
- предоставление медицинской, правовой и психологической помощи.

Согласно постановлению, в "Темир дафтари" по каждому сектору будут включены семьи следующих категорий:

- Согласно постановлению Кабинета Министров Республики Узбекистан от 5 марта 2021 года № 122 "О дальнейшей доработке системы социальной защиты населения и широком внедрении современных информационно-коммуникационных технологий в данную сферу", признаны малообеспеченными семьи:

- семьи с членами, имеющими I и II группы инвалидности и нуждающимися в социальной помощи;
- малозаботливые одинокие граждане и пожилые люди;
- семьи, потерявшие кормильца;
- многодетные семьи (с 4 и более детьми), нуждающиеся в материальной помощи;
- семьи с трудоспособными безработными членами;
- семьи, нуждающиеся в медицинской помощи (имеющие хронические или тяжелые заболевания, приводящие к инвалидности, с не установленной группой инвалидности и недостаточным источником дохода);
- нуждающиеся семьи, проживающие в нежилых помещениях и не имеющие жилья на имя себя или членов семьи.

Если члены указанных категорий семей также включены в "Аёллар дафтари" и "Ёшлар дафтари", то список этих семей ведется в этих реестрах. Проблемы, потребности и интересы семей изучаются следующими способами:

- через обход домов сотрудниками местных управлений, постоянными представителями и активистами махаллы для выявления всех проблем;
- через рассмотрение обращений семей с тяжелыми условиями жизни;
- на основе результатов проведенных опросов о нуждающихся семьях.

Секретарь сектора, сотрудники махаллы, постоянные представители и активисты махаллы формируют сводный список интересов, проблем и социального статуса членов нуждающихся семей в срок не более трех дней.

В заключение можно отметить, что в результате проведенных исследований видно, что в Кашкадарьинской области на душу населения в 2024 году составит 9805,1 тысячи сум, в 2023 году 9032,4 тысячи сум, в 2022 году 8002,8 тысячи сум, в 2021 году 6651,3 тысячи сум, а в 2017 году 5880,3 тысячи сум. Это означает, что в 2021 году реальные доходы по сравнению с 2017 годом увеличились на 166,7%, по сравнению с 2018 годом на 147,4%, с 2019 годом на 122,5%, а с 2023 годом на 108,5%.

Также представлены статистические данные о низкообеспеченной части населения районов Чирокчи, Шахрисабз и Миришкор, а именно: население района Чирокчи составляет 414602 человека, количество домохозяйств 69861, количество семей 93040, из которых нуждающихся семей 32670, нуждающихся в жилье 2036, и женщин, живущих в тяжелых условиях 1432.

В Шахрисабзе население составляет 321412 человек, количество домохозяйств 54210, количество семей 73268, из которых нуждающихся семей 21230, нуждающихся в жилье 1623, и женщин, живущих в тяжелых условиях 946.

В районе Миришкор население составляет 119500 человек, количество домохозяйств 22750, количество семей 35786, из которых нуждающихся семей 1550, нуждающихся в жилье 784, и женщин, живущих в тяжелых условиях 675.

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ВАЛЕНТНОСТЬ СЛОВА И СИНТАКСИЧЕСКАЯ СВЯЗЬ

Аннотация: Статья посвящена слову, валентности слова и синтаксической связи между ними. В ней слово выступает в качестве носителя всех своих свойств, качеств и отношений. Субстанциональный подход к слову обобщает результаты исследования лексико-семантических и грамматических ярусов, эти ярусы выступают в диалектическом единстве. В речи семантика отдельного слова выступает во взаимодействие с семантической структурой всего высказывания.

В настоящее время основные закономерности сочетания одной единицы языка с другой объединяются понятием валентности. Валентность слова как субстанциально – семантический факт связана со значением слова и реализацией его значения в конструкциях предложения.

Семантическое отношение между словами непосредственно выявляет синтаксическое отношение, что закрепляется в образовании синтаксических конструкций, так как семантические отношения существуют на основе синтаксических. Валентность не исходит из синтаксической связи, а синтаксическая связь основана на валентности.

Если валентность внутренняя возможность, потенция, то синтаксическая связь её реализация.

Валентность слова и синтаксическая связь диалектические взаимосвязаны, взаимно целые, неразделимые, но в то же время каждый является относительно самостоятельно активным явлением.

Ключевые слова: Валентность, слово, единица речи, субстанциональный подход, семантика, семантический отношения, синтаксическая связь, глагол.

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VALENCE OF THE WORD AND SYNTACTICAL CONNECTION

Abstract: Abstract: The article is devoted to the word, the valence of the word and the syntactic connection between them. In it, the word acts as a carrier of all its properties, qualities and relations. The substantial approach to the word generalizes the results of the study of lexical-semantic and grammatical tiers, these

tiers act in dialectical unity. In speech, the semantics of a separate word interacts with the semantic structure of the entire utterance.

At present, the main patterns of combination of one unit of language with another are united by the concept of valence. The valence of a word as a substantial - semantic fact is associated with the meaning of the word and the implementation of its meaning in sentence constructions.

The semantic relationship between words directly reveals the syntactic relationship, which is fixed in the formation of syntactic constructions, since semantic relations exist on the basis of syntactic ones. Valence does not come from the syntactic connection, and the syntactic connection is based on valence.

If valence is an internal possibility, a potentiality, then syntactic connection is its realization.

The valence of a word and syntactic connection are dialectically interconnected, mutually whole, inseparable, but at the same time each is a relatively independently active phenomenon.

Key words: Valency, word, unit of speech, substantive approach, semantics, semantic relations, syntactic connection, verb.

Что является основной единицей языка? Такой единицей следует считать слово. Слово как единица нормы, а через нее как единица языка в отличие от фонемы, морфемы является универсальной, в семантическом плане разнообразной и самой сложной единицей. Такое утверждение обосновано тем, что каждое слово, наделенное звуковой оболочкой и значением, кроме включения в свой состав фонем и морфем, выражает еще и потенциальную мысль, которая является функцией предложения. Слово потенциально может выступать в качестве предложения, что особенно раскрывается в глагольной лексеме. Ср.: келаман (приду) — мен келаман (я приду). В свое время А.А. Потебня правильно утверждал, что "предложение невозможно без *verbum finitum*, что само по себе *vb. finitum* составляет предложение" [1]. В такой единице языка как слово можно рассматривать другие единицы языка, в том числе и единицу речи - предложение. Справедливо пишет Лоя Я.В., что "действительная, живая,

самостоятельная единица языка (Бодуэн, в 1880), конечно - слово" [2].

По нашему мнению, сказанным полностью не исчерпывается особенность слова быть основной, действительной единицей языка. С точки зрения диалектического материализма обосновывать самостоятельность слова как единицы языка возможно лишь через его субстанциональную интерпретацию: самостоятельность слова может быть доказана лишь тогда, когда слово получит свое толкование как отдельная субстанция со всеми присущими ему свойствами.

Субстанциальный подход к слову обобщает результаты исследования

Лексикологическо-семасиологических, морфологических и синтаксических ярусов, берет эти ярусы в диалектическом единстве и изучает их во взаимосвязи.

При субстанциальном подходе к слову слово рассматривается в качестве носителя всех своих свойств, качеств и отношений [3]. Это полностью соответствует концепции диалектического материализма - пониманию объективной действительности как совокупности вещей, являющихся носителями определенных свойств и отношений [4]. Каждое слово является своего рода микросистемой, состоящей из единства своих свойств и особенностей, обладающей определенными элементами, гранями, возможностями [5].

Таким образом, понимание слова при выполнении им номинативной функции действительной, живой основной единицы языка, в сущности, является результатом субстанциального подхода к слову. Слово выделяется способностью быть универсальной и самой важной единицей среди других языковых единиц благодаря диалектическому единству определенных сторон и отношений, свойств и особенностей. В этом отношении исследование слова как субстанции, как единицы языка, являющейся носителем определенных особенностей (например, семантико-грамматические особенности) полностью соответствуют поставленной нами цели.

Еще один важный вывод из субстанционального понимания слова:

слово является единицей языка и единицей речи. Возможность быть и единицей языка, и единицей речи присуща только слову в отличие от других единиц языка. Когда говорим, что слово выступает как единица речи, то этот вывод основан на изучении сущности слова в предложении, а когда слово рассматривается как единица языка, то имеется в виду его изучение вне предложения. Слово изучается как в языке (единица языка), так и в речи (единица речи).

Надо подчеркнуть, что изучение слова в речи как единицы речи в научно-практическом отношении является основной, проблематической задачей, имеющей важное значение, потому что слово считается первичным материалом синтаксических единиц: словосочетаний и предложений, контекста и текста. Акт коммуникации осуществляется посредством слов в их семантико-синтаксической связи.

В процессе речи слово выполняет свою основную номинативную функцию. В этом акте оно является семантически конкретным, позиционно самостоятельным, реализуясь в определенной синтаксической функции. По мнению В.Г. Гака, "в речи семантика отдельного слова вступает во взаимодействие с семантической структурой всего высказывания" [6], тем самым осуществляется конкретизация лексического значения слова - основной единицы языковой системы, связь лексического значения слова с другими семемами лексем и составление определенных семантических синтагм [7].

Из сказанного логически вытекает важность проблемы изучения роли слова в речевой деятельности, выяснение его семантико-синтаксических отношений с другими единицами речи, описание семантических возможностей слова. Это одна сторона вопроса. Вторая, не менее важная,

вытекает из первого положения и конкретно выражается в следующем мнении Г. Хельбига "Слова того или иного языка подлежат не только парадигматическому анализу, но и анализу синтагматическому, поскольку они всегда соединяются в конкретном речевом акте, в предложении с определенными "партнерами" и не употребляются изолированно. Их сочетательные позиции с определенными партнерами в определенном окружении не случайны и не полностью произвольны: они подчиняются особым закономерностям, которые, однако, относительно поздно стали предметом внимания лингвистов. В настоящее время основные закономерности сочетания (комбинирования) одной единицы языка с другой объединяются понятием валентности [8].

Теория валентности [9] является одной из ведущих теорий современного языкознания (актуального синтаксиса). Теория валентности появилась в связи с изучением, исследованием семантико-синтаксической и функциональной активности слов в речи (как единиц речи).

Изучение слова в речи, его возможность сочетаться с другими словами, составление семантических синтагм, что связано с требованием сочетания словоформ для раскрытия лексической семантики - все это легло в основу теории валентности. Валентность слова как субстанционально-семантический факт связана со значением слова и реализацией его значение в конструкциях предложения. В этом отношении характерно мнение С.Д. Кацнельсона, который в конце 40-х ввел в советское языкознание понятия валентности. "Валентность — свойство

слова, осуществление синтаксического отношения слова с другими словами на основе своего значения" [10]. Иными словами, "в теории валентности обобщаются особенности определенного слова соединять в себе одно, два или больше слов" [11].

Объективность, актуальность, научно-практическая значимость теории валентности определяется лексико-семантическим потенциалом слова. Семантика, являющаяся "душой", "духом" слова, обеспечивает соединение, сочетание его с другими словами.

Словосочетания, предложения как единицы речи должны рассматриваться через семантическую возможность с другими словами, как отношение валентности, что подчеркивает слова соединяться в речи с другими словами, как отношение валентности, что подчеркивает большое научно-теоретическое значение теории валентности для языкознания.

Таким образом, валентность оценивается при субстанциональном подходе к слову, как внутренняя возможность слова быть распространенным в речи, как определенная семантико-синтаксическая особенность, присущая слову.

Как единицы речи, выражающие сложные понятия, так и единицы речи, выражающие определенную мысль, непосредственно связаны с валентностью слова. Следует учитывать, что соединение слов в речи не абсолютное явление, а относительное, так как слова соединяются в предложении не со всяким словом предусмотренным грамматической

моделью, а с некоторыми из них [12]. Возможность соединения слов между собой ограничена, что находится в зависимости от семантической потенции каждого слова. В составе семем соединяющихся слов существуют семантические компоненты (классемы), присущие (общие) для обеих семем, которые имеют способность соединять эти семемы. Семемы семантических синтагм соединяются между собой через эти семы, вступая в логические отношения [13]. Таким образом, слова, семантически соединяясь с некоторыми словами, образуют синтаксические конструкции, в то время как с другими имеют общность только как номинативная единица не находясь между собой в логическом отношении. Если в ряде случаев слова и входят в такие отношения, то это часто связано с явлением искусственным, формальным, который не утверждается различными объективными фактами. Ср. : семиз холодильник – толстый холодильник, тўрт бурчак велосипед – четырехугольный велосипед, одамни ўқимоқ – читать человека и др.

Соединение слов, логическая связь между ними осуществляется прежде всего семантической возможностью (субстанциальной особенностью) единиц языка. Общественно-практическая, научная - ценность языка как средства связи вытекает из обладания плана содержания, благодаря выражению определенного понятия его единиц [14].

Семантическая связь слов (лексем) непосредственно выявляет семантические отношения их семем. Сочетание определенных слов осуществляется их семантической возможностью. В этом проявляется проблема семантического отношения между требующим и требуемым словами. В свою очередь, семантическое отношение между словами непосредственно выявляет синтаксическое отношение, что закрепляется в образовании семантических синтагм, синтаксических конструкций, так как семантические отношения существуют на основе синтаксических. Этим проблема определяется диалектического единства между семантикой и синтаксисом, и как подчеркивал В.Г.Гак, "в естественных языках синтаксис семантичен, то есть категории и элементы соотносятся определенным образом с внешними объектами, а семантика - синтаксична, то есть отражает отношения между символами – обозначениями [15]".

Семантика синтаксических единиц, взаимоотношения их компонентов, возможность соединения в речи глагольной лексемы с другими единицами речи и др., характеризующие семантический синтаксис, являются наименее изученным аспектом советского языкознания [16], поэтому здесь, по определению А.Н.Кононова, "непечатый работы представляют семантические исследования грамматики тюркских языков [17].

Семантика словосочетания, семантика предложения являются одним из основных, важных сторон семантического синтаксиса, непосредственно связанных с валентностью слова (глагола). В этом аспекте валентность как семантико-синтаксический факт заслуживает особого внимания, так как изучение проблемы валентности слова неразрывно связано с семантическим

синтаксисом. Изучение валентности слова в широком смысле означает изучение семантики слова, словосочетания и предложения.

Теория валентности, непосредственно связанная с мало изученными аспектами семасиологии, семантического синтаксиса и др., полностью раскрывает общественный характер, сущность структуральных элементов речи, акт коммуникации, симметрию в форме и плане содержания таких синтаксических конструкций, как словосочетание, предложение и текст. Так как валентность слова в качестве субстанционального явления является особенностью слова, его семантической способностью, то из этого логично вытекает понятие семантической валентности.

Семантическая валентность слова является потенциальной семантической возможностью, присущей слову, которая исходит из его лексического значения и считается основным критерием отличия слова от других единиц языка, его дискретности и конкретности. Она является самостоятельной благодаря своему избирательному характеру [18], обеспечивает синтаксическую связь между словами.

Таким образом, семантика семантические взаимосвязи слов, являющихся единицей языка и речи, в сущности, аккумулятивных в самих словах, в их субстанции в "форме" валентностной потенции.

Валентность слова в качестве субстанционального факта является постоянной внутренней способностью слова, которая не создается в процессе речевой деятельности, во взаимосвязи слова, а существует, "живет", сохраняется как потенциальная возможность до речи, т.е. в языке - в семантической структуре слова в качестве "единицы языка". В речи данная возможность, субстанциональный факт "приходит в движение", реализуется, находит свое конкретное выражение в различных речевых единицах. Таким образом, валентность, с одной стороны, обеспечивает взаимопонимание слов, синтаксическую связь между ними – живую речь, во-вторых, валентность реализуется, переходит на воздействующую "силу", приобретая внешнюю "форму" в данной синтаксической связи между словами, во взаимосвязи слов. Следовательно, валентность не исходит из синтаксической связи, а синтаксическая связь основана на валентности.

Если валентность – внутренняя возможность, потенция, то синтаксическая связь – ее реализация.

Если валентность – "единица" языка, то синтаксическая связь - "единица" речи.

Если валентность – сущность то синтаксическая связь – явление.

Если валентность – общее, то синтаксическая связь – единичное.

Если валентность – причина, то синтаксическая связь – следствие.

Таким образом, валентность слова является семантической способностью, готовой к проявлению, скрытой возможностью, существующей в слове, в его субстанции, которая реализуется в речи. По утверждению К. Маркса, "свойства данной вещи, не создаются ее отношением к другим вещам, а лишь обнаруживаются в таком отношении" [19].

Поэтому С.Н.Иванов пишет: "В этом плане грамматическая форма как нечто, имеющее отдельное бытия, представляет собой вещь, предмет (в философском смысле), обладающий определенными свойствами (значения грамматической формы), которые проявляются в отношениях данной вещи, (синтаксической функции грамматической формы)" [20], или "...

грамматическая форма (предмет) и вне конкретной реализации обладает своими свойствами, т.е. значениями [21]".

Характерно, что валентность слова, какой бы она ни была - ведущей, первичной, основной по сравнению с синтаксическими связями слова она только в речи, во взаимоотношении между словами, в синтаксической взаимосвязи единиц речи, превращается в реальную силу в процессе коммуникации. Поэтому синтаксическая связь между словами как форма проявления реализации, перевода на "видимое" положение скрытой способности (валентности) слова имеет важное значение. Следовательно, в валентности слова существование двусторонней связи является естественной и в то же время обязательной. Поэтому валентность не является односторонним явлением, она - двусторонняя - и семантическая, и синтаксическая.

Процесс коммуникации в лингвистическом плане рассматривается как семантика-синтаксический процесс, как семантико-синтаксическая связь между словами.

Таким образом, на основе синтаксической связи слов лежит валентная способность слова. Синтаксическая связь показывает обладание словом определенной валентностной способностью. Проявление валентностной особенности слова в речи, в различных связях между словами - в сущности идентично с "проявлением диалектики общего и единичного, сущности и явления" [22].

Из сказанного стало известно, что валентность слова требует двусторонней связи. Валентность определяется не только господствующим, управляющим словом (например, глаголом), но и подчиняющим, управляемым словом (например, имя существительное). Она определяется во взаимоотношений, взаимосвязи господствующего и

подчиняющего слов. Потому что в семантической структуре господствующего слова (глагола) потенциально, скрыто существуют подчиняющее слово (имя существительное).

В речи данное слово (существительное), "приходя в движение", употребляется в определенной грамматической форме, активно участвует в составлении конструкции. Ср.: Семантические валентности глагола қолмок, т.е. слова и словоформы, с которыми данный глагол входит в непосредственное синтаксическое отношение, которые реализует его семантические валентности:

Мен ўз юртимда Ватанимни севганим учун, халқимга астойдил хизмат қилиш учун қолдим.



агенс (мен)
локалис (ўз юртимда)
причина (ватанимни сев.учун)
цель (халқ.аст.хиз.қ.учун)

Таким образом, глагол қолмоқ под валентностной субстанциональной особенностью имеет валентности агенса, локалиса, причины, цели и входит в семантико-синтаксические связи с их реализаторами. В данном предложении логические компоненты семантики глагола, т.е. семантические участники (актанты), служат для реализации денотативного значения глагола.

В выше рассматриваемой конструкции с глаголом қолмоқ, т.е. в номинативных единицах произошло согласование подчиняющего компонента (реализатора валентностей) с господствующим компонентом (глаголом), формирование, проявление его (реализатора) в определенной словоформе. Это случилось непосредственно по требованию господствующего компонентом (глаголом), т.е. его способностью иметь "притяжательной силы", а формы подчиняющих компонентов обладают способностью "притягаемости".

Исходя их вышесказанного, хотелось бы подчеркнуть, что сущность семантической валентности слова, которая реализуется в синтаксической связи слов, в том "...что слова (в качестве носителей валентности) требуют определенных контекстных партнеров с определенными семантическими признаками и исключают других контекстных партнеров с иными семантическими признаками. Она регулирует заполнение открытых позиций классами партнеров, отобранных по смыслу по определенным семантическим признакам. Отбор подходящих контекстных партнеров и исключение недопустимых контекстных партнеров осуществляется на основе совместимости или несовместимости семантических признаков обоих контекстных партнеров (с лингвистической точки зрения), которые в свою очередь мотивированы явлениями действительности (экстра лингвистически) [23].

Таким образом, валентность слова и синтаксическая связь диалектически взаимосвязаны, взаимно целые, неразделимые, но в то же время каждый является относительно самостоятельным активным явлением.

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ОПРЕДЕЛЕНИЕ ЭКОНОМИЧЕСКОЙ ЭФФЕКТИВНОСТИ КАМЕРНО-КОНВЕКТИВНОЙ СУШИЛЬНОЙ УСТАНОВКИ ДЛЯ СУШКИ ДЫНИ

***Аннотация:** В статье представлены результаты экспериментальных исследований по определению экономической эффективности разработанной камерно-конвективной сушильной установки для производства сушеной дыни.*

***Ключевые слова:** реализованная продукция, сушеная дыня, продолжительность сушки, межцикловая загрузка, экономическая эффективность, производительность труда, себестоимость, чистый доход, выручка, прибыль, рентабельность.*

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DETERMINATION OF ECONOMIC EFFICIENCY OF A CHAMBER- CONVECTION DRYING UNIT FOR DRYING MELON

***Abstract:** The article presents the results of experimental studies to determine the economic efficiency of the developed chamber-convective drying plant for the production of dried melon.*

***Key words:** Sold products, dried melon, drying duration, cycle loading, economic efficiency, labor productivity, cost, net income, revenue, profit, profitability.*

Проведенные исследования показывают, что традиционные технологии производства сушеной сельскохозяйственной продукции в естественных условиях позволяют экономить до 20% энергоресурсов. Однако важно учитывать, что солнечно-воздушная сушка овощной продукции должна осуществляться на затененной площадке для сохранения цвета, соответствующего мякоти сырого плода [1].

Сохранение и дальнейшее развитие промышленного потенциала при переработке дыни требует тщательного технико-экономического обоснования. В связи с этим нами была разработана универсальная

сушильная установка по производству сушеной дыни для малых и средних фермерских хозяйств [1]. Экономическая эффективность обоснована по результатам экспериментальных исследований, проведенных на оборудовании по сушке плодов дыни, которые разработаны студенческим ОКБ Гулистанского государственного университета под руководством профессоров О. Рахматова, К.К. Нуриева, а также и.о. доцента Ф.О. Рахматова.

Экономическая эффективность производства сушеной дыни выражается системой показателей, в которую входят производительность труда, себестоимость, чистый доход, прибыль, рентабельность на всех этапах переработки дынь – очистка мякоти от кожуры до сушки [2].

Чистый доход является денежным выражением прибавочного продукта, который служит источником расширения производства и формирования фондов потребления. Он соответствует прибыли предприятия, определяемый как разница между выручкой за реализованной продукцией и ее себестоимостью. Прибыль в расчете на единицу продукта представляет собой разницу между ценой реализации и полной себестоимости.

Для предприятий, работающих в условиях рыночной экономики, важно не только достигать запланированного объема валовой продукции, но и обеспечивать прибыль, достаточную для расширенного производства. Предприятие, получившее прибыль, считается рентабельным.

Рентабельность кластера означает, что выручка за реализованную продукцию превышает затраты на ее производство и реализацию. Отношение полученной прибыли к себестоимости реализованной продукции, выраженное в процентах, показывает уровень рентабельности и определяется по следующей формуле

$$Y_p = \frac{П}{C_о} \cdot 100\%, \quad (1)$$

где Y_p – уровень рентабельности;

$П$ – прибыль, тыс. сум;

$C_о$ – полная себестоимость реализованной продукции, тыс. сум.

При расчете прибыли и себестоимости готовой продукции (сушеной дыни) исходили из соображения, что выращенный урожай дыни фермерскими и дехканскими хозяйствами перерабатывается на специализированном сушильном цехе, оснащенном необходимыми машинами и оборудованием.

Спецификация на основное и вспомогательное оборудование по сушке плодов дынь приведена в таблице.

Расчетная прибыль от реализации товарного продукта определяется по следующей формуле (расчёты выполнены по ценам 2024 года) [3]:

$$П = (C_1 - C_2) M, \text{ сум}, \quad (2)$$

где C_1 – оптовая стоимость сушеной дыни, 15 000 сум/кг;

C_2 – себестоимость сушеной дыни на разработанной сушильной установке СКД – 800 сум/кг.

Себестоимость (C_2) складывается из текущих расходов на производство и покупной стоимости ($C_{п}$) сырья

$$C_2 = C_3 + C_a + C_3 + C_{п}, \quad (3)$$

Таблица

**Спецификация на основное и вспомогательное оборудование по сушке
ПЛОДОВ ДЫНЬ**

№	Наименование оборудования	Единица измерения,	Количество	Установленная мощность, кВт	Стоимость единицы оборудования, млн, сум	Всего млн. сум
1.	Сушильная установка (с вентилятором)	шт.	1	21,5	84,0	84,0
2.	Тележка продуктовая	шт.	8	-	0,4	3,2
3.	Электроцит	шт.	1		3,0	3,0
4.	Вспомогательное оборудование		1	-	3,3	3,3
	Итого:			21,5		93,5

где C_3 – расход на электроэнергию, сум;

C_a – расходы на амортизационные отчисления, сум;

C_3 – расходы на зарплату рабочего персонала, сум;

$C_{п}$ – расходы на покупку сырья, сум.

При расчете приняты:

- производительность сушильной установки по свежей дыне, $G_d = 800$ кг за цикл;
- продолжительность сушки дынь, (август, сентябрь, октябрь) – 90 дней;
- продолжительность сушки одной закладки $\tau = 28-32$ ч;
- число обслуживающего персонала – 4 человек;
- стоимость 1 кВт электроэнергии (на 2024 г.) – $\text{Эс} = 1000$ сум.

Таким образом, при длительности перерабатывающего сезона $T=90$ дней и продолжительности одного цикла сушки $\tau=32$ ч, т.е. $\approx 1,5$ сут, максимальная пропускная способность сушильной установки составит [4]:

$$G_{\max} = G_d \cdot \frac{T}{\tau} = 800 \cdot \frac{90}{1,5} = 48000 \text{ кг}. \quad (4)$$

С учетом коэффициента загрузки $\varphi=0,9$ при эксплуатации сушилок, учитывающий неисправности, текущий ремонт, также потери времени при межцикловой загрузке – выгрузке тележек из камер, реальная пропускная производительность будет:

$$G_p = G_{\max} \cdot \varphi = 48000 \cdot 0,9 = 43200 \approx 43 \text{ т}. \quad (5)$$

После сушки выход сушеной дыни составит порядка 21 %, т.е.

$$M = G_p \cdot \frac{W}{100} = 43200 \cdot \frac{21}{100} = 9072 \text{ кг / сезон},$$

(6)

или

$$m = \frac{M}{T} = \frac{9072}{90} = 100 \text{ кг / сут} \approx 3024 \text{ кг / мес.}$$

Расчет текущих расходов на производство

1. Общая установленная мощность сушильной установки составляет 21,5 кВт, Таким образом, суточный расход электроэнергии при непрерывной работе определяется как: $P_{\Sigma} = P_{\text{ус}} \cdot 24 = 21,5 \cdot 24 = 516 \text{ кВт.}$ (7)

Учитывая, что в сутки производится больше 100 кг сушеного дыня, на 1 кг продукта денежный расход электроэнергии составляет:

$$C_s = \frac{P_{\Sigma} \cdot \Xi_c}{m} = \frac{516 \cdot 1000}{100} = 5160 \text{ сум / кг.}$$
 (8)

2. При расчете амортизационных отчислений (C_a) определяется общая стоимость технологического оборудования, необходимого для производства (без учета стоимости капитального сооружения, см. таблицу выше). Ориентировочная стоимость установки для сушки плодов дыни, включая затраты на монтаж, пусконаладочные работы и прочие расходы, составляет 10% от общей стоимости оборудования:

$$C_a = C_o \cdot 1,1 = 93,5 \cdot 1,1 = 102,85 \text{ млн. сум.}$$

(9)

Следует отметить, что сушильные установки используются по прямому назначению всего 3 месяца (90 дней), а затем могут использоваться для сушки других сельскохозяйственных культур: абрикоса, яблок, персика, сливы и др.

Учитывая это обстоятельство, средний коэффициент амортизационных отчислений составляет 10 %. При этом годовые отчисления составят:

$$102,85 \cdot 0,1 = 10,285 \text{ млн. сум,}$$
 (10)

а суточные - $\frac{102,85 \cdot 10^6}{360} = 28569 \text{ сум.}$

Имея в виду, что в сутки производится 100 кг сушеной дыни, доля амортизационных отчислений на 1 кг готовой продукции составит

$$C_a = \frac{102850000}{160 \cdot 360} = 1786 \text{ сум / кг.}$$

(11)

3. Расходы на зарплату определяются из средней месячной зарплаты на одного работающего в размере 1200000 – 1500000 сум/мес. Тогда месячный фонд зарплаты работающих составляет:

$$\Phi_z = 15000000 \cdot 4 = 6000000 \text{ сум.}$$
 (12)

С учетом того, что в месяц производится 3024 кг сушеной дыни, удельная составляющая на 1 кг готовой продукции по зарплате составляет:

$$C_s = \frac{\Phi_z}{m} = \frac{6000000}{3024} = 1984 \text{ сум / кг.}$$
 (13)

4. Для определения расходов на сырье ориентировались средними оптовыми рыночными ценами на дыни. С учетом транспортных расходов, доставки дынь на пункт переработки обойдется в 1317 сум/кг.

5. Таким образом, с учетом всех составляющих, себестоимость 1кг сушеной дыни составляет

$$C_2=C_3+C_a+C_3+C_n=5160+1786+1984+1317=10247 \text{ сум/кг.} \quad (14)$$

Принимаем $C_2=10247$ сум/кг.

6. Прибыль от реализации всего товарного продукта составляет

$$\Pi=(C_1-C_2) M=(15000-10247) 9072=43\ 119\ 216 \text{ сум.} \quad (15)$$

7. Уровень рентабельности

$$y_p = \frac{\Pi}{C_6} 100 \% = \frac{43119216}{102850000} \cdot 100 \% = 42 \%. \quad (16)$$

8. Срок окупаемости специализированной сушильной базы, организованной несколькими фермерскими и дехканскими хозяйствами составляет

$$T = \frac{C_6}{\Pi} = \frac{102850000}{43119216} = 2 \text{ год.} \quad (17)$$

принимаем $T=2$ года.

Следовательно, вложенные средства на приобретение оборудования фермерскими и дехканскими хозяйствами в складчину может окупиться за два года.

Таким образом, можно отметить, что разработанная сушильная установка рассчитана на переработку за сезон (90 дней) реально около 43 т свежей дыни с производством не более 9 т сушеной дыни высокого качества.

Себестоимость готовой продукции при внедрении новой сушильной установки составит 4753 сум/кг, срок окупаемости оборудования – 2,0 года. Сушильную установку кроме дыни можно использовать на сушке абрикоса, яблок, персиков, винограда, шинкованного лука и др.

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ДЕГРЕЗ СУВОМБОРИ ҚИРҒОҚ БЎЙИ ТОРОН ЎСИМЛИГИ НЕМАТОДАЛАР ФАУНАСИ

Аннотация. Мақолада Дегрездаги сув ўсимликлари, қирғоқбўйи ўсимликлари ва таронларнинг нематода фаунаси ҳақида маълумотлар келтирилган. Тадқиқотлар натижасида 12 турдаги нематодлар қайд этилган бўлиб, улар 6 та жинс ва 3 та экологик гуруҳга мансуб экани аниқланган. Экологик гуруҳлар бўйича параризобионтларнинг кўплиги қайд этилган.

Калим сўзлар: фауна, сув омборлари, фаунистик спектр, эркин яшовчи нематодлар, паразит нематодлар, экологик гуруҳлар.

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NEMATODE FAUNA OF TARAN PLANTS ON THE SHORE OF THE DEGREEZ RESERVOIR

Abstract: This article provides information on the nematode fauna of the Degrez water plant, the coastal plant, and the thoron plant. As a result of the study, 12 species of nematodes were recorded, and it was determined that they belong to 6 genera and 3 ecological groups. A large number of pararrhizobionts was recorded according to ecological groups.

Key words: Fauna, reservoir, Faunistic spectrum, free-living nematodes, parasitic nematodes, ecological groups.

Нематодалар макробентос компонентлари учун муҳим озуқа сифатида, сувнинг ифлосланиш даражасини кўрсатувчи индикатор сифатида фойдаланиш ва сув ҳавзаларининг унумдорлигини оширишда муҳим аҳамиятга эга. Шу сабабли сув омборларида эркин яшовчи ва фитопаразит нематодаларнинг эколого-фаунистик ҳолатини баҳолаш муҳим илмий ва амалий аҳамият касб этади.

Тадқиқот ишлари 2023-2024 йилларда 25 апрелдан 25 сентябргача ўтказилди. Тўпланган намуналар Термиз давлат университети Зоология кафедраси қошидаги фитогельминтология муаммоли лабораториясида анализ ва таҳлил ишлари олиб борилди. Доимий препаратлар тайёрлашда Сайнхорст [5; 67-69-б.] услубидан фойдаланилди.

Турни аниқлаш учун Micoletzky [3; 650 б.] томонидан модификация қилинган de Man [4; 104 б.] формуласининг морфометрик кўрсаткичларидан фойдаланилди.

Фаунистик тадқиқотлар натижасига кўра торон (*Polygonum hydropiper* L., 1753) ўсимлигида 12 турга мансуб 311 индивид аниқланди.

Тадқиқотлар давомида торон (*P. hydropiper*) ўсимлигида аниқланган нематодаларнинг устунлик даражаси Krogerus [109; 1-239-б.] классификацияси бўйича аниқланиб, 3 гуруҳга ажратилди: Торон ўсимлигида аниқланган доминант нематодалар – 7 та турни (*L. dadayi*, *L. pseudostagnalis*, *P. filiformis*, *E. pratensis*, *R. terrestris*, *P. parainquirendus*, *P. wescolagricus*), субдоминантлар - 3 та турни (*T. pellucidus*, *P. salinarim*, *A. terricola*), рецедент турлар аниқланмади. Субрецедентлар эса 2 та турни (*T. gracilis*, *A. buetschlii*) ўз ичига олади.

Торон ўсимлигида аниқланган нематодалар 6 та туркумга мансуб бўлиб, улар орасида турлар сони бўйича Dorylaimida туркуми вакиллари етакчи ўринни эгаллаб (3 тур), жами аниқланган турларнинг 25,1% ини ва Chromadoridaе туркуми (3; 25,1%) вакиллари эгаллади. Кейинги ўринларни Enoplida (2; 16,6%), Araeolaimida (2; 16,6%), Rhabditida (1; 8,3%), Tylenchida ((1; 8,3%) туркумлари вакиллари ташкил этди.

Enoplida туркуми 1 та кенжа туркум: Tripyloidina; 1 та оила: Tobrilidae; 1 та кенжа оила: Tobrilinae; 1 та авлод: *Tobrilus* ва 2 та турни (жами аниқланган турларнинг 16,6%) ва жами 12 та индивидни (аниқланган нематодаларнинг 3,8%) ўз ичига олади.

Dorylaimida туркуми 1 та кенжа туркум: Dorylaimina; 1 та катта оила: Dorylaimoidea; 2 та оила: Dorylaimidae, Paradorylaimidae; 2 та кенжа оила: Dorylaiminae, Paradorylaiminae; 2 та авлод: *Laimydorus*, *Paradorylaimus*; 3 турдан (25,1%) иборат. Жами 138 та (44,5%) индивидни ўз ичига олади.

Chromadorida туркуми 2 та кенжа туркум: Chromadorina, Cyatholaimina; 1 та катта оила: Cyatholaimoidea; 3 та оила: Chromadoridae, Cyatholaimidae, Ethomolaimidae; 3 та кенжа оила: Chromadorinae, Cyatholaiminae, Ethomolaiminae; 3 та авлод: *Punctodora*, *Acromadora*, *Ethomolaimus*; 3 тур (умумий аниқланган турларнинг 25,1%) ва жами 41 та (аниқланган нематодаларнинг 13,1%) индивиддан иборат.

Araeolaimida туркуми 1 та кенжа туркум: Araeolaimina; 2 та оила: Rabdolaimidae, Plectidae; 2 та кенжа оила: Rabdolaiminae, Plectinae; 2 та авлод *Rabdolaimus*, *Plectus*; 2 та турни (барча аниқланган турларнинг 16,6 %) ўз ичига олади. Жами 99 та (умумий аниқланган индивидларнинг 31,9%) индивиддан иборат.

Rhabditida туркуми 1 та кенжа туркум: Cephalobina; 1 та катта оила: Cephaloboidea; 1 та оила: Cephalobidae; 1 та кенжа оила: Acrobolinae; 1 та авлод: *Acrobeloides*; 1 та тур (8,3%), жами 2 та (0,6%) индивиддан иборат.

Tylenchida туркуми 1 та кенжа туркум: Tylenchina; 1 та оила: Pratylenchidae; 1 та кенжа оила: Pratylenchinae; 1 та авлод: *Pratylenchus* ва 1 та

тур (барча аниқланган турлар сонининг 8,3%) ва жами 19 та (аниқланган нематодалар сонининг 6,1%) индивиддан ташкил топган.

Торон ўсимлигида аниқланган нематодалар А.А. Парамоновнинг экологик классификацияси бўйича [1; 338-369-б.], бўйича 3 та экологик гуруҳга мансуб бўлиб, параризобионтлар – 10 та тур (жами аниқланган турларнинг 83,4%), 290 та (жами аниқланган индивидларнинг 93,3%) индивид; девисапробионтлар 1 та турни (8,3%), 2 та (0,6%) фитонематода; касаллик келтириб чиқарадиган фитогельминтлар 1 та турни (8,3%), 19 та (6,1%) индивидни ўз ичига олади. **3-** Аниқланган турларнинг экологик гуруҳлар бўйича тақсимланиши (турлар ва индивидлар сони ва уларнинг % кўрсаткичи).

Параризобионтлар гуруҳи қуйидаги туркумлар: Enoplida, Dorylaimida, Chromadorida, Araeolaimida ва Tobrilidae (2 тур; 16,8%), Dorylaimidae (2; 16,8%), Nygolaimidae (1; 8,3%), Chromadoridae (1; 8,3%), Cyathaloimidae (1; 8,3%), Ethomoloimidae (1; 8,3%), Rabdolaimidae (1; 8,3%), Plectidae (1; 8,3%), оила вакиллари ўз ичига олади.

Девисапробионтлар гуруҳи Rhabditida туркуми, Cephalobidae оиласига мансуб 1 та турни ўз ичига олиб, жами аниқланган турларнинг 8,3% ни ташкил қилди.

Касаллик келтириб чиқарадиган фитогельминтлар Tylenchidae туркуми Pratylenchidae оиласига мансуб 1 та турни (8,3%), 19 та (6,1%) индивидни ўз ичига олади. Учқизил сув омборида қирғоқ бўйи торон ўсимлиги илдизи ва поя қисмидан аниқланган жами 12 тур нематодалардан 1 та тури (*P.salinarim*) Ўзбекистон фаунаси учун илк бор учраганлиги қайд этилди.

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СУРХОНДАРЁ ВИЛОЯТИ ШАРОИТИДА ПЕКАН ЎСИМЛИГИ НЕМАТОДАЛАР ФАУНАСИ

***Аннотация.** Mazkur maqolada Surxondaryo viloyati sharoitida pekan o'simligi nematodalarining faunasi, tarqalish xususiyatlari to'g'risida ma'lumotlar berilgan. Tadqiqotlar natijasida Surxondaryo viloyati sharoitida pekan o'simligida 2 ta keng sinf, 8 ta turkum, 16 ta oila, 27 ta avlodga mansub 45 tur nematodalar aniqlandi.*

***Калит sozlar:** Surxondaryo viloyati, pekan, nematodalar, ildiz sistemasi, ildiz atrofidagi tuproq, Rhabditida, Dorylaimida, Aphelenchida*

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FAUNA OF NEMATODES OF PLANTS OF BAKERY IN THE SURKHANDARYA REGION

***Abstract.** This article presents information about the fauna and the peculiarities of the spread of baking nematodes in the Surkhandarya region. As a result of studies, 45 species of nematodes belonging to 2 subclasses, 8 family, 16 families and 27 births were identified in the Plant of bakers in the Surkhandarya region.*

***Key words:** Surkhandarya region, bakers, nematodes, root system, soil around the root, Rhabditida, Dorylaimida, Aphelenchida*

Сурхондарё вилоятида фитогельминтологик тадқиқот олиб борилган, жумладан, сувомборларда учровчи эркин яшовчи ва фитопаразит нематодалар ўрганилган. Сурхондарё вилоятидаги Учқизил ва Жанубий-Сурхон сув омборида илк бор тадқиқот ишлари олиб борилиб, 119 турдаги эркин яшовчи ва фитопаразит нематодалар сув омборлар тупроқларида, хара, торон сув ўсимликлари, қирғоқ бўйи қамиш ва қўға ўсимликларида аниқланган бўлиб, улар 3 кенжа синф, 9 туркум, 18 кенжа туркум, 10 катта оила, 42 оила, 41 кенжа оила ва 64 авлодга мансублиги қайд этилган [3,4]

Пеканни тижорат мақсадларида етиштириш 1880 йилларга қадар бошланган. XIX - асрнинг бошларида бу ёнғоқларнинг дунёдаги ҳосилининг камида 80% АҚШда йиғилади.

Пекан ёғочлари қаттиқ, зич ва зарбаларга чидамли. У турди хил мебель, спорт ва чолғу асбоблари ясашда ишлатилади. Бундан ташқари, тахта хушбўйлаштирувчи восита сифатида кўра овқатларга ширин лаззат беради.

Пекан турли микроэлементлар ва витаминларга, айниқса А, В ва Е витаминларига, кальций, фосфор, магний, калий ва рухга бой. Холестеролга қарши парҳезларда фойдаланиш тавсия этилади.

Пекан бошқа кўплаб ёнғоқларга қараганда ёғлироқдир. Пекан бошқа ёнғоқларга қараганда кўпроқ калория ва кўп тўйинмаган ёғларга эга бўлганлиги сабабли (70%), пеканларни ёғли овқатларга кўшимча сифатида эмас, балки меъёрида истеъмол қилиш керак.

Пекан Жанубий Ўзбекистоннинг тоғ ва тоғ олди ҳудудларида ва дендрология боғларида ўстирилади.

Ўзбекистонда пекан ўсимлиги нематодалари умуман ўрганилмаган. Шу боисдан биз ўз олдимизга Сурхондарёда ўсадиган пекан ўсимлиги нематодалари комплексини ўрганишни мақсад қилиб қўйдик [5,6]

Тадқиқот ишининг эколого-фаунистик қисмини амалга ошириш ва пекан ўсимлиги нематодалари турлар таркибини аниқлашда МДҲ мамлакатлари фитогелминтологлари томонидан кенг қўлланиладиган умумий қабул қилинган маршрут усулидан фойдаланилди [1,2]. Бу усулдан Сурхондарё вилояти шароитида песан ўсимлиги устида кенг қўламли фитогелминтологик кузатувлар олиб бориш мақсадида фойдаланилди.

Нематодаларни тупроқ ва ўсимлик тўқималаридан ажратиб олиш учун асосан Берманнинг воронкали услубидан фойдаланилди. Доимий препаратлар тайёрлашда Сайнхорст [7] усулидан фойдаланилди.

Тадқиқот натижалари. Текширишлар натижасида пекан ўсимлигида 45 тур нематода топилган бўлиб, улар 8 туркум, 16 оила, 27 авлодга мансуб. Топилган нематода турларидан девисапробионтлар-17 тур, параризобионтлар- 10 тур, эусапробионтлар-3 тур, фитогелминтлар-15 турни ташкил этди (1-жадвал).

Топилган нематодалар популяциясининг зичлиги бўйича Rhabditida туркуми етакчи ўринда бўлиб, ушбу туркум вакиллари умумий нематодалар сонининг 37,7% ини ташкил этади.

Tylenchida туркуми вакиллари нематодалар сонининг 22,2% ини, Dorylaimida туркуми 15,5% ини, Aphelenchida туркуми эса 11,1% ини ташкил этди. Mononchida, Enoplida, Xromadorida, Plektida туркумлари умумий ҳолатда 13,3% ни ташкил этишди.

Фитогелминтлар ва девисапробионтлар умумий нематодалар турлари сонининг 66,6% ини ташкил этди. Параризобионтлар умумий нематодалар сонининг 20% ини ташкил қилди. Эусапробионтлар энг кам сонда учради ва умумий нематодалар сонининг 13,3% ини ташкил этди (1-жадвал).

Пекан ўсимлиги илдизи ва илдиз атрофи тупроғида *Hetrocephalobus elongatus*, *Acrobeloides nanus*, *Panagrolaimus rigidus*, *Rhabditis brevispina*, *R. filiformis*, *Aphelenchus avenae* каби турлар энг кўп сонда учраши аниқланди.

1-жадвал

№	Турлар номи	Экологик гуруҳлари
1	<i>Alaimus striatus</i>	Параризобионт
2	<i>Clarcus papillatus</i>	Параризобионт
3	<i>Dorylaimus stagnalis</i>	Параризобионт
4	<i>Paradorylaimus filiformis</i>	Параризобионт
5	<i>Eudorylaimus paraobtusicaudatus</i>	Параризобионт
6	<i>Xiphinema pachtaicum</i>	Фитогельминт
7	<i>X. index</i>	Фитогельминт
8	<i>Tylencholaimus minimus</i>	Параризобионт
9	<i>Achromadora tenax</i>	Параризобионт
10	<i>A. terricola</i>	Параризобионт
11	<i>Plectus geophilus</i>	Параризобионт
12	<i>Proteroplectus inguirendus</i>	Параризобионт
13	<i>Teratocephalus terrestris</i>	Девисапробионт
14	<i>Heterocephalobus elongatus</i>	Девисапробионт
15	<i>H. filiformis</i>	Девисапробионт
16	<i>Eucephalobus oxyuroides</i>	Девисапробионт
17	<i>Acrobeloides labiatus</i>	Девисапробионт
18	<i>A. nanus</i>	Девисапробионт
19	<i>Chiloplacus propinquus</i>	Девисапробионт
20	<i>Ch. Quintastriatus</i>	Девисапробионт
21	<i>Ch. Lentus</i>	Девисапробионт
22	<i>Ch. Sclerovaginus</i>	Девисапробионт
23	<i>Ch. demani</i>	Девисапробионт
24	<i>Cervidellus serratus</i>	Девисапробионт
25	<i>C. bonus</i>	Девисапробионт
26	<i>Panagrolaimus rigidus</i>	Девисапробионт
27	<i>P. hygrophilus</i>	Девисапробионт
28	<i>P. subelongatus</i>	Девисапробионт
29	<i>P. ruffoi</i>	Девисапробионт
30	<i>Pelodera operose</i>	Эусапробионт
31	<i>Rhabditis brevispina</i>	Эусапробионт
32	<i>Rh. filiformis</i>	Эусапробионт
33	<i>Aphelenchus avenae</i>	Фитогельминт
34	<i>Paraphelenchus myceliophthorus</i>	Фитогельминт
35	<i>Aphelenchoides parietinus</i>	Фитогельминт
36	<i>A. composticola</i>	Фитогельминт
37	<i>A. limberi</i>	Фитогельминт
38	<i>Tylenchus davainei</i>	Фитогельминт
39	<i>Lelenchus leptosome</i>	Фитогельминт
40	<i>Tylenchorhynchus cylindricus</i>	Фитогельминт
41	<i>Helicotylenchus dihystra</i>	Фитогельминт

42	<i>H. erythrinae</i>	Фитогельминт
43	<i>Pratylenchus pratensis</i>	Фитогельминт
44	<i>Meloidogyne incognita</i>	Фитогельминт
45	<i>Paratylenchus nanus</i>	Фитогельминт

O'zbekistonda, xususan, Surxondaryo viloyati hududida pekan o'simligi nematodalar kompleksi, sistematikasi, ekologiyasi, tarqalish xususiyatlari hamda parazit turlariga qarshi kurash choralarini ishlab chiqish bo'yicha fitogelmintologik tadqiqotlar juda kam o'tkazilgan bo'lib, hozirgi vaqtda parazit nematodalarning salbiy ta'siri oshib borayotganligini e'tiborga olib, pekan o'simligi nematodalari ustida to'laqonli tadqiqotlarni amalga oshirish dolzarb vazifalardan sanaladi.

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**БИОЛОГИЯ ЦВЕТЕНИЯ ИССОПА ЛЕКАРСТВЕННОГО
*HYSSOPUS OFFICINALIS L***

Аннотация

*Статья посвящена исследованию феноменов и механизмов, связанных с процессом цветения одного из известных лекарственных растений — иссопа лекарственного (*Hyssopus officinalis L.*). В работе рассматриваются биологические особенности растения, влияющие на его способность к цветению, такие как физиологические изменения, климатические условия и почвенные факторы.*

Ключевые слова: семейство, культура, семена, полив, опыления, цветения.

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**BIOLOGY OF FLOWERING OF MEDICINAL HYSSOP
*HYSSOPUS OFFICINALIS L***

Abstract

*The article is devoted to the study of phenomena and mechanisms associated with the flowering process of one of the well-known medicinal plants - hyssop (*Hyssopus officinalis L.*). The work considers the biological characteristics of the plant that affect its ability to bloom, such as physiological changes, climatic conditions and soil factors.*

Key words: family, culture, seeds, watering, pollination, flowering.

Биология цветения иссопа лекарственного (*Hyssopus officinalis L.*) является важным аспектом изучения данной лекарственной культуры. Иссоп лекарственный - многолетнее травянистое растение семейства яснотковых (*Lamiaceae*), широко распространенное в Европе, Азии и Северной Африке.

Это растение славится своими лечебными свойствами, выраженными в антисептическом, противовоспалительном и иммуномодулирующем действии. Чтобы лучше понять значение этого растения, необходимо обратиться к его биологическим характеристикам, особенно к процессам цветения и опыления.

В постановлении Президента Республики Узбекистан от 26 ноября 2020 года No ПП-4901 "О мерах по расширению масштабов научных исследований по выращиванию и переработке лекарственных растений, развитию их семеноводства" определены вопросы создания единой базы научных исследований по выращиванию и переработке лекарственных растений в регионах республики, изучения передовых научных разработок зарубежных стран, установления сотрудничества с ведущими научными учреждениями, а также внедрения современных технологий, научных разработок.

Объектом научного исследования является иссоп лекарственный (*Hyssopus officinalis*), относящийся к семейству губоцветных (Lamiaceae). Широко распространенное растение иссоп лекарственный, или обыкновенный иссоп (*Hyssopus officinalis* L), произрастает в Европе, в верхнем и нижнем течении в регионе Черного моря, на горных склонах Крыма, Кавказа, Центральной Азии и Алтая среди камней и в степях [2].

Иссоп лекарственный относится к семейству губоцветных Lamiaceae. Это многолетний полукустарник с острым запахом, постоянно зеленый, высотой 85-90 см.

Корень - белый. Основная часть стебля одревесневшая, разветвленная, четырехгранная. Листья расположены супротивно, сидячие или с короткими черешками, ланцетовидные или линейные, с краями, немного загнутыми вниз. Цветки фиолетового цвета, собраны по 3-7 между листьями. Плод состоит из четырех нечетко выраженных граней, яйцевидный орешек. Длина 2,5-3 мм, поверхность орешков неровная, цвет темно-коричневый или черно-коричневый.

В листьях содержится 0,90-1,98% эфирного масла, дубильные вещества, кислоты, а в цветках - флавоноид диосмин $C_{34}H_{44}O_6$, иссопин и глюкоза. В составе эфирного масла присутствуют α - и β -пинены, 1-пинокамфон, 1-пинокамфеол и его уксусные эфиры, альдегиды, камфен, цинеол, уксусная кислота, спиртовые соединения и сесквитерпены.

Лекарственное растение иссоп размножается в основном семенами и вегетативным способом. Для его хорошего роста и развития необходимо выбирать плодородные почвы и участки с хорошим солнечным освещением. Поскольку иссоп является многолетним растением, его не рекомендуется выращивать на полях севооборота. Это связано с тем, что он может давать урожай на одном месте в течение 20-25 лет.

Осенью на площадях, засеянных лекарственным иссопом, вносят 15-20 тонн гнилой гумуса и 30-40 кг суперфосфата на гектар, в районах с низким уровнем осадков и на почвах с глубоким залеганием грунтовых вод вносят 20 кг азотистого удобрения и вспахивают почву до глубины 25-28 см

Наилучшим способом является размножение иссопа из семян. Наиболее эффективным временем посева является конец октября и первая декада ноября. Семена высеваются глубже. Если время посева откладывается на весну, семена должны быть стратифицированы. Для этого их хранят в нетеплых помещениях в ящиках с мокрым песком.

Семена время от времени увлажняют, чтобы они не зарослись и не выцвели. Перед посевом земли очищают от остатков сорных трав, боронируют и выравнивают. При температуре воздуха 15-17 °С междурядья высевают на расстоянии 70 см. На каждый гектар расходуется 4 кг семян. Если в составе почвы недостаточно влаги, после посева орошают быстро.

Семена прорастают через 6-8 дней. Через 10-12 дней в траве образуется более 2 - 3 листьев, а между растениями с помощью культивации разрыхляются и очищаются от сорняков. Весной в результате осадки, почва засеянной иссопом затвердеет, поэтому почва между растениями разрыхляется, при этом на каждом кусте оставляется по 2-3 растения длиной 20-30 см. Посаженные растения появляются в конце июня. Растения, посаженные осенью, дважды поливают и после полива между растениями разрыхляют на глубину 8-10 см с культивацией. Растения, посаженные весной, цветят в начале июля. К этому времени корневая система иссопа хорошо развита, поэтому растение начинает крепко расти.

Рекомендуется начинать кормление иссопа на стадии формирования бутонов. Перед проведением полива вносят азотные удобрения в количестве 50 кг на гектар и калийные удобрения в размере 30 кг на гектар. Использование разбавленного гумуса в подкормке растений также дает хорошие результаты. Участки, засеянные иссопом, необходимо пропалывать каждые 2-3 полива.

Второе подкормление завершается внесением в фазу цветения 40-50 кг азота и 20 кг фосфорных удобрений на гектар. В одном ее соцветии насчитывается от 16 до 20 цветов. Цветки у него раскрываются ранним утром в 6-7 часов. В это время на полях, засеянных иссопом, появляются птенцы и бабочки. В течение вегетации проводят 6-8 поливов с учетом температуры воздуха. Сырьем растения является соцветие.

В фазе цветения при длине завитков 30 см (во второй половине августа) собирают его сырье. При свежей упаковке сырья в его составе много влаги. Поэтому, чтобы растение не зеленело, его тонко выкраивают в хорошо проветренные навесы и укладывают в стеллажи. Урожай собирается в сухую безветренную погоду [2].

Для изучения лекарственного растения иссоп мы посадили его из семян. При этом мы очистили первую опытную площадку от сорной растительности и провели агротехнические работы.

На опытной площадке мы высадили растения с междурядьями по 60 см, а между растениями по 50 см. Растение начало цвести, когда высота растения составила 40 см, а когда достигло 70 см, оно полностью зацвело. Цветение лекарственного растения иссопа началось с 6 августа, а массовое цветение

состоялось 23 августа. Завершение цветения растения произошло в конце сентября (таблица1).

Таблица 1

Биология цветения иссопа лекарственного (за 2023 год)			
№	Начало цветения	Массовое цветение	Завершение цветения
1	06-10.09	20-25.09	20-25.10

Эфирное масло иссопа лекарственного в фармакологии главным образом применяется для улучшения аромата мазей, особенно средств для наружного использования. Благодаря антисептическим характеристикам, это эфирное масло эффективно при лечении ожогов. Врачами оно используется для терапии заболеваний органов дыхания, таких как одышка, бронхиальная астма и бронхит. В пищевой промышленности масло иссопа применяют весьма широко.

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ҚАНДЛИ ДИАБЕТНИНГ 2-ТУРИ БИЛАН КАСАЛЛАНГАН БЕМОРЛАРДА ЮРАК ҚОН-ТОМИР КАСАЛЛИКЛАРИНИ РИВОЖЛАНИШИ

***Аннотация:** Қандли диабет давомийлигини ортиши асоратларни кўпайиши билан тўғри корреляцияланади. Гликирланган гемоглобин 83,3% беморда қониқарсиз натижани кўрсатиши, гликемик назоратни, айниқса эркаклар орасида паст эканлигини тасдиқлайди. Бу эса асоратларни олдини олишида беморларни ўз-ўзини назорат қилишига ўргатиш, гликемик назоратни кучайтириши заруратини кўрсатади.*

***Калим сўзлар:** Қандли диабетнинг 2-тури, юрак қон-томир касалликлари, гликемик назорат, баҳолаш.*

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THE DEVELOPMENT OF CARDIOVASCULAR DISEASES IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

***Abstract:** An increase in the duration of diabetes correctly correlates with an increase in complications. The fact that glycated hemoglobin showed an unsatisfactory result in 83.3% of patients confirms low glycaemic control, especially among men. This indicates the need to train patients in self-control and enhance glycaemic control in preventing complications.*

***Keywords:** type 2 diabetes, cardiovascular diseases, glycaemic control, assessment.*

Кириш. Семизлик, қандли диабет ва юрак-қон томир касалликлари бутун дунё бўйлаб эпидемияга айланмоқда. Кўпинча турмуш тарзи, ортиқча овқатланиш ва жисмоний ҳаракатсизлик жигар ёғли гепатози, атеросклероз, диабет ва семизлик каби касалликларнинг ривожланишига олиб келади ва охир-оқибат бу касалликлар ҳозирги кунда ўлим даражаси бўйича олдинги ўринларда турувчи юрак-қон томир касалликлари ривожланишининг асосий омилларидан саналади [Nisa N.M., 2022]. Узоқ вақт давомида қонда глюкоза миқдорининг юқори бўлиши юрак, буйраклар, мия, оёқлар ва кўзларни зарарлаши оқибатида сурункали диабетик асоратларга олиб келади [Wei J, 2023]. Сурункали қандли диабетнинг энг хавфли асоратлари юрак-қон томир касалликлари, периферик қон томир касалликлари, буйрак етишмовчилигининг сўнгги босқичи, ретинопатия ва нейропатияни ўз ичига олади [J.L. Harding, 2019]. Диабет ривожланиши учун анъанавий муҳим хавф омиллари сифатида семизлик, жисмоний ҳаракатсизлик, кекса ёш ва нотўғри

овқатланиш ҳисобга олинади [Harold E.V., 2023]. Ҳозирги вақтда диабетнинг сабаби кўп жиҳатдан номаълум бўлиб қолмоқда, шу билан бирга касалликнинг кўзғатувчи омиллари генетик ва атроф-муҳит элементларини, ҳамда, иккаласининг ўзаро таъсирни ўз ичига олиши кенг тарғиб этилмоқда. Диабет дунё бўйлаб шиддат билан кенг тарқалиб бораётган касалликлардан биридир. 2021 йилда 20-79 ёшдаги беморлар сони 537 млнни ташкил қилган бўлса 2030 йилга келиб қандли диабет беморлари сони 643 млн; 2045 йилга бориб ушбу кўрсаткичлар 783 млнни ташкил этиши кутилмоқда [H. Sun., 2022; Saeedi P., 2019].

Таҳлил натижаларига кўра, 2019 йил қандли диабетнинг дунё бўйлаб тарқалиши 9,3% ни, шундан II тур қандли диабет 90%, I тур қандли диабет ва гестацион диабет 10% ни ташкил этди [Khunti K., 2021]. Бутун дунёда 21,3 миллион янги туғган аёллар ҳомиладорлик даврида гипергликемиядан азият чекишади [Zemene D.K., 2021]. Қандли диабет катталарда учраши нисбатан юқори бўлиб, 2023 йилда аҳоли катта ёшларнинг 8,8 фоизига таъсир қилади ва 2045 йилга келиб бу рақам 9,9% гача ошади [S.N. Hong, 2023].

Бутун жаҳон соғлиқни сақлаш ташкилоти 2014 йилда 18 ва ундан катта ёшдаги катталарнинг 8,5 фоизи қандли диабет билан касалланганлигини эълон қилди. 2019 йилда диабет 1,5 миллион ўлимга сабаб бўлган, уларнинг 48 фоизи 70 ёшгача бўлган беморларни ташкил этади. Бундан ташқари, диабетик нефропатия туфайли яна 460 000 кишининг ўлимига олиб келди ва юрак-қон томир касалликлари билан боғлиқ ўлимларнинг тахминан 20% қонда глюкозанинг кўтарилиши билан боғлиқ. 2000-2019 йилларда диабет билан боғлиқ ўлим даражаси 3% га ўсди [Samar A. A, 2023].

2-тип диабетнинг кенг тарқалган асоратларига нефропатия ва ретинопатия каби микроваскуляр ўзгаришлар ёки атеросклероз, аневризм, эмболия, периферических томирлар касалликлари, цереброваскуляр касалликлар ва юракнинг ишемик касаллиги каби макроваскуляр ўзгаришлар киради [Denicolo S, 2021]. 2-тип диабет беморларининг деярли ярмисида микроваскуляр ўзгаришлар, 27% макроваскуляр ўзгаришлар келиб чиқади [Davies M.J., 2018]. Шунингдек, диабетнинг кенг тарқалган ва хавфли асоратларидан бири сурункали буйрак етишмовчилиги бўлиб, 20-40% беморларда ушбу ҳолат қайд этилади [Davies M.J., 2018; Denicolo S., 2021].

Қандли диабет билан касалланишнинг ортиши ўз навбатида юрак қон-томир, сурункали буйрак касалликлари каби ҳаёт учун хавфли асоратларини ҳам кўпайишига олиб келади. Қандли диабетдан вафот этганлар ўлим сабаби ўрганилганда, айнан юрак қон-томир касалликлари етакчилик қилган.

Тадқиқот мақсади. Қандли диабетнинг 2-тури билан касалланган беморларда юрак қон-томир касалликлари ривожланишига гликемик назорат таъсирини баҳолаш.

Тадқиқот материаллари ва усуллари. Тадқиқотга 711 нафар бемор жалб қилиниб, уларнинг 54% аёллар ва 46% эркаклардир. Эркакларнинг ўртача ёши $53,3 \pm 1,02$, аёлларники $60,3 \pm 1,13$ ёшга тенг бўлди. Қандли диабетнинг давомийлиги $10,0 \pm 1,21$ йил, юрак қон-томир касалликлари

давомийлиги эркакларда 34%, аёлларда 40%ни кўрсатди. Беморларни қандли диабетнинг давомийлиги бўйича 3 гуруҳга, 1-гуруҳ ҚД давомийлиги 5 йилгача, 2-гуруҳ 5-10 йилгача ва 3-гуруҳ 10 йилдан ортиқ давом этган диабетдир. Тадқиқот натижалари. Тадқиқотдаги беморларда

Диабетик тўпик синдроми 1-гуруҳ беморларда 18,8%, 2-гуруҳда 31,4% ва 3-гуруҳ беморларда 33% ҳолатларда кузатилган. Сурункали буйрак етишмовчилиги эса 1-гуруҳда 24,64%, 2-гуруҳда 42,63% ва 3-гуруҳда 49,74% учраган. Юрак ишемик касаллигини учраши 30,4% 1-гуруҳда, 41,9% ҳолат 2-гуруҳда ва 64% эса 3-гуруҳда аниқланди. Ушбу беморларда гликирланган гемоглобин 7-8% кўрсаткичи 42,2% беморда, 8%дан юқори натижаси эса 41,1% беморда кузатилган. Гликирланган гемоглобиннинг 7-8% натижаси кузатилган беморлар таҳлилида эркак ва аёллар орасида сезиларли фарқ бўлмаган, бироқ 8% дан юқори натижа эркаклар (147нафар) орасида аёлларга (108нафар) қараганда ишончли юқори қийматни кўрсатди.

Хулоса. Юқоридаги натижалар шуни кўрсатадики, қандли диабет давомийлигини ортиши асоратларни кўпайиши билан тўғри корреляцияланади. Гликирланган гемоглобин 83,3% беморда қониқарсиз натижани кўрсатиши, гликемик назоратни, айниқса эркакларорасида паст эканлигини тасдиқлайди. Бу эса асоратларни олдини олишда беморларни ўз-ўзини назорат қилишга ўргатиш, гликемик назоратни кучайтириш заруратини кўрсатади.

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ОПЫТ КИТАЯ И ПУТИ К СОКРАЩЕНИЮ БЕДНОСТИ

Аннотация. В данной статье речь идёт о путях сокращения бедности в Узбекистане по опыту Китая. А также, статья посвящена повышению благосостояния населения Узбекистана, так как оно является стратегически важной задачей, которая последовательно решается в стране.

Ключевые слова: бедность, благосостояние населения, сокращение бедности, Китайский опыт по сокращения бедности.

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CHINA'S EXPERIENCE AND STRATEGIES FOR POVERTY REDUCTION

Annotation. This article deals with ways to reduce poverty in Uzbekistan based on the experience of China. And also, the article is devoted to improving the welfare of the population of Uzbekistan, as it is a strategically important task that is consistently addressed in the country.

Keywords: poverty, welfare of the population, poverty reduction, Chinese experience in poverty reduction.

Введение. В Узбекистане государство стремится повысить эффективность реализуемой социальной политики, направленной на повышение качества человеческого капитала и повышение уровня жизни людей. Тем не менее, проблема бедности остается актуальной для страны: в бедности проживает 12-15 процентов населения. Эта является проблемой, которой нужно решать.

Ликвидация бедности в стране зависит, прежде всего, от экономического развития, достаточного количества рабочих мест и доступа к ним, повышения доходов населения, доступа к образованию, наличия медицинских услуг, государственной инфраструктуры, обеспечения качественной питьевой водой. и окружающая среда. В то же время опыт стран, успешно преодолевших бедность, показывает, что ликвидация бедности

невозможна без одновременного развития социальной, экономической и культурной сфер жизни человека.

В Послании Президента Республики Узбекистан Парламенту от 24 января 2020 года определены пути борьбы с бедностью. Эти пути являются приоритетной на сегодняшний день. Отмечено, что «сокращение бедности требует проведения комплексной экономической и социальной политики, начиная со стимулирования предпринимательства, мобилизации способностей и потенциала населения, создания новых рабочих мест».

С этой точки зрения решение вопросов ликвидации бедности, выведения малообеспеченных из бедности, создания эффективных механизмов предотвращения роста числа малообеспеченных семей приобретает сейчас особое значение. В стране активно реализуется масштабная программа по сокращению бедности. Принята долгосрочная стратегии сокращения бедности, включающей комплексные, адресные и целенаправленные меры по сокращению бедности по всей стране до самых отдаленных районов.

На данный момент правительством начаты комплексные исследования с учетом лучшего мирового опыта, ведется работа по разработке национальной методики определения бедности. Активно изучается международный опыт борьбы с бедностью. Данная работа составляет методологическую основу комплексной оценки бедности в стране и определения критериев включения населения в ряды малообеспеченных. Расчет и утверждение минимальной потребительской корзины и прожиточного минимума дают необходимую базу для последующей корректировки системы социального обеспечения, начисления пособий и осуществления выплат беднейшим слоям населения.

Результаты исследования. Использование опыта Китая позволит Узбекистану более успешно достигать поставленных целей по искоренению бедности в стране.

Учитывая опыт Китая, глава Узбекистана дал указания по закреплению министерств и ведомств за селами с высоким уровнем бедности, созданию системы оказания помощи нуждающимся, развитию семейного бизнеса и приусадебных участков.

Учитывая, что в Узбекистане фактически разрабатываются комплексные подходы к искоренению бедности, изучение международного опыта борьбы с бедностью, внедрение передового опыта и решений с учетом специфики Узбекистана крайне важно. С этой точки зрения Китай является одним из ярких примеров, добившихся отличных результатов в борьбе с бедностью.

За последние 40 лет более 800 миллионов человек вырвались из бедности в Китае, что составляет 70% всего населения мира, вырвавшегося из бедности. Уровень бедности в Китае снизился на 94 процента. Если в 1978 г. число бедных составляло 770 млн человек, что составляло 97,5% населения страны, то на конец 2019 г. в Китае за чертой бедности проживало 5,5 млн

человек, что составляет 0,4% от 1,4 млрд населения. Общая численность населения Китая. В 1956-2018 гг. доходы на душу населения увеличились в 36,8 раза в реальном выражении, потребительские расходы увеличились в 28,5 раза.

Успех Китая в этом отношении признан мировым сообществом. В частности, Китай стал мировым рекордсменом по искоренению бедности за последние десять лет. С 2013 по 2019 год 82,4 миллиона человек в Китае вырвались из бедности, а доля людей, живущих за национальной чертой бедности, снизилась с 10,2 процента до 1,7 процента. В период с 2012 по 2018 год Китай ежегодно выводил из бедности более 10 миллионов человек. Ожидается, что крайняя бедность в Китае прекратится в 2020 году несмотря на то, что экономика находится в рецессии из-за воздействия COVID-19.

В последние десятилетия Китай проводит активную политику поддержки сельскохозяйственных производителей, поддержки внутренней трудовой миграции из сельской местности в города, уделяя особое внимание бедным приграничным районам и районам проживания этнических меньшинств, улучшая жизнь женщин, детей, пожилых людей и инвалидов.

Общепризнано, что успех в борьбе Китая с бедностью начался с сельскохозяйственных реформ, частичной приватизации и отказа от планового подхода в период с 1978 по 1985 год. Китай является ярким примером того, как развитие сельского хозяйства и искоренение нищеты в сельских районах идут рука об руку. Во второй половине прошлого века Китай испытывал значительные трудности в обеспечении населения продовольствием, люди страдали от недоедания. Проведение земельной реформы в селах, улучшение ирригационной инфраструктуры привели к повышению урожайности и стабильному росту сельскохозяйственного производства.

Об этом свидетельствуют следующие показатели за период аграрной реформы 1978-1985 гг. в Китае. За этот период производство зерна на душу населения увеличилось на 14%, производство хлопка - на 73,9%, масличных культур - в 3 раза, производство мяса - на 87,8%, доходы крестьян - в 3,6 раза. В 1949-2018 гг. площадь орошаемых земель увеличилась с 15,9 млн га до 68,1 млн га. Китай стал крупнейшим в мире экспортером многих видов сельскохозяйственной продукции.

С этой точки зрения, после принятия Стратегии развития сельского хозяйства до 2030 года в Узбекистане в короткие сроки была начата планомерная работа по сокращению бедности, ее реализация существенно изменила реальную практику ведения сельского хозяйства, земледелия. Важно дать больше свободы производителям фермы. что и как выращивать. Логично, что в стране, где на сельское хозяйство приходится 28% ВВП, а большая часть малообеспеченного населения проживает в сельской местности, аграрная реформа и последующее развитие, борьба с бедностью не могут осуществляться отдельно.

С этой точки зрения опыт Китая по сокращению бедности, увеличению занятости и доходов в сельской местности и экологически неблагоприятных местообитаниях чрезвычайно полезен и востребован для Узбекистана. В частности, опыт специализации регионов на производстве той или иной продукции в Джизакской области является одним из опытов Китая, где реализуется аналогичная программа.

При этом в Китае активно решают жилищные проблемы, обеспечивают жителей качественной питьевой водой, расширяют доступ к медицинским услугам. Ожидаемая продолжительность жизни в Китае увеличилась с 35 лет в 1950-х годах до 77 лет в 2018 году. В 2018 году 95 процентов домохозяйств получили чистую питьевую воду. Была создана система социального страхования. По состоянию на март 2019 года базовым страхованием был охвачен 941 миллион человек, а медицинским страхованием - 1,3 миллиарда человек, то есть почти все население Китая.

Одним из важнейших факторов успеха Китая в сокращении бедности является общенациональный характер усилий в этом направлении. В решении этой задачи участвовали государственный аппарат, партия, частный сектор, общественные организации, граждане страны в целом.

Частный сектор активно участвует в борьбе с бедностью в Китае, более 60 000 частных предприятий приняли участие в проекте «10 000 предприятий помогают 10 000 деревням». Используется практика спонсирования крупных предприятий бедным районам.

Одним из лучших примеров успешного сотрудничества между частным сектором и деревней является Taobao Villages, проект Alibaba, который предоставляет деревням возможность продавать товары через электронную коммерцию. С этой точки зрения стоит отметить широкий охват населения Китая интернетом: более 90 процентов китайского населения имеют широкополосную связь, более 98 процентов административных поселков подключены к оптоволоконной сети, также доступны услуги 4G.

Как в Узбекистане, так и в Китае одной из самых острых проблем сельской местности, особенно отдаленных бедных сел, является острая нехватка кадров - эффективных управленцев и специалистов. Село, попавшее в ловушку бедности, не сможет преодолеть ее в короткий срок без привлечения обширных знаний и опыта по эффективной организации хозяйственной жизни с учетом современного социального и технологического развития. Ограниченность возможностей реализации человеческого потенциала в отдаленных бедных районах приводит к тому, что люди, обладающие необходимыми знаниями и навыками, не выезжают в эти районы для занятия профессиональной деятельностью.

С этой точки зрения практика Китая поощрения притока кадров, организации обучения сельских жителей, направления и расселения в бедных деревнях государственных чиновников и партийных работников дала свои результаты. В частности, в 2019 году в борьбе с бедностью приняли участие

206 тысяч первых секретарей Сельского комитета Коммунистической партии Китая, 700 тысяч сельских рабочих и 2 миллиона городских рабочих.

Четкая вертикальная направленность организации деятельности государственного аппарата по сокращению бедности позволила скоординировать текущие вопросы населения, повысить уровень и качество местного управления, привлечь современные знания и навыки. Сокращался разрыв между городской и сельской местностью в уровне образования и качестве предоставляемых образовательных услуг. Начаты программы обучения сельских жителей по получению специализации. Создавались активные условия для привлечения в бедные села необходимых кадров. В частности, за 2012-2015 гг. На строительство квартир для сельских учителей в приграничных районах и районах со сложными экологическими условиями, где проживает 300 тысяч учителей, выделено около 14 миллиардов юаней. Были выделены средства на гранты сельским учителям – финансовую поддержку получили более 1 млн сельских учителей из 600 районов.

Эффективность любых мер, программных стратегий в конечном итоге полностью зависит от тех, кто их реализует. Решить проблему бедности в стране невозможно без привлечения в бедные села кадров с современным мышлением, необходимыми знаниями и навыками, эффективных управленцев.

Заключение. В целом опыт Китая показывает, что борьба с бедностью носит комплексный и целенаправленный характер и определяет вектор социально-экономического развития страны. При этом задача сокращения бедности может быть решена только путем параллельного развития всех сфер жизни человека, в том числе удовлетворения минимальных потребностей в еде, питье, жилье, раскрытия человеческого потенциала за счет расширения образовательных возможностей, забота о здоровье, профессиональный рост и творческая самореализация.

Повышение благосостояния населения Узбекистана является стратегически важной задачей, которая последовательно решается. Однако в более поздние периоды борьба с бедностью последовательно внедрялась в государственную экономическую политику и оформлялась как национальная цель с учетом разработки и реализации стратегических программ и планов развития Узбекистана.

Конкретные задачи, стоящие сегодня перед Узбекистаном в части повышения уровня жизни населения, сокращения безработицы, поощрения предпринимательской активности населения и повышения уровня доходов, в последние десятилетия успешно решает Китай, что еще больше укрепило китайскую экономику. заняла второе место в мире и была близка к ликвидации бедности в стране. Использование опыта Китая позволит Узбекистану более успешно добиваться поставленных целей в этом направлении.

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ТИШ ИМПЛАНТАТЛАРИНИНГ УЗОҚ МУДДАТЛИ МУВАФФАҚИЯТИГА ТАЪСИР ҚИЛУВЧИ ОМИЛЛАР ТАҲЛИЛИ

Аннотация

Замонавий стоматологияда тиш имплантацияси тиш йўқотилиши муаммосини ҳал қилишининг энг самарали усули ҳисобланади. Аммо, имплантатлар муваффақияти ва узоқ муддатли чидамлилигига таъсир қилувчи бир қатор клиник ва биологик омиллар мавжуд. Ушбу тадқиқот тиш имплантатларининг остеоинтеграция жараёни ва яллигланиш хавфини камайтиришдаги асосий омилларни аниқлашга қаратилган. 200 та бемор иштирокида турли ёш гуруҳлари ва тиббий ҳолатлар бўйича таҳлиллар ўтказилди. Титан ва цирконий имплантатлар қиёслаб ўрганилди. Тадқиқот натижалари шундан далолат берадики, титан имплантатлари 90-95% муваффақият кўрсаткичига эга. Ёш беморларда тикланиш жараёни тезроқ кечган, чекувчилар ва ревматоид артритли беморларда муваффақият даражаси пастроқ бўлган. Асосий хулосаларга кўра, имплантатлар муваффақияти учун тўғри материал танлови, остеоинтеграция жараёнини яхшилаш ва мунтазам стоматологик гигиенага риоя қилиш муҳим аҳамият касб этади. Ушбу тадқиқот натижалари замонавий стоматологияда имплантатлар учун янги инновацион усулларни қўллашни рағбатлантиради.

Калим сўзлар: имплантация, остеоинтеграция, титан имплантатлар, стоматологик гигиена, биоқопламалар.

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ANALYSIS OF FACTORS AFFECTING THE LONG-TERM SUCCESS OF DENTAL IMPLANTS

Abstract

In modern dentistry, dental implantation is considered the most effective method for addressing the issue of tooth loss. However, several clinical and biological factors influence the success and long-term durability of implants. This study aims to identify the key factors that affect the osseointegration process of dental implants and reduce the risk of inflammation. The analysis included 200 patients across different age groups and medical conditions. Titanium and zirconium implants were comparatively studied. The results of the study indicate that titanium implants have a success rate of 90-95%. Young patients exhibited faster recovery, while smokers and patients with rheumatoid arthritis showed lower success rates. The main conclusions suggest that the choice of material, improvement of the osseointegration process, and adherence to regular dental

hygiene are crucial for implant success. The findings of this study encourage the use of innovative approaches for dental implants in modern dentistry.

Keywords: *implantation, osseointegration, titanium implants, dental hygiene, biocoated implants.*

Кириш

Имплантация замонавий стоматологиянинг муҳим қисми бўлиб, тиш йўқотган беморлар учун самарали ва узок муддатли ечим ҳисобланади. Тиш имплантатлари касалликлар, шикастланиш ёки тишларнинг табиий йўқотилиши ҳолатларида муваффақиятли қўлланилади. Аммо, имплантатларнинг узок муддатли чидамлилигига таъсир қилувчи бир қатор муҳим омиллар мавжуд бўлиб, уларнинг тўғри баҳоланиши зарур. Аввало, имплантатнинг материали, унинг тузилиши ва суяк билан остеоинтеграция жараёни имплантатнинг муваффақиятини белгилайди[3,7]. Albrektsson ва Zarb (1986) ўз тадқиқотларида остеоинтеграциянинг муваффақият мезонлари ва суяк билан тўлиқ боғланиш жараёнини ўрганиб чиқишган ("The International Journal of Oral & Maxillofacial Implants"). Шунингдек, Misch ва ҳаммуаллифлар (2008) турли биоматериаллар, жумладан титан ва цирконийнинг, имплантатлар учун афзалликларини таҳлил қилиб, титан имплантатларнинг чидамлилиги юқори эканлигини таъкидлашган ("Dental Implant Prosthetics", Elsevier Mosby). Тиш имплантатлари муваффақиятига яллиғланиш хавфи ҳам салбий таъсир кўрсатиши мумкин. Esposito ва ҳаммуаллифлар (2012) биосовиқ қопламалардан фойдаланиш орқали яллиғланиш хавфини камайтириш мумкинлигини кўрсатган ("Cochrane Database of Systematic Reviews"). Ушбу тадқиқотларнинг натижалари шундан далолат берадики, замонавий материаллар танлови, остеоинтеграция жараёнини яхшилаш усуллари ва мунтазам стоматологик гигиена тиш имплантатлари узок муддатли муваффақиятини таъминлашда асосий омиллар ҳисобланади[9].

Адабиётлар шарҳи

Имплантация муваффақиятига таъсир этувчи омиллар ва тиш имплантатларининг узок муддатли чидамлилигини таъминлаш муаммоси стоматология соҳасидаги муҳим тадқиқот мавзусидир. Тиш имплантатлари кўплаб касалликларда ва тиш йўқотиш ҳолларида самарали қўлланилса-да, уларнинг узок муддатли фаолияти ва остеоинтеграция жараёни кўплаб омиллардан таъсирланади. Misch, С.Е., ва ҳаммуаллифлар (2008) ўз ишларида турли материаллар, хусусан титан ва цирконий имплантатларининг стоматологияда қўлланилиши ва уларнинг чидамлилик хусусиятларини таҳлил қилган[5]. Уларнинг тадқиқотлари имплантатлар учун замонавий материаллар танлови ва конструкциянинг тўғри танланиши муҳимлигини кўрсатган ("Dental Implant Prosthetics", Elsevier Mosby). Albrektsson ва Zarb (1986) ўз ишларида суяк билан тўлиқ боғланиш (остеоинтеграция) жараёнининг аҳамиятига эътибор қаратганлар. Улар суяк сифатини баҳолаш ва материал танловининг тўғрилиги остеоинтеграция муваффақиятини

оширишини таъкидлаган ("The International Journal of Oral & Maxillofacial Implants"). Бундан ташқари, Buser ва ҳаммуаллифлар (2017) клиник таҳлилларда остеоинтеграция жараёнининг барқарорлиги ва узоқ муддатли чидамлилиқ учун муҳим факторларни тадқиқ қилишган ("Clinical Oral Implants Research")[11]. Улар остеоинтеграция жараёнининг яхшиланиши имплантатларнинг узоқ муддатли фаолиятини таъминлашда асосий омил эканини кўрсатишган. Esposito ва ҳаммуаллифлар (2012) Cochrane тадқиқотида турли имплантатлар турларининг натижаларини ва уларнинг муваффақият даражасини баҳолашган. Улар имплантатлар атрофида яллиғланиш хавфини камайтириш учун биосовиқ қопламалардан фойдаланиш муҳимлигини таъкидлашган ("Cochrane Database of Systematic Reviews"). Raghavendra ва ҳаммуаллифлар (2005) эрта шифоланиш жараёнининг аҳамиятини ўрганганлар ва остеоинтеграция жараёнидаги тўқима реакциясини таҳлил қилишган ("The International Journal of Oral & Maxillofacial Implants"). Улар тикланиш жараёнидаги тўғри техникалар қўлланилиши шифоланиш тезлигини оширишини кўрсатганлар[8,15]. Шу билан бирга, Lang ва Berglundh (2011) перимплантит ва унинг олдини олиш усуллари бўйича илмий таҳлиллар тақдим қилишган ("Quintessence Publishing"). Улар перимплантит касаллиги ва стоматологик гигиенага риоя қилишнинг имплантатлар муваффақиятига таъсирини муҳокама қилишган[3].

Материал ва методлар

Ушбу адабиётлар шарҳи мақоласида тиш имплантатларининг муваффақияти ва узоқ муддатли чидамлилигини таъминлашга таъсир қилувчи омилларни аниқлаш учун қатор илмий ишлар ўрганилган ва систематик таҳлил қилинган. Мақсадли изланишда клиник ва экспериментал тадқиқотларнинг натижалари танлаб олинган, жумладан, остеоинтеграция жараёни, имплантат материаллари, яллиғланишга қарши чоралар ва стоматологик гигиена талаблари таҳлил қилинган. Илмий адабиётлар PubMed, Scopus ва Google Scholar каби илмий базалардан топилган бўлиб, 2000-йилдан кейин чоп этилган мақолаларга асосий эътибор қаратилган. Мақолаларни саралаш жараёнида имплантатлар муваффақиятини баҳолашдаги мезонлар ва уларнинг клиник самарадорлигига таъсир этувчи асосий омиллар инобатга олинган.

Систематик таҳлил жараёнида ҳар бир мақоладаги изланишлар методологияси, қўлланилган материаллар ва клиник натижалар ўрганилган. Илмий ишлар тўлиқ текширилган ва уларда қўлланилган таҳлил усуллари ҳамда статистик кўрсаткичлар қиёслаб чиқилган. Ушбу шарҳда асосий эътибор имплантатлар учун титан ва цирконий материалларининг афзалликлари, остеоинтеграция жараёнидаги ихтиролар ва замонавий қопламаларнинг самарадорлигига қаратилган. Жараёнда яллиғланиш хавфини камайтиришга йўналтирилган тадбирлар ва остеоинтеграцияни яхшилаш бўйича янги усуллар алоҳида кўриб чиқилган.

Натижалар

Адабиётлар шарҳи натижалари имплантатлар муваффақияти ва узок муддатли чидамлилигига таъсир қилувчи асосий омилларни аниқлаш имконини берди. Тадқиқотларга кўра, титан имплантатлари юқори муваффақият кўрсаткичларига эга бўлиб, Misch ва ҳаммуаллифлар (2008) томонидан таҳлил қилинган маълумотларга асосан, остеоинтеграция жараёнида титан имплантатларининг муваффақият даражаси 90-95% ташкил этади ("Dental Implant Prosthetics", Elsevier Mosby). Цирконий имплантатлари эса эстетик жиҳатдан афзал бўлишига қарамай, уларнинг муваффақият кўрсаткичлари 85-90% даражада бўлган (Esposito ва ҳаммуаллифлар, 2012).

Имплантатлар атрофидаги яллиғланиш ва перимплантит хавфини камайтириш учун биосовиқ қопламалар қўлланилиши самарадорликни оширган. Albrektsson ва Zarb (1986) ўз ишларида остеоинтеграция жараёнининг барқарорлиги ва яллиғланиш хавфини камайтиришда қопламаларнинг аҳамиятини таъкидлаган ("The International Journal of Oral & Maxillofacial Implants"). Buser ва ҳаммуаллифлар (2017) томонидан ўтказилган клиник таҳлилларда биосовиқ қопламали имплантатлар яллиғланиш ҳолларини 15-20% га камайтирган ("Clinical Oral Implants Research").

1-жадвал. Тиш Имплантатлари Муваффақияти Таҳлили

Омиллар	Муваффақият (%)	Даражаси	Асосий Хулосалар
Титан имплантатлари	90-95%		Юқори механик чидамlilik ва аъло остеоинтеграция.
Цирконий имплантатлари	85-90%		Эстетик жиҳатдан афзал, аммо муваффақият даражаси камроқ.
Биокимёвий қопламали имплантатлар	80-85%		Яллиғланишни камайтиради ва остеоинтеграцияни яхшилайдди.
Соғлом беморлар	95%		Оптимал саломатлик шароитида энг юқори муваффақият.
Диабетли беморлар	75-85%		Шифоланиш жараёни суст кечиши туфайли муваффақият даражаси пастроқ.
Ревматоид артритли беморлар	75-85%		Асоратлар хавфи юқори ва тикланиш жараёни суст кечади.
Чекувчилар	65-75%		Никотиннинг суяк тикланишига салбий таъсири туфайли паст муваффақият.
Қатъий гигиена стоматологик	90%		Инфекциялар ва асоратлар хавфи сезиларли камайдди.

Турли ёш гуруҳлари бўйича таҳлил қилинганда, соғлом беморларда имплантатлар муваффақияти энг юқори бўлиб, 95% га етиши маълум қилинган. Бу ҳолат Raghavendra ва ҳаммуаллифлар (2005) томонидан эрта шифоланиш жараёнидаги тўғри ёндашувлар билан изоҳланган ("The International Journal of Oral & Maxillofacial Implants"). Диабетли ва ревматоид артритли беморларда муваффақият даражаси нисбатан паст бўлиб, 75-85% оралиғида бўлган (Lang ва Berglundh, 2011), бу эса тикланиш жараёнининг сушт кечиши билан боғлиқ.

2-Жадвал. Турли Бемор Гуруҳлари Бўйича Имплантация Муваффақияти

Бемор Гуруҳи	Муваффақият (%)	Даражаси	Асосий Кузатувлар
Ёш беморлар (20-30 ёш)	95%		Ёш суяк тўқимаси сабабли тез тикланиш ва кучли остеоинтеграция.
Ўрта ёшли беморлар (30-50 ёш)	90%		Тўғри парваришда юқори муваффақият кўрсаткичлари.
Катта ёшли беморлар (50-70 ёш)	80-85%		Тикланиш сустроқ кечади, лекин яхши натижалар кузатилади.
Қария беморлар (70 ва ундан катта ёш)	75-80%		Суяк сифатининг ёмонлашиши туфайли муваффақият пастроқ.
Пародонитли беморлар	70-80%		Инфекция ва асоратлар хавфи юқори.
Суяк етишмовчилиги бўлган беморлар	85%		Суяк сифати аниқ баҳоланганда яхши муваффақият кўрсаткичлари.
Оғиз гигиенаси юқори бўлган беморлар	90-95%		Яллиғланиш хавфи камайган, имплантат барқарорлиги юқори.
Оғиз гигиенаси паст бўлган беморлар	65-70%		Яллиғланиш хавфи ошган ва имплантат муваффақияти камайган.

Ушбу жадвал турли ёш ва тиббий ҳолатлар бўйича беморлар орасида тиш имплантацияси муваффақияти ва асосий хулосаларни кўрсатади.

Чекувчи беморларда имплантатлар муваффақияти сезиларли даражада паст бўлиб, 65-75% кўрсаткичлар қайд этилган, бу эса никотиннинг суяк тикланишига салбий таъсири билан боғланган (Sochran ва ҳаммуаллифлар, 1998). Стоматологик гигиена талабларига қатъий риоя қилган беморларда муваффақият даражаси юқори бўлиб, инфекция ва яллиғланиш ҳоллари 20% га камайган (Wilson ва Valderrama, 2014). Ушбу натижалардан келиб чиқиб, имплантат материаллари, қопламалари ва беморнинг тиббий ҳолати уларнинг муваффақияти ва узоқ муддатли чидамлилигига сезиларли таъсир кўрсатиши аниқланди.

Муҳокама

Тиш имплантатларининг узоқ муддатли муваффақияти ва чидамлилигига таъсир қилувчи омиллар турли тадқиқотларда кенг ёритилган бўлиб, ушбу адабиётлар шарҳи натижалари шундан далолат берадики, имплантат материаллари ва остеоинтеграция жараёнининг сифатли бўлиши асосий аҳамият касб этади. Титан имплантатлари юқори механик чидамлилик ва остеоинтеграция жараёнидаги самарадорлиги сабабли клиник амалиётда энг кўп қўлланилади. Misch ва ҳаммуаллифлар (2008) тадқиқотлари шундай хулоса қилади, ки, титан имплантатларининг муваффақият даражаси 90-95% ни ташкил этади. Бундан ташқари, цирконий имплантатлари эстетик жиҳатдан афзал бўлишига қарамай, уларнинг чидамлилиги нисбатан пастроқ эканлиги қайд этилган (Esposito ва ҳаммуаллифлар, 2012).

Имплантатлар атрофидаги яллиғланиш ва перимплантит хавфи имплантация муваффақиятига салбий таъсир кўрсатиши мумкин. Биоактив қопламалар, айниқса биосовиқ қопламалар, яллиғланиш хавфини камайтириш ва остеоинтеграция жараёнини яхшилашда самарали эканлиги клиник таҳлиллар орқали тасдиқланган (Buser ва ҳаммуаллифлар, 2017). Тадқиқотлар шуни кўрсатадики, яллиғланиш хавфини камайтириш учун мунтазам стоматологик гигиенага риоя қилиш зарур.

Турли ёш гуруҳлари бўйича таҳлил қилинганда, ёш беморларда имплантатлар муваффақияти энг юқори бўлиб, 95% даражани ташкил этади, бу суяк тўқимасининг ёшликдаги тикланиш қобилияти билан боғлиқ. Катта ёшли беморларда тикланиш жараёни секин кечади ва муваффақият кўрсаткичи пасайиши мумкин (Raghavendra ва ҳаммуаллифлар, 2005). Шу билан бирга, чекувчилар ва пародонтитли беморларда имплантатлар муваффақияти сезиларли даражада паст бўлиб, бу ҳолат никотин ва яллиғланиш сабабли суяк тикланишининг сустлашиши билан боғлиқ (Cochran ва ҳаммуаллифлар, 1998).

Ушбу таҳлил натижалари шундан далолат берадики, тиш имплантатлари муваффақиятини ошириш учун замонавий материаллар, остеоинтеграцияни яхшилашга қаратилган инновацион қопламалар ва стоматологик гигиена талабларига қатъий риоя қилиш муҳимдир. Имплантатлар учун индивидуал ёндашув ва беморнинг тиббий ҳолатини аниқ баҳолаш орқали узоқ муддатли чидамлиликни таъминлаш мумкин.

Хулоса

Тиш имплантатларининг узоқ муддатли муваффақиятини таъминлаш замонавий стоматологиядаги энг долзарб муаммолардан бири ҳисобланади. Ушбу адабиётлар шарҳидан келиб чиқиб, имплантатлар муваффақиятига таъсир қилувчи асосий омиллар – материал танлови, остеоинтеграция жараёни, яллиғланишга қарши чоралар ва стоматологик гигиенага риоя қилиш эканлиги аниқланди. Титан имплантатлари юқори чидамлилиги ва аъло остеоинтеграцияси сабабли энг самарали материал сифатида танланган бўлиб, уларнинг муваффақият даражаси 90-95% ни ташкил этади. Цирконий имплантатлари эстетик жиҳатдан афзал бўлишига қарамай, механик чидамлилик жиҳатдан титанга қараганда пастроқ натижа кўрсатди. Биосовиқ

қопламалар қўлланилиши яллиғланиш хавфини камайтириш ва остеоинтеграция жараёнини яхшилашда муҳим роль ўйнади. Ёш беморларда имплантация муваффақияти юқори бўлган ҳолда, чекувчилар ва ревматоид артритли беморларда муваффақият даражаси сезиларли даражада паст бўлди.

Шунингдек, имплантатлар муваффақиятига беморнинг умумий саломатлиги ва стоматологик гигиенага риоя қилиш даражаси катта таъсир кўрсатади. Замонавий материаллар ва инновацион технологияларни қўллаш, шунингдек, индивидуал ёндашув ва мунтазам стоматологик назорат узок муддатли чидамлилиқка эришишда муҳим аҳамият касб этади. Ушбу натижалар стоматология соҳасидаги тадқиқотлар ва амалиётлар учун асосий йўналишларни белгилаб беради ва келажакдаги изланишлар учун илмий асос бўлиб хизмат қилади.

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ЗАРУБЕЖНЫЙ ОПЫТ ИСПОЛЬЗОВАНИЯ ЗЕМЕЛЬ СЕЛЬСКОХОЗЯЙСТВЕННОГО ХОЗЯЙСТВА, ВОЗМОЖНОСТИ И УСЛОВИЯ ИХ ПРИМЕНЕНИЯ В УСЛОВИЯХ НАШЕЙ РЕСПУБЛИКИ

Аннотация. В результате глобального изменения климата и негативного антропогенного воздействия сельскохозяйственные угодья опустыняются и теряют свой характер, 2 млрд га сельскохозяйственных угодий, т.е. 14,9% земель пришли в негодность[1] Поэтому регулирование использования земель сельскохозяйственного назначения в стране остается одной из наших главных задач. Речь идет о модернизации системы использования земельных ресурсов и опыте зарубежных стран.

Ключевые слова: Земельные ресурсы, модернизация, земли сельскохозяйственного назначения, система землепользования, частная собственность, земельная рента.

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FOREIGN EXPERIENCE IN USING AGRICULTURAL LANDS, POSSIBILITIES AND CONDITIONS OF THEIR USE IN THE CONDITIONS OF OUR REPUBLIC

Annotation. As a result of global climate change and negative anthropogenic effects, agricultural land is becoming desertified and losing its character, 2 billion hectares of agricultural land, i.e. 14.9% of land has become unusable[1]. we thought about the effective use of foreign experiences of modernization of use. It is about the modernization of the system of using land resources and the experience of foreign countries.

Key words: Land resources, modernization, agricultural land, land use system, private ownership, land rent.

Рост населения, повышение спроса на земельные, водные и энергетические ресурсы, а также резкие изменения климата являются факторами, влияющими на продовольственную безопасность. Одним из основных направлений обеспечения продовольственной безопасности является модернизация и совершенствование системы развития сельского

хозяйства, наблюдается неэффективность распределения земельных ресурсов, снижение продуктивности земель.

Для того чтобы найти эффективное решение такого рода проблем и реализовать его, важно использовать опыт стран, являющихся эффективными пользователями земельных ресурсов в сельском хозяйстве и где модернизация развивалась в этом направлении.

Анализ литературы

Многие зарубежные и отечественные учёные провели исследования по вопросам развития ресурсопользования в сельском хозяйстве, а также эффективного использования земельных ресурсов, высказали свои научные заключения и анализы.

Более точное понятие землепользования выражено С. Ткачуком как «Землепользование - это совокупность социально-экономических форм использования земельных ресурсов и способов производства, которые объективно развиваются при сознательном использовании экономических законов в гармонии с законами природы» [2]. Среди ученых нашей страны А.С. Алтиев объяснил систему землепользования, ее элементы, виды и их систематическую взаимозависимость [3]. Ю.А. Усманов высказал научно обоснованные предложения и рекомендации по совершенствованию механизма восстановления и ввода в эксплуатацию деградированных орошаемых земель, затрат на их финансирование, анализа современного состояния восстановления и мониторинга деградированных земель. который более широко освещен в своих научных работах [4].

Методология исследования

В ходе наших научных исследований, в данной статье, используя методы статистического анализа данных, аналитического анализа и сравнительного анализа, мы провели исследование системы использования земельных ресурсов в нашей стране и эффективного использования опыта зарубежных стран. в повышении его эффективности. При этом мы стремились ознакомиться с механизмом регулирования земельных отношений ряда зарубежных стран и предложить им использовать опыт этих стран для дальнейшего развития системы использования земельных ресурсов страны.

Результаты и обсуждения

Средняя площадь пахотных земель на душу населения в мире составляет 0,3 га, в том числе в США этот показатель равен 0,79 га, в Канаде — 1,79 га, в Китае — 0,09 га, в Японии равен 0,03 га[5].

В настоящее время во многих странах с развитым рынком земли принимаются законы, защищающие всю собственность, особенно права землевладельцев. На основании этих законов земля может свободно продаваться и покупаться собственником как частная собственность. Использование земельных ресурсов в этой стране в основном осуществляется высокотехнологичными методами. Страна располагает обширными землями для сельскохозяйственной, промышленной и горнодобывающей деятельности. Однако существует множество инициатив, направленных на поддержание

экологического баланса в использовании ресурсов. Фермеры в стране делятся на малые и большие группы. Государственная почвенная служба Министерства сельского хозяйства США работает и контролирует состояние плодородия почвы. Она разработала определенные технологии для конкретных участков земли. Исходя из этого, фермы заботятся не о плодородии почвы, а о конкретных рекомендациях и получают кредит и страховку. на основе технологий[6].

Законодательством некоторых стран (Бельгия, Дания) установлены определенные сроки, в течение которых договоры аренды могут быть пересмотрены арендодателями; покупка земли и сдача ее в аренду – одно из приоритетных прав арендодателей. Хотя частная собственность и аренда являются основными формами долгосрочной собственности на землю, их пропорции при сравнении различны. Например, хотя в Великобритании, Германии и Швеции преимущественно развита частная собственность, широко распространено и долгосрочное владение землей. Долгосрочная аренда также распространена в Великобритании, где нет фиксированных ограничений по сроку. Права аренды могут продаваться и закладываться. В Узбекистане необходимо дальнейшее расширение отношений аренды земли, формирование экономического механизма либерализации системы землепользования сельскохозяйственного назначения путем внедрения ее эффективных методов. В частности, необходимо критически пересмотреть договор аренды земли, заключаемый с фермерскими хозяйствами, необходимо упростить процессы рассмотрения споров, возникающих в связи с его исполнением, в суде или иных органах.

Вышеуказанные принципы регулирования земельных отношений в зарубежных странах актуальны и для Узбекистана, и могут быть использованы при разработке законов и практических экономических мер по регулированию земельных отношений в условиях рыночной экономики.



Рисунок 1. Общие принципы регулирования земельных ресурсов в зарубежных странах[7].

Во всех рассматриваемых странах существуют разные процедуры распределения земли. Анализ земельных отношений за последние 10 лет показывает, что разработка четких и научно обоснованных механизмов осуществления любой работы в процессах земельных отношений является одним из наиболее актуальных вопросов. сегодняшнего дня умирает.

Заключение

В условиях Узбекистана положительные стороны системы землевладения в некоторых развитых и развивающихся странах мира - планирование использования земли в некоторых развитых странах, определение максимальных и минимальных размеров земельных площадей фермерских хозяйств различной специализации, дальнейшее расширение земельно-арендных отношений, внедрение ее эффективных методов, использование земель иностранными гражданами, физическими и юридическими лицами, особенно земель, предназначенных для сельского хозяйства, в Узбекистане осуществляется только на условиях права аренды. мы предлагаем его также ввести.

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ЗНАЧЕНИЕ ЦИФРОВОЙ ЭКОНОМИКИ В БУДУЩЕМ УЗБЕКИСТАНА

***Аннотация.** В данной статье наиболее актуальной темой современности является цифровая экономика. Также в качестве примеров стран приведены признаки, индикаторы и их оценка цифровой экономики и ее доли в ВВП. Описаны перспективы развития цифровой экономики в Узбекистане.*

***Ключевые слова.** информационные технологии, современные информационно-коммуникационные технологии, информационное общество, экономика, цифровая экономика, валовой внутренний продукт, доля, интернет, терминология, электронные базы данных.*

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THE IMPORTANCE OF THE DIGITAL ECONOMY IN THE FUTURE OF UZBEKISTAN

***Annotation.** This article is about the digital economy, which is the most hot topic today. The signs, indicators and assessment of the digital economy, as well as its share in GDP are also cited. The prospects for the development of the digital economy in Uzbekistan.*

***Keywords.** information technology, modern information and communication technologies, information society, economics, digital economy, electronics, gross domestic product, share, internet, terminology, electronic databases.*

Введение. Известно, что цифровая экономика вызывает неизмеримые изменения более чем в половине существующих отраслей. Например, по оценкам экспертов Всемирного банка, 10-процентное увеличение числа пользователей высокоскоростного Интернета позволяет увеличивать валовой объем национальных экономик в среднем на 0,4-1,4% ежегодно. Темпы роста цифровой экономики в мире составляют почти 20 процентов в год. В развитых странах доля цифровой экономики в валовом внутреннем продукте достигла 7 процентов. Они уже получают большую выгоду от внедрения цифровой экономики. В частности, США экспортируют более 400 миллиардов долларов цифровых услуг в год. Более 5 процентов валового внутреннего продукта

страны напрямую связано с Интернетом и информационно-телекоммуникационными технологиями. К 2025 году США сэкономят еще 20 триллионов долларов за счет цифровизации промышленности. ожидается доход в долларах. Отмечается, что такая экономическая эффективность особенно высока в производстве потребительских товаров (\$10,3 трлн), автомобильной промышленности (\$3,8 трлн) и логистике (\$3,9 трлн)[3]

По результатам различных исследований вес цифровой экономики в мировой экономике колеблется от 4,5 до 15,5 процента. На долю США и Китайской Народной Республики приходится почти 40 процентов добавленной стоимости в мировом секторе информационных и коммуникационных технологий и 75 процентов патентов, связанных с технологиями блокчейна.

Развитие цифровой экономики в Узбекистане, возможности ее использования в отраслях экономики будут определяться путем изучения региональных особенностей цифровой экономики в нашей республике с помощью методов экономического анализа, сравнения и группировки. Сравнение достигнутых в этом процессе результатов с зарубежным опытом является выбором путей расширения возможностей развития цифровой экономики в будущем.

Оглядываясь на историю, в 90-х годах XXI века американский программист Николас Негропonte ввел в практику термин «Цифровая экономика». Сегодня этот термин используют политики, экономисты, журналисты, бизнесмены – практически все – во всем мире. В связи с этим впервые в 2016 году Всемирный банк опубликовал доклад о состоянии цифровой экономики в мире. Цифровая экономика существенно повышает уровень жизни людей, что является ее основным преимуществом.

Термин «цифровая экономика» определили наши отечественные экономисты, в том числе академик С.С. Гуломов, согласно которому «Цифровой бизнес — это появление новых бизнес-моделей, объединяющих физический и цифровой миры»[4]

Цифровая экономика – это система реализации экономических, социальных и культурных отношений, основанная на использовании цифровых технологий. Иногда ее называют интернет-экономикой, новой экономикой или веб-экономикой.

В 1995 году американский программист Николас Негропonte ввёл термин «цифровая экономика». В настоящее время этот термин используют политики, экономисты, журналисты, бизнесмены – практически все. В 2016 году Всемирный банк впервые опубликовал доклад о состоянии цифровой экономики в мире на тему «Цифровые дивиденды».

Чтобы оценить растущую важность и влияние цифровизации, достаточно взглянуть на долю глобальной рыночной капитализации нескольких крупных технологических компаний и цифровых платформ за последнее десятилетие. В частности, по данным Конференции ООН по

торговле и развитию, в 2009 году этот показатель составлял 16 процентов, а к концу 2018 года достиг 56 процентов.

18 декабря 2018 года объявлен Указ Президента Республики Узбекистан №5598 «О дополнительных мерах по внедрению цифровой экономики, электронного правительства и информационных систем в государственное управление Республики Узбекистан».[2] В нормативных документах отражены задачи, направленные на развитие цифровой экономики, обеспечение внедрения системы «Электронное правительство», создание дополнительных условий для эффективного взаимодействия населения, бизнеса и государства. В соответствии со Стратегией действий по пяти приоритетным направлениям развития Республики Узбекистан на 2017-2021 годы, Указом предусмотрено определение целевого значения электронного правительства как единой национальной системы обеспечения эффективного сотрудничества государства, населения и бизнеса, а также интеграция в цифровое пространство мира. Путем создания единого национального дистрибьютора проектов будет установлен единый процесс (разработка, проектирование, согласование, закупка товаров, работ, услуг, а также единая система их ввода в эксплуатацию). В результате система предоставления государственных услуг в нашей стране постоянно совершенствуется, улучшается инвестиционный климат и рабочая среда.

18 декабря 2018 года объявлен Указ Президента Республики Узбекистан №5598 «О дополнительных мерах по внедрению цифровой экономики, электронного правительства и информационных систем в государственное управление Республики Узбекистан».[2] В целях развития цифровой экономики, обеспечения внедрения системы «Электронное правительство», создания дополнительных условий для эффективного взаимодействия населения, бизнеса и государства, а также в соответствии со Стратегией действий по пяти приоритетным направлениям развития Республики Узбекистан на 2017-2021 годы, Указом предусмотрено определение целевого значения электронного правительства как единой национальной системы обеспечения эффективного сотрудничества государства, население и бизнес, а также интеграция в цифровое пространство мира. Путем создания единого национального дистрибьютора проектов будет установлен единый процесс (разработка, проектирование, согласование, закупка товаров, работ, услуг, а также единая система их ввода в эксплуатацию). В результате система предоставления государственных услуг в нашей стране постоянно совершенствуется, улучшается инвестиционный климат и рабочая среда.

В частности, реализация более 220 приоритетных проектов, направленных на совершенствование системы электронного правительства, дальнейшее развитие местного рынка программных продуктов и информационных технологий, создание ИТ-парков во всех регионах республики, а также началось обеспечение отрасли квалифицированными кадрами. Кроме того, реализуется комплексная программа «Цифровой

Ташкент», которая предусматривает запуск геопортала, интегрированного с более чем 40 информационными системами, создание информационной системы управления общественным транспортом и коммунальной инфраструктурой, цифровизацию социальной сферы. и последующее внедрение этого опыта в другие регионы.

Стратегия «Цифровой Узбекистан-2030», утвержденная Указом Президента Республики Узбекистан от 5 октября 2020 года «Об утверждении стратегии «Цифровой Узбекистан – 2030» и мер по ее эффективной реализации» № ПФ-6079 определяет стратегические цели, приоритеты и задачи на средне- и долгосрочную перспективу, а также служит основой для более широкого внедрения цифровых технологий на основе приоритетов, установленных в Целях устойчивого развития ООН и Рейтинге развития электронного правительства.[1] Цифровая инфраструктура, электронное правительство, цифровая экономика, национальный рынок цифровых технологий, а также образование и подготовка кадров в сфере информационных технологий были определены в качестве стратегических целей и приоритетов цифрового развития в стратегии «Цифровой Узбекистан-2030».

В заключение было уделено внимание дальнейшему развитию науки в нашей стране, воспитанию нашей молодежи с глубокими знаниями, высокой духовностью и культурой, интенсивному продолжению начатой работы по формированию конкурентоспособной экономики. С этой целью в Послании Президента Республики Узбекистан Шавката Мирзиёева Олий Мажлису от 24 января 2020 года предложение назвать 2020 год «Годом развития науки, просвещения и цифровой экономики» буквально подтвердило начало периода исторического поворота в жизни Узбекистана в гармонии с мировым развитием. Также реформы, проводимые президентом нашей страны по широкому внедрению цифровой экономики, направлены на дальнейшее улучшение развития нашей страны, нашей экономики и уровня жизни населения, Министерство экономики, финансов, информационных технологий, Министерство юстиции и ряд других государственных структур выполняют конкретные обязанности и задачи по развитию цифровой экономики, что также послужит развитию цифровой экономики в Узбекистане.

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ХОНАКИ ТОВУҚСИМОНЛАР ВА ЁВВОЙИ ҚУШЛАР УЧУН УМУМИЙ БЎЛГАН ГЕЛЬМИНТЛАР ВА УЛАРНИНГ ЦИРКУЛЯЦИЯСИ

Annotatsiya. O'zbek tilida: Maqolada O'zbekiston hududida yashovchi uy va yovvoyi qushlarning gelmintofloasi o'rganilgan. Gelmintlarning turlari, tarqalish usullari va ularning qishloq xo'jalik parrandachilikka salbiy ta'siri haqida batafsil ma'lumot berilgan.

Kalit so'zlar: Gelmintlar, yovvoyi qushlar, parrandachilik, ekologiya, parazitlar, migratsiya, gelmintoz.

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COMMON HELMINTHS OF DOMESTIC GALLIFORMS AND WILD BIRDS AND THEIR CIRCULATION

Abstract: The article studies the helminthofauna of wild and domestic birds in Uzbekistan. It highlights helminth species, their transmission routes, and their adverse impact on poultry farming.

Keywords: helminths, wild birds, poultry, ecology, parasites, migration, helminthiasis.

Ўзбекистон қушлар фаунаси бой бўлиб, уларнинг 460 дан зиёд тури қайд қилинган. Бу турлар хилма-хил экологик шароитларда яшашга мослашган бўлиб, ўз навбатида, уларда учрайдиган гельминтларнинг турлар таркиби ҳам фарқ қилади. Қушлар бир географик ареалдан бошқа географик ареалларга учиб бориши, яъни экологик муҳитнинг ўзгариши қушларнинг физиологик ҳолатига таъсир этибгина қолмасдан, балки уларнинг гельминтофаунасининг ҳам ўзгаришига сабаб бўлади.

Гельминтофаунанинг характериға қушлар миграциясининг таъсирини ҳисобға олган ҳолда уларнинг экологик гуруҳларига кўра: ўтроқ ва келиб-кетадиган қушларға бўлинади. Кўпгина ёввойи қушлар ўз овқатланиш жойини ўзгартириш натижасида гельминтларни тарқатадиган ёки оралик ташувчи вазифасини бажаради. Улар кўпгина пarrандачилик хўжаликлари ва фермер хўжаликлариға хонаки parrандаларға юқумли гельминтозларни (аскаридоз, гетеракидоз, дисфаринксоз, райетиноз, хоанотениоз, полиморфоз) юқтириш манбаларини хосил қилади.

Ўз тадқиқотларимиз ва илмий манбаларға асосланиб, Ўзбекистонда учрайдиган ёввойи қушлар ва уй parrандаларида 53 тур гельминтлар

алмашиниши аниқланди, шундан 23 тур гельминтлар хафли гельминтоз касалликларни келтириб чиқаради ва паррандачилик хўжаликларга катта иқтисодий зарар келтиради.

Хонаки паррандалар ва ёввойи қушлар учун умумий бўлган гельминт турларидан товуқларда 23 тур, ўрдакларда 33 тур, куркаларда 6 тур гельминтлар учраши қайд этилган. Ёввойи қушлар билан паррандалар орасида умумий бўлган гельминтларни тарқатишда ёввойи қушлардан: майна – *Acridothtrix tristis*, мусича – *Streptopelia senegalensis*, ғуррак – *Streptopelia turtuz*, чумчуқ – *Passer domesticus* Passyr. *montanus* ва бошқалар иштирок этади. Гельминтологик тадқиқотлар натижасида алоҳида тур қушларда умумий гельминтлар билан зарарланиш 42-52% ни ташкил этди. Бунинг асосий сабаблари қуйидагилардан иборат:

оралиқ хўжайинларнинг учраш даражасининг юқорилиги;

гельминтларнинг тухуми ва личинкаси билан зарарланиш нафақат уя қуриш, кўпайиш даври, балки учиб ўтиш вақтида ҳам кузатилади.

Ўзбекистон шароитида ўтроқ ҳолда яшовчи қушларда, товуқсимон қушлар учун хос бўлган *Raillietina*, *Ascaridia*, *Heterakis* авлодларига кирадиган гельминт турлари характерлидир. Бу гельминт турлари паррандачилик хўжаликларда райетениоз, аскаридоз, гетеракидоз касалликларини тарқатишда ва зарарланишида бевосита иштирок этади.

Тадқиқотлар натижасида шу нарса кузатилдики, синантроп қушлардан майна (*Acridothtrix tristis*) 4 тур, уй паррандалари ва ёввойи товуқсимонларда учрайдиган гельминтларнинг асосий хўжайини ҳисобланади. Чуғурчуқ 2 та, қарға 3 та, ёввойи ўрдак 7 та, ғуррак ва мусича 2 та гельминтларнинг тарқалишида иштирок этди.

Хонаки ва ёввойи қушлар умумий гельминтларининг алмашиниш қонуниятлари, паразитофаунанинг шаклланиш йўллари турли хил биоценозда аниқланди, паразитларнинг табиатда табиий манбаларини бошқариш имкониятини беради. Юқорида келтирилган маълумотларга асосланиб, паразит чувалчангларнинг 8 та юқиш йўли циркуляциясини изохлаб берамиз:

Қуш (қирғовулар) → куруқлик қушлари. Ушбу йўл билан гельминтларнинг қуйидаги оилалари *Ascarididae* (*Ascaridia galli*) ва *Heterakidae* (*Heterakis gallinaium*) турлари ривожланиш цикли кузатилди.

Қуш (ўрдаклар) → сув муҳити → қуш. Бу йўл билан гельминтларнинг қуйидаги оилалари: *Echinostomatidae* (*Echinostoma revolutum*), *Anisakidae* (*Gangulaterakis*) ривожланиш цикли кузатилди.

Қуш (чуғурчуқлар, тўқимачилар, қарғасимонлар) → куруқлик муҳити → оралиқ хўжайин (ёмғир чувалчанги, хашаротлар, кемирувчилар) → қуш. Бу йўл билан гельминтларнинг *Davainedae* (*Raillietina echinobotrida*, *Skrjabinia cesticillus*), *Dilepididae* (*Choanotaenia infundibulum*) ва *Hymenolepididae* (*Echinolepis cariosa*) оилалари ривожланиши қайд этилди.

Қуш (ўрдаклар, қоравойлар оиласи) → сув муҳити → оралиқ хўжайин (сув қисқичбақасимонлари) → қуш. Бу йўл билан гельминтларнинг *Ascarididae*

(*Dispharynx nasuta*) ва *Tetrameridae* (*Tetrameres fissispina*) оилалари ривожланади.

Куш (товуқсимонлар) куруклик муҳити → резервуар хўжайин (ёмғир чувалчанги) → куш. Ушбу ривожланиш цикли орқали *Capillariidae* (*Eucoleus annulatus*) гельминт оиласи ривожланади.

Куш (товуқлар, қирғовуллар, чуғурчуқлар) → куруклик → муҳити биринчи оралик хўжайин (захкаш) → куш → иккинчи оралик хўжайин (хашаротлар) → куш. Ушбу ривожланиш цикли орқали *Prostogonimidae* (*Prostogonimus ovatus*) оиласига мансуб гельминтлар ривожланади.

Куш (ўрдақлар, чайкалар, чил) → сув муҳити → оралик хўжайин (моллюска) → қўшимча хўжайин → куш. Бу ривожланиш цикли орқали гельминтларнинг *Echinostomatidae* (*Echinostoma revolutum*, *Ech. phasianina*, *Ech. robustum*) оилалари ривожланади.

Куш (ўрдақлар оиласи) → сув муҳити → оралик хўжайин (қисқичбақалар) → резервуар хўжайин (балиқлар) → куш. Ушбу ривожланиш цикли орқали *Tetrameriidae* (*Tetrameres fissispina*) оиласи гельминтлари ривожланади.

Товуқсимон кушлар асосан донхўр кушлар ҳисобланиб, уя қуриш, бола очиш ва полопонларини озиклантириш вақтида турли хашаротлар ва уларнинг личинкалари билан озикланиши уларнинг зарарланиш даражасини оширади. Товуқсимонларнинг ҳазм каналида паразитлик қиладиган гельминтларнинг сон ва сифат жиҳатидан миқдорига озика таркиби муҳим роль ўйнайди. Гельминтологик текширилган ёввойи товуқсимон кушлар (каклик, бедана, қирғовул) нинг гельминтофаунаси таркиби био ва геогельминтлар бўлиб, паразит чувалчангларнинг 3 синфига таалуқлидир. Уларнинг циркуляцияси биоценотик алоқаларнинг амалга ошиши билан изоҳланади.

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ВЛИЯНИЕ РЕЛЬЕФА ХЛОПКОВЫХ ПОЛЕЙ НА РАБОТУ НАВЕСНОГО ПЛУГА

Аннотация: в статье приведены результаты изучения влияния рельефа хлопкового поля на равномерность хода навесного плуга. Установлено, что навесные плуги, применяемые в зоне хлопководства, не полностью отвечают агротехническим требованиям, в первую очередь, из-за непригодности их к явно выраженному микрорельефу хлопкового поля. Корпуса плуга целесообразно выполнить с шириной захвата, равной половине ширине междурядий, число корпусов должно быть четным.

Ключевые слова: почва, рельеф, ширина междурядья, корпуса плуга, хлопчатник, качество обработки, ширина захвата.

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INFLUENCE OF COTTON FIELDS RELIEF ON MOUNTED PLOUGH PERFORMANCE

***Abstract:** the article presents the results of studying the influence of cotton field relief on the uniformity of the mounted plough. It has been established that mounted ploughs used in the cotton-growing zone do not fully meet the agrotechnical requirements, primarily due to their unsuitability for the clearly expressed microrelief of the cotton field. It is advisable to make the plough bodies with a capture width equal to half the row spacing, the number of bodies should be even.*

***Keywords:** soil, relief, row spacing, plough bodies, cotton, quality of processing, capture width.*

При вспашке хлопковых полей работа пахотного агрегата происходит в условиях явно выраженного неровного рельефа поля, на поверхности которого имеются искусственно созданные поливные борозды и рядки с определенной шириной междурядий. В практике хлопководства в целях обеспечения поливного уклона полей пахотные агрегаты движутся вдоль поливных борозд. Однако при таком движении опорные колеса плуга занимают различные положения относительно поверхности гребня рядков [1, 2, 3, 4].

Для установления влияния рельефа хлопкового поля на работу плугов сделаем следующие допущения:

1. Почва под воздействием опорных колес не деформируется.
2. Неровности поперечного профиля между междурядьями одинаковые на всем поле.
3. Неровности хлопкового поля в координатной плоскости описываются синусоидой в виде [5, 6]

$$z = \frac{h}{2} \sin A (x + e), \quad (1)$$

где h – высота неровностей хлопкового поля, см; A – коэффициент, определяющий период синусоиды; e – смещение фаз синусоиды, см. Период синусоиды зависит от ширины междурядья, т.е. $A = 2\pi/B_m$.

При вспашке плуг на заданную глубину пахоты устанавливают с учетом неровности рельефа поля.

Между заданной глубиной обработки a_3 и неровностью хлопкового поля существует следующая зависимость

$$a_3 = a_1 + \frac{h}{2} a_n + a_{3в},$$

где a – расстояние от дна поливной борозды до дна борозды пахотного слоя; $a_{3в}$ и a_n – заданные глубины обработки верхним и нижним корпусами.

Из рис. 1, $a, б$ имеем $a_{фв} = a_n + a_{фв}$

Фактическая глубина обработки верхним корпусом

$$a_{фв} = a_3 \pm z_{ок} \quad (2)$$

где $z_{ок}$ – высота расположения точки касания с почвой опорного колеса относительно абсциссы OX .

Тогда
$$a_{ф} = a_n + a_3 \pm z_{ок} \quad (3)$$

Для установления закономерности изменения $z_{ок}$ от указанных параметров, навесной плуг располагают в междурядье так, чтобы конец лемеха последнего корпуса и середина откоса гребня лежали в одной вертикальной плоскости. При этом за начало координатных осей выберем точку O середины откоса (рис. 2).

Из рис. 2 определим координаты точки k опорного колеса для первого прохода плуга

$$X_{ок} = nB_k + m = B_{пл} + m,$$

где m – расстояние между колесом и полевым образом последнего корпуса.

Для последующих проходов плуга имеем

$$X_{ki} = \kappa_i nB_k + m = \kappa_i B_{пл} + m,$$

$$z_{ki} = \frac{h}{2} \sin \left[\frac{2\pi}{B_m} (\kappa_i nB_k + m) + \pi \right],$$

где κ_i – число проходов плуга.

Подставив z_{ki} в (3), имеем

$$a_{\phi} = a_n + a_{ze} + \frac{h}{2} \sin \left[\frac{2\pi}{B_M} (\kappa_i h B_k + m) + \pi \right]. \quad (4)$$

Известно, что качество двухъярусной вспашки в основном зависит от соотношения глубины обработки нижнего и верхнего ярусов, т.е. $i = a_n / a_{\phi}$.

При обработке полей с неровным рельефом $i = a_n / a_{\phi}$.

Результаты расчетов на ЭВМ для 10-ти проходов плуга показывают, что при обработке полей из-под хлопчатника с неровным рельефом глубина обработки изменяется в больших пределах, а дно борозды получается ступенчатым. При этом неравномерность глубины обработки значительно превышает допустимую величину. На полях с междурядьем $B_M = 90$ см при $h = 18$ см неравномерность глубины обработки составляет $\pm 8,8$ см, а на полях $B_M = 60$ см при $h = 12$ см - $\pm 5,35$ см.

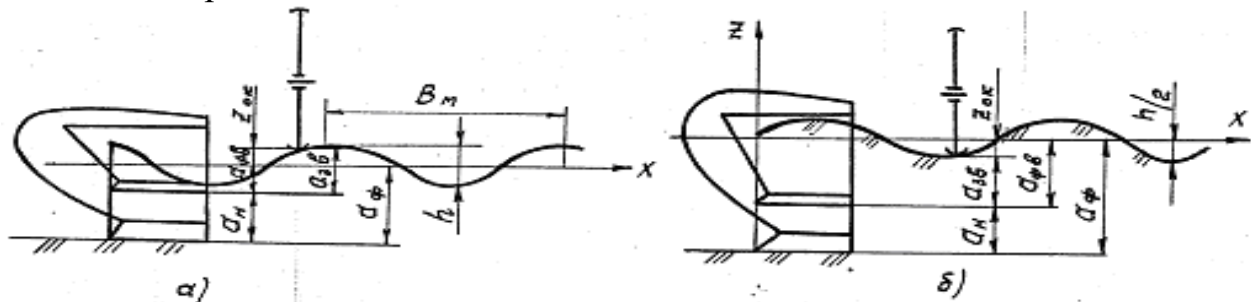


Рис.1. Влияние места расположения опорного колеса в междурядье на глубину обработки почвы плугом.

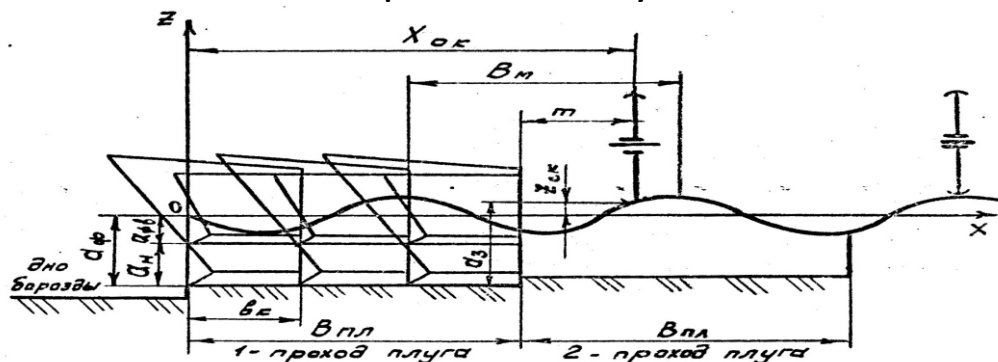


Рис. 2. Схема к определению фактической глубины пахоты двухъярусным плугом.

Наилучшей схемой расстановки верхних и нижних корпусов двухъярусных плугов по глубине вспашки являются: 20 : 10 ($i = 2$) и 15 : 15 ($i = 1$) при вспашке на глубину $a = 30$ см и 20 : 20 ($i = 1$) при $a = 40$ см.

Анализ полученных данных показывает, что при несоответствии ширины захвата корпусов и ширины захвата плуга ширине междурядья резко ухудшается равномерность глубины пахоты. При этом глубина пахоты изменяется на каждом проходе плуга. Соответственно дно борозды получается ступенчатым. Неравномерность глубины пахоты приводит к нарушению технологии двухъярусной вспашки. Отношение глубины обработки нижним корпусом и глубины обработки верхним корпусом варьирует в больших пределах. Площадь поперечного сечения пласта,

приходящаяся на верхние и нижние корпуса, также переменна. Таким образом, двухъярусные плуги, применяемые в зоне хлопководства, не полностью отвечают агротехническим требованиям, в первую очередь, из-за неприспособленности их к явно выраженному микрорельефу хлопкового поля. С агротехнической и энергетической точек зрения корпуса двухъярусного плуга целесообразно выполнить с шириной захвата, равной половине ширине междурядий, число корпусов должно быть четным. Это позволит за каждый проход агрегата обрабатывать определенное число междурядий, обеспечит постоянство места размещения опорного колеса в междурядье, значительно выравнивает загрузженность отдельных корпусов плуга.

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О НЕКОТОРЫХ СВОЙСТВАХ ПОЧВЫ ХЛОПКОВЫХ ПОЛЕЙ ПЕРЕД ВСПАШКОЙ

Аннотация: в статье приведены результаты изучения физико – механических свойств почвы гребня, откоса и середины междурядья хлопчатника. Сделано вывод, что изучение и применение полученных результатов физико – механических свойств почвы из-под хлопчатника при разработке рациональной технологии и технических средств для обработки таких почв имеет большое значение.

Ключевые слова: почва, гребня, середина междурядья, исследования, хлопчатник, качество обработки, плотность, влажность, структура, твердость.

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ABOUT SOME PROPERTIES OF SOIL COTTON FIELDS BEFORE PLOWING

Abstract: the article presents the results of studying the physical and mechanical properties of the soil of the ridge, slope and middle of the row spacing of cotton. It is concluded that the study and application of the obtained results of the physical and mechanical properties of the soil from under the cotton plant in the development of rational technology and technical means for processing such soils is of great importance.

Keywords: soil, ridge, middle of the row spacing, research, cotton plant, quality of processing, density, humidity, structure, hardness.

Разработка новых технологий и технических средств в зоне хлопководства, обеспечивающих высокое качество обработки почвы с минимальными энергозатратами, невозможно без определения закономерностей изменения физико – механических свойств почвы в пахотном и подпахотном слое, сложившейся при возделывании и уборке сельскохозяйственной культуры [1, 2, 3].

Нами изучены физико – механические свойства почвы: плотность, влажность, структура, твердость и сопротивление разрыву, сдвигу, кручению. Для выяснения физико – механических свойств почвы пахотного слоя перед основной обработкой были взяты пробы на полях хлопчатника,

возделываемого на такырных почвах с междурядьем 90 см и на светло – сероземных почвах с междурядьем 60 см [4].

При выборе места взятия проб учитывали то обстоятельство, что в период вегетации хлопчатника некоторые участки поля подвергаются многократным воздействиям ходовых аппаратов тракторов, а некоторые не подвергаются. Поэтому физико – механические свойства почвы в междурядьях шириной 90 см измеряли в точке *A* (рис. 1) на гребне (в зоне размещения корней хлопчатника), в точке *B* середине откоса и в точке *C* середине междурядья (по дну поливной борозды), а в междурядьях шириной 60 см, измеряли в гребне и в середине междурядья. За точку отсчёта глубины горизонта приняли точку *A*. При этом глубина расположения h_0 поверхности откоса в точке *B* равнялась 15 см, а высота гребней в междурядьях шириной 90 и 60 см соответственно составляла 20 и 10 см.

Плотность почвы в междурядьях 60 см измеряли в гребне и в середине междурядья [5].

Исследованиями установлено (рис. 2), что плотность почвы гребня, откоса и середины междурядья значительно различается. В верхнем горизонте гребня (0...10 см) почва рыхлая, ее плотность составляет 1,18 г/см³. Верхний горизонт почвы откоса и дна борозды при междурядных обработках постоянно рыхлится. Кроме того, после последнего полива в этом горизонте образуются трещины. Все это приводит к снижению плотности почвы этого горизонта. Максимальная плотность в гребне такырной почвы достигает 1,44 г/см³ в горизонте 10...20 см. Этот слой в течение всего вегетационного периода хлопчатника не подвергается воздействию рыхлящих рабочих органов, как и защитная зона. Почва этого горизонта уплотняется за счет бокового распространения деформации почвы под воздействием колес трактора из-за вогнутой формы рельефа междурядий. В горизонтах 20...30, 30...40 и 40...50 см плотность почвы снижается. Минимальное значение составляет 1,35 г/см³, в горизонте 30...40 см. В нижележащих горизонтах почвы происходит увеличение плотности почвы, в горизонте 60...70 см достигающее 1,44 г/см³.

Полученные данные показывают, что светло – сероземная почва в середине междурядий по следу колеса сильно уплотнена. Плотность почвы по следу колеса в горизонте 20...30 см (от поверхности почвы 10...20 см) составляет 1,78 г/см³, что соответственно больше на 0,24 и 0,19 г/см³, плотности почвы гребня и борозды, не подверженной воздействию колеса.

Плотность почвы на гребне и в середине борозды, не подверженной воздействию колес, почти одинакова.

Установлено, что твердость гребня, откоса и середины междурядья такырных почв значительно различается. В середине борозды в слое 0...30 см твердость почвы в среднем в 1,69 раза больше, чем в гребне междурядья. Максимальная твердость в слое 0...30 см гребня приходится на глубину 20 см. В середине междурядья наибольшее увеличение твердости почвы наблюдается в слое 15...25 см. На глубине 20 см твердость почвы в середине

междурядья в 1,22 раза больше, чем почвы этого же горизонта в гребне. В заметной степени твердость почвы увеличивается в бороздах по следу колеса. Так, в непроезжаемом междурядье в слое 0...30 см она колеблется от 1,98 до 3,38 МПа, что меньше твердости почвы по следу колеса на 0,58...0,95 МПа.

Анализ результатов измерений показывает, что твердость пахотного и подпахотного горизонтов середины междурядья и такырных почв и светлых – сероземов больше, чем твердости почвы гребня и междурядья без следа колес.

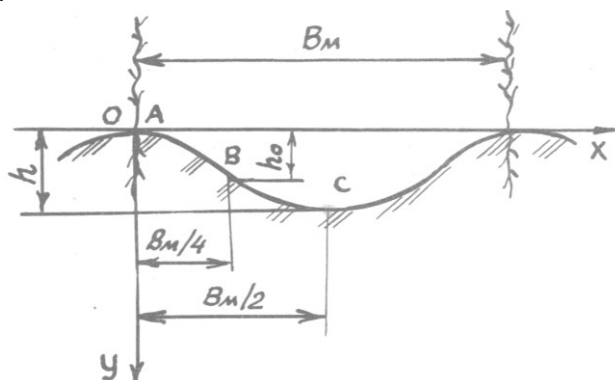


Рис. 1. К определению плотности и влажности почвы

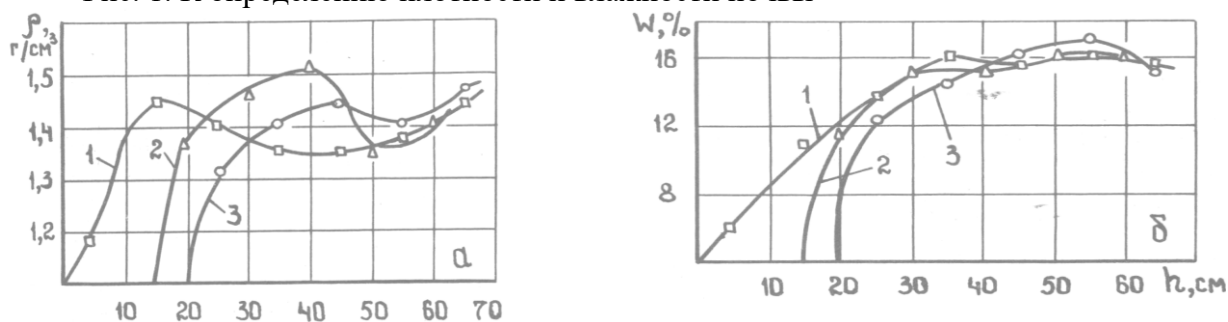


Рис. 2. Зависимости плотности ρ (а) и влажности W (б) такырной почвы от глубины почвы от глубины горизонтов h : 1 – на гребне; 2 – на откосе; 3 – в борозде

Сопротивляемость почвы к различным деформациям определяли с помощью нами реконструированного прибора.

Анализ экспериментальных данных показывает, что в слое 0...3 см такырных почв при деформации сдвигом требуется усилие больше, чем при деформации разрывом и кручением, соответственно в среднем в 1,4 и 1,2 раза. Например, в слое 0...10 см середины междурядья при сдвиге требуется 61,51 кПа, а при разрыве и кручении соответственно 47,17 и 49,46 кПа. Для почвы гребня в этом же слое при деформации сдвигом требуется 7,56 кПа, а при разрыве и кручении соответственно 5,56 и 7,11 кПа.

Сопротивляемость почвы середины борозды по следу колес на сдвиг, кручение и разрыв соответственно в 1,63, 1,54 и 1,54 раза больше, чем при деформации почвы на гребне. В слое 15...25 см сопротивляемость почвы различным деформациям имеет максимальное значение. Например, в слое 15...20 см борозды усилия деформации почвы сдвигу в 1,33 раза больше, чем в слое 0...5 см.

В слое 0...30 см светлых-сероземов при деформации сдвигом требуется усилие больше, чем при деформации разрывом и кручением

соответственно в среднем в 1,33...1,40 и 1,15...1,21 раза. Сопротивляемость почвы середины борозды по следу колес на сдвиг, кручение и разрыв соответственно в 1,39, 1,32 и 1,38 раза больше, чем середины борозды без следа колес. Почвы гребня оказывают сопротивление на сдвиг, кручение и разрыв соответственно в 1,77, 1,71 и 1,69 раза меньше, чем почвы середины междурядья по следу колес. Сопротивляемость почвы различным деформациям имеет максимальное значение в слое 15...20 см борозды и в слое 25...30 см гребня.

Сопротивляемость подпахотных слоев почвы середины борозды по следу колеса на разрыв, кручение и сдвиг больше, чем при деформации почвы на гребне и середине борозды без следа колес. Отсюда делаем вывод, что изучение и применение полученных результатов физико – механических свойств почвы из-под хлопчатника при разработке рациональной технологии и технических средств для обработки таких почв имеет большое значение.

Использованные источники:

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ИНТЕРАКТИВНЫЕ МЕТОДЫ ОБУЧЕНИЯ ИНФОРМАЦИОННЫМ ТЕХНОЛОГИЯМ В МЕДИЦИНСКИХ ВУЗАХ - КЛЮЧ К УСПЕШНОМУ БУДУЩЕМУ

Аннотация

Современная система образования в медицинских вузах требует внедрения новых методов и технологий обучения, которые отвечают актуальным потребностям и вызовам в области медицины и информационных технологий (ИТ). Одним из таких методов являются интерактивные технологии обучения, которые становятся все более востребованными в учебном процессе. В этой статье рассматриваются основные формы интерактивного обучения информационным технологиям в медицинских вузах, их преимущества и недостатки, а также примеры успешного применения.

Ключевые слова

Интерактивные методы обучения, информационные технологии, медицинские вузы, симуляционные тренажеры, ролевые игры, проектная деятельность, онлайн-платформы.

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INTERACTIVE METHODS OF TEACHING INFORMATION TECHNOLOGY IN MEDICAL UNIVERSITIES: THE KEY TO A SUCCESSFUL FUTURE

Annotation

The modern education system in medical universities requires the introduction of new teaching methods and technologies that meet the current needs and challenges in the field of medicine and information technology (IT). One of these methods is interactive learning technologies, which are becoming more and more in demand in the educational process. This article discusses the main forms of interactive information technology education in medical universities, their advantages and disadvantages, as well as examples of successful application.

Keywords

Interactive teaching methods, information technology, medical universities, simulation simulators, role-playing games, project activities, online platforms.

Интерактивное обучение — это процесс обучения, при котором обучающиеся активно взаимодействуют с преподавателем, материалом и друг с другом. В отличие от традиционного лекционного формата, где преподаватель выступает основным источником информации, интерактивные методы ставят в центр учебного процесса студента, побуждая его к активному познанию, анализу и решению практических задач.

К интерактивным методам относятся симуляционные тренажеры которые позволяют студентам отработать навыки работы с медицинским оборудованием, проводить виртуальные операции и принимать решения в сложных клинических ситуациях. А также симуляцию в здравоохранении можно в широком смысле определить как «инструмент, устройство и/или среду, имитирующую аспект клинической помощи». Она имеет долгую историю в образовании в области здравоохранения, ценится за свою способность воспроизводить некоторые условия клинической практики и позволяет учащимся практиковаться в безопасной среде. В последнее время ее стали использовать в качестве метода поддержки улучшения систем и процессов здравоохранения, например, помогая диагностировать проблемы или тестировать новые подходы до их реального применения. Учитывая эту историю, большинство исследований посвящено симуляции (сосредоточившись, например, на ее эффективности в достижении целей обучения или практики).

Тренажеры для работы с электронными медицинскими картами (ЭМК) позволяют студентам и медицинским специалистам осваивать работу с системами ЭМК, которые являются основой для ведения пациентов в современных медицинских учреждениях.

VR в медицине позволяет обучать и нарабатывать навыки без угроз для здоровья пациентов и рисков для оборудования в условиях максимально приближенных к реальным. Помогают проводить аттестацию, квалификацию и контроль знаний. Решения позволяют обучиться работе с новым или трудно доступным оборудованием, оценивать условия и ожидаемую эффективность внедрения для конкретного учреждения.

Дополненную реальность (AR) в медицине используют в учебных заведениях и клиниках, в рамках научных исследований, разработки терапевтических решений, а также в качестве тренажеров и обучающих инструкций.

VR и AR технологии в медицине позволяют практиковать сложные процедуры в реалистичной виртуальной среде, интегрироваться с роботизированными хирургическими системами и контролировать операции, создавать прототипы и испытывать медицинские устройств в виртуальных средах перед их физическим производством, поддерживать программы реабилитации, адаптированные к индивидуальным потребностям, отвлекать пациентов от боли, погружая их в виртуальные миры или сценарии, обучать медсестер, анестезиологов различным процедурам и сценариям неотложной

помощи, информировать пациентов об их состоянии, вариантах лечения и хирургических процедурах.

Ролевые игры моделируют реальные клинические ситуации, позволяя студентам отработать коммуникативные навыки, умение работать в команде и принимать обоснованные решения. Внедрение РИ в учебный процесс способствует развитию практических навыков, улучшению взаимодействия между студентами, а также помогает лучше усваивать теоретические и практические аспекты применения ИТ в медицине.

Ролевые игры активизируют учебный процесс, они позволяют студентам принимать участие в решении реальных или смоделированных ситуаций, что стимулирует активное восприятие материала, повышает мотивацию студентов и вовлекает в процесс, который способствует лучшему пониманию и запоминанию теоретических концепций и технологий, развивает коммуникативных навыков, в процессе игр студенты учатся взаимодействовать с коллегами, пациентами и другими заинтересованными сторонами, что важно для их будущей профессиональной деятельности. Ролевые игры помогают смоделировать ситуации, в которых требуется принятие решений, применение определённых информационных технологий в медицинской практике, например, в работе с электронными медицинскими картами, медицинскими базами данных, телемедициной и др.

Онлайн-платформы предоставляют доступ к разнообразным учебным материалам, интерактивным заданиям и тестам, что позволяет студентам учиться в удобное для них время и темпе. Эти платформы предоставляют возможность изучать теорию, осваивать практические навыки, а также взаимодействовать с различными инструментами и системами, которые используются в медицинской практике. Например, Coursera предлагает широкий спектр курсов по информационным технологиям в медицине, а также специализированные программы, разработанные ведущими университетами и компаниями. Некоторые из курсов такие как, "Health Informatics: The Cutting Edge" от Университета Сан-Диего (University of California San Diego)-курс, который охватывает базовые и передовые концепции медицинских информационных технологий, включая электронные медицинские карты (ЭМК), телемедицину и анализ медицинских данных, "Digital Transformation in Healthcare" от Университета Калифорнии в Сан-Франциско (UCSF)- курс, который фокусируется на том, как цифровизация меняет здравоохранение, включая ИТ-инфраструктуру, безопасность данных и инновации в лечении могут быть полезны для студентов медицинских вузов.

FutureLearn-еще одна популярная платформа для онлайн-курсов, которая сотрудничает с университетами и медицинскими учреждениями по всему миру. Здесь можно найти курсы по медицинским информационным технологиям, включая инновации в телемедицине, обработку больших данных в медицине и другие темы.

Примерами интерактивных заданий является создание базы данных пациентов. Студенты собирают и структурируют информацию о пациентах,

используя специализированное программное обеспечение. Анализ медицинских изображений в котором студенты обучаются работе с программами для анализа медицинских изображений (КТ, МРТ и др.). Проведение виртуальной операции, студенты выполняют виртуальную операцию на симуляторе, оттачивая хирургические навыки.

Интерактивные методы обучения информационным технологиям в медицинских вузах играют ключевую роль в подготовке специалистов, готовых к вызовам современного здравоохранения. Использование симуляций, мобильных технологий, проектной и проблемно-ориентированной деятельности способствует не только улучшению теоретических знаний, но и развитию практических навыков, необходимых для работы с медицинскими информационными системами. Несмотря на ряд вызовов, связанных с внедрением таких методов, перспективы их применения в медицине очевидны, и они открывают новые возможности для повышения качества образования и подготовки медицинских кадров.

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ТЕОРЕТИЧЕСКИЕ ВОПРОСЫ ТРАНСГРАНИЧНОГО ТУРИЗМА

АННОТАЦИЯ: В разделе, посвященном теоретическим вопросам приграничного туризма, подробно рассматриваются аспекты приграничного, трансграничного сотрудничества, приграничного туризма, а также возможная организация приграничного туризма между Узбекистаном и соседними странами на территории объекта Всемирного наследия ЮНЕСКО.

КЛЮЧЕВЫЕ СЛОВА: Индустрия туризма, экономическая и социальная жизнь приграничного региона, международная граница, приграничье, приграничное сотрудничество, приграничный туризм, всемирное наследие ЮНЕСКО, Узбекистан и соседние страны.

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THEORETICAL ISSUES OF CROSS-BORDER TOURISM

ABSTRACT: The section on theoretical issues of cross-border tourism examines in detail the aspects of cross-border, cross-border cooperation, cross-border tourism, and the possible organization of cross-border tourism between Uzbekistan and neighboring countries in the UNESCO World Heritage Site.

KEY WORDS: Tourism industry, economic and social life of the border region, international border, cross-border, cross-border cooperation, cross-border tourism, UNESCO World Heritage, Uzbekistan and neighboring countries.

ОСНОВНАЯ ЧАСТЬ: Ученые анализируют, что индустрия туризма будет испытывать стабильный рост в течение 2024-2025 годов и станет одним из самых быстрорастущих секторов экономики в мире. В 2023 году Соединенные Штаты стали мировым туристическим направлением с наибольшим количеством доходов от международного туризма. Доходы от въездного туризма в США в этом году составили более 189 миллиардов долларов. Хотя эта цифра представляет собой резкий годовой рост, она остается ниже допандемического уровня. При этом следующее место в рейтинге в 2023 году заняла Великобритания с 92 миллиардами и 74 миллиардами долларов США. В целом определено, что 2024 год будет выше.

Туризм и путешествия почти всегда предполагают пересечение региональных или международных политических границ. Взаимодействие между границами и туризмом многогранно и зависит от ряда факторов, поскольку международные границы - это места, где сталкиваются политические игроки, смешиваются культуры и сходятся экономики. Поскольку туризм сегодня является одной из наиболее глобализированных отраслей, на туризм, безусловно, влияют границы. Приграничный регион – это территория, характеризующаяся своей экономической и социальной жизнью, на которую прямо и существенно влияет близость к международной границе. Туристические направления или зоны встречаются на границах. Здесь общение и сотрудничество могут заставить зону работать как единое целое или стать барьером.

Условия в каждом приграничном регионе различаются по всему миру, поскольку международные границы имеют разную степень проницаемости. На проницаемость границы влияет функция границы, а также социокультурное сходство каждой стороны. За последние десятилетия функция границ очень быстро изменилась. Традиционно международные границы заключались в возведении барьеров для потока людей и товаров, экономической торговли, услуг и транспорта. Растущий интерес к границам в исследованиях туризма может быть связан с изменением характера границ в результате глобализации и дезинтеграции стран, создавая новые приграничные регионы. В последние десятилетия в крупнейшем в мире трансграничном туризме, с принятием Шенгенского соглашения, мы стали свидетелями смягчения требований при пересечении границ, включая визы и паспорта. По мере того как роль и функции границ менялись, они становились все более коммуникационными линиями и зонами производства, торговли и туризма. Обе стороны международной границы не могут игнорировать то, что происходит по другую сторону. Сотрудничество и сотрудничество между странами важны для достижения устойчивого развития туризма в мире, где конкуренция возрастает в результате глобализации. На социокультурную идентичность или функцию границы влияют политические и идеологические системы, которые, возможно, делают некоторые приграничные районы более открытыми, чем другие.

Существует четыре основных взаимосвязи между туризмом и границами. Во-первых, границы, которые служат туристическими достопримечательностями. Во-вторых, границы являются естественными барьерами или барьерами для путешествий с такими ограничениями, как визы. В-третьих, границы – это транзитные линии и, в-четвёртых, рост интернационализма. Пересечение международных границ очаровывало людей на протяжении веков и может стать мотивацией для некоторых людей путешествовать. Многие из самых популярных туристических направлений в мире расположены вблизи международных границ или за их пределами. Водопад Виктория, на границе между Замбией и Зимбабве, Индией и Пакистаном: граница Вагах. Привлекательность приграничных

территорий иногда может быть такой же простой, как и сама граница, со знаками демаркации, такими как заборы и стены. Другие факторы могут включать в себя виды деятельности, достопримечательности и особенности сообщества вблизи границы, такие как рестораны, магазины и бары.

Понятие «трансграничный» в науке очень молодо. Эта концепция предназначена для изучения процессов, происходящих внутри смежных структур, стремящихся образовать самостоятельный объект. Термин «трансграничный» состоит из двух слов: «граница» и «транс» (означает пересечение, пересечение, перемещение). Видно, что категория границы является центральным элементом транснационализма.

Понятия «трансграничный», «трансграничный», «приграничное сотрудничество», «граница» широко использовались в отечественной науке в постсоветский период, что было связано с уровнем прозрачности государственной границы. . В настоящее время эти термины широко используются в различных сферах деятельности.

Всемирное наследие ЮНЕСКО — природные или рукотворные объекты, приоритетными задачами, связанными с ними, по мнению ЮНЕСКО, является принятие мер по их сохранению и популяризации, в соответствии с которыми выделяются места, имеющие культурное, историческое или экологическое значение.

По состоянию на 2024 год в Списке всемирного наследия насчитывается 1223 объекта. Из них 952 являются памятниками культуры, 231 – природными и 40 – смешанными объектами. Они расположены в 168 странах, являющихся членами Конвенции ЮНЕСКО об охране всемирного культурного и природного наследия. Каждый объект имеет свой идентификационный номер.

ЗАКЛЮЧЕНИЕ: На территории Узбекистана находится ряд объектов Всемирного наследия ЮНЕСКО, они находятся в горах.

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Развитие трансграничных маршрутов паломничества представителей исламской религии в Узбекистане и соседних странах требует обоснования выгод.

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ОСОБЕННОСТИ ПАРАЗИТОФАУНЫ РЫБ, ОБИТАЮЩИХ В БАССЕЙНАХ АРАЛЬСКОГО МОРЯ

Аннотация

В статье рассматриваются особенности паразитофауны рыб, обитающих в бассейнах Аральского моря, что представляет собой важную научную проблему в условиях изменений экосистем морских водоемов. Исследование направлено на изучение разнообразия паразитов, их распространенности и влияния на популяции рыб в изменяющихся экологических условиях.

Ключевые слова: экосистема, климат, водоем, проблема, паразит.

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FEATURES OF THE PARASITOFUNA OF FISH INHABITING THE ARAL SEA BASINS

Abstract

The article discusses the features of the parasite fauna of fish inhabiting the Aral Sea basins, which is an important scientific problem in the context of changes in the ecosystems of marine reservoirs. The study is aimed at studying the diversity of parasites, their prevalence and impact on fish populations in changing environmental conditions.

Key words: ecosystem, climate, reservoir, problem, parasite.

Аральское море, некогда величественное водное пространство Центральной Азии, обладает уникальной экологической системой, которая значительно изменилась в последние десятилетия. Из-за антропогенных воздействий и глобальных изменений климата, экосистема этого региона

претерпевает серьёзные изменения, что напрямую сказывается на биоразнообразии его обитателей, включая паразитофауну рыб.

В бассейнах Аральского моря обитает множество видов рыб, каждый из которых следует изучать в контексте его взаимодействия с разнообразными паразитами. Паразитофауна рыб Аральского региона значительно варьируется в зависимости от видового состава гидробионтов, уровня загрязнения водоёмов, а также миграционных процессов рыбьих популяций. В последние годы, с изменением гидрологического режима, многие виды паразитов адаптируются к новым условиям, а некоторые паразитарные виды, благодаря устойчивости к неблагоприятным факторам среды, становятся доминирующими.

Исследования показывают, что среди основных паразитарных групп, поражающих рыб бассейнов Аральского моря, можно выделить моногеней, цестод, нематод и акантоцефал. Моногенеи, например, чаще всего поражают кожу и жабры обитателей, провоцируя ухудшение их дыхательной функций и ведущие к снижению биологической продуктивности. В свою очередь, цестоды концентрируются в пищеварительной системе рыб, вызывая истощение организма и ослабление иммунной системы. Актуальной остаётся также проблема гельминтозов, вызываемых нематодами, которые могут атаковать как пищеварительную систему, так и гематологических параметры рыб, существенно влияя на их прирост и репродуктивную способность.

Изменения в экосистеме также повлияли на структуру паразитарных сообществ. Поскольку сокращение объема воды привело к изменению солёности и иным климатическим факторам, наблюдается рекомбинация паразитических комплексив и адаптация отдельных видов к меняющейся среде. Эти процессы обуславливают необходимость дальнейшего регулярного мониторинга и подробного изучения паразитофауны рыб, чтобы своевременно выявлять изменения и разрабатывать меры по снижению негативного воздействия паразитов на рыбье население.

Изменения в экосистеме также повлияли на структуру паразитарных сообществ. В последние десятилетия исследователи заметили значительные сдвиги в динамике взаимодействий между хозяевами и их паразитами, что, в свою очередь, оказало влияние на биологическое разнообразие и устойчивость экосистем.

Одним из ключевых факторов, способствующих изменениям в паразитарной структуре, является глобальное потепление. Повышение температуры воздуха и воды создает благоприятные условия для размножения и выживания многих паразитарных видов, что приводит к усилению их воздействия на экосистемы. В более теплых условиях некоторые паразиты расширяют свой ареал, захватывая новые территории и вытесняя менее приспособленные виды.

Изменение влажности и количества осадков, с которыми связано глобальное изменение климата, также влияет на паразитарные сообщества. Увеличение частоты и интенсивности дождей может ускорить

распространение водных паразитов, тогда как засушливые периоды оказывают давление на наземные системы, изменяя доступность ресурсов и устойчивость хозяев.

Важным аспектом является также человеческая деятельность, включая индустриализацию и урбанизацию, которые приводят к фрагментации и деградации природных местообитаний. Эти изменения зачастую способствуют увеличению взаимодействий между дикими животными и городскими паразитами, приводя к появлению новых патогенов и усложнению эпидемиологической обстановки.

Экосистемные изменения оказывают давление и на эволюционные процессы. Под влиянием изменившихся условий многие виды адаптируются, включая развитие устойчивости к паразитам или, наоборот, эволюцию более агрессивных форм паразитарной атаки. Этот динамический процесс постоянно изменяет баланс сил в экосистемах и может как усиливать, так и ослаблять существующие пищевые цепи.

Таким образом, наблюдаемые перемены в структуре паразитарных сообществ представляют собой серьезный вызов для экосистем. По мере того как планета продолжает изменяться, понимание и предсказание этих изменений становятся крайне важными задачами для биологов и экологов, стремящихся сохранить разнообразие и здоровье природных систем. Сохранение биоразнообразия и изучение механизма взаимодействия паразитов и их хозяев в столь динамичных условиях остаётся актуальной задачей современной паразитологии. Исследования в этом направлении позволят не только углубить понимание экосистемных процессов, но и разработать эффективные методы управления состоянием ихтиофауны в бассейнах Аральского моря.

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РЕГИОНАЛЬНЫЕ ОСОБЕННОСТИ РАЗВИТИЯ ПРЕДПРИНИМАТЕЛЬСТВА

***Аннотация.** В данной научной статье анализируются региональные особенности, значение и создаваемые возможности стимулирования предпринимательства в нашей стране. Сравнивались данные о точках роста предпринимательской активности и доле малого бизнеса в основных отраслях экономики Кашкадарьинской области и районов. Также была показана важность принятия законодательства о социальном предпринимательстве, благоприятной бизнес-среды в нашей стране, созданных привилегий и возможностей для иностранных инвесторов, которые служат реализации новых проектов.*

***Ключевые слова:** предпринимательство, малый бизнес, производство, оказание услуг, увеличение объемов продукции, экспорт, обеспечение занятости, развитие социально-экономических возможностей, стимулирование роста, финансовое сотрудничество, транспортно-коммуникационная система, создание инновационной продукции, государственные закупки, торговля, конкуренция*

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REGIONAL FEATURES OF ENTREPRENEURSHIP DEVELOPMENT

***Annotation.** This scientific article analyzes regional features, significance and created opportunities for stimulating entrepreneurship in our country. Data on growth points of entrepreneurial activity and the share of small businesses in the main sectors of the economy of the Kashkadarya region and districts were compared. The importance of adopting legislation on social entrepreneurship, a favorable business environment in our country, created privileges and opportunities for foreign investors, which serve the implementation of new projects, was also shown.*

***Key words:** entrepreneurship, small business, production, provision of services, increasing production volumes, exports, providing employment, developing socio-economic opportunities, stimulating growth, financial cooperation, transport and communication system, creating innovative products, government procurement, trade, competition.*

Введение. Развитие мировой экономики, основанное на опыте развитых стран, требует использования опыта, полученного в процессах развития предпринимательской деятельности, связанного с многолетней историей, и внимания к применению современных технологий.

Для обеспечения безопасности предпринимательской деятельности в условиях глобализации самым важным является то, чтобы каждый предприниматель принимал оптимальные решения в своей деятельности и осуществлял действия в соответствии с рыночной ситуацией. В системе рыночных отношений риск в предпринимательской деятельности является объективно существующим фактом. Одним из основных рисков для предпринимателя является предпринимательский риск, возникающий в процессе максимизации прибыли.

В Узбекистане реализуется система государственной поддержки бизнеса и предпринимательства в целях повышения благосостояния населения и укрепления экономики страны. Также важное значение имеет принятие нормативно-правовых документов по социальному предпринимательству. Благоприятная бизнес-среда в нашей стране, льготы и возможности, созданные для иностранных инвесторов, служат реализации новых проектов. Это играет важную роль в устранении существующих препятствий и подводных камней, стоящих перед ними в результате реформ по развитию отраслевой деятельности, проводимых нашим государством, а также в обеспечении стабильности и дальнейшего развития деятельности предприятий.

О путях развития предпринимательства и повышения его эффективности через механизмы государственного стимулирования предпринимательства от зарубежных и европейских экономистов К. Макконнелла, С. Брю, А. Маршалла, Ю. Шумпетера «Основы предпринимательства» [4], Дж.Б. Сей, А. Смит, Д. Рикардо, Дж.С. В ряде работ Майлза, В.М. Яковлева «Конструктивное предпринимательство» [5], Ю.И. Иванов, Ф.М. Русинов, М. Вебер, В. Зомбарт, П. Друкер, В. Шепелев, Д.В. Бусигин, В.Д. Камаев, И.Н. Герчикова, Ф. Найт, И.Х. Тюнен, Р. Кантильон, К. Бодо, И.Х. Тюнен, Найтир, Д. Гэлбрейт, Е.В. Глущенко, Е.В. Михайлова, Клас Эклунд, А.И. Капсов, Ю.В. Это нашло отражение в трудах Тихонравовых и других экономистов. Свой значительный вклад внесли те, кто изучал отдельные аспекты развития предпринимательской деятельности, ее виды и формы.

Среди ведущих ученых нашей республики - «Предпринимательство и малый бизнес» С.С. Гуломова, А. Вахобова, А. Абдукаримова, Х. Абулкасимова «Экономические проблемы развития частного малого предпринимательства» [6], Х.О. Рахмонова «Социально-экономическое развитие малого предпринимательства». бизнеса и частного предпринимательства в условиях либерализации экономики «Эконометрическое моделирование развития» [7], Ю. Абдуллаева, Ф. Каримова «Малый бизнес и принципы предпринимательства», труды А.Б. Гурбанова, И.Э. Турсунова под названием «Тенденции развития малого бизнеса и предпринимательства» [8] и другие

научные работы в определенной степени изучили конкретные аспекты механизмов развития и стимулирования предпринимательства. Узбекский учёный С.С.Гуломов говорил: «Малый бизнес и частное предпринимательство считаются признаком культуры (цивилизации) и обеспечивают стабильную гарантию жизнедеятельности и жизнедеятельности людей. Описана организация человеческих отношений, необходимая для

Также в нашей стране создаются механизмы поощрения предпринимательства и возможности государственной поддержки и развития.

В соответствии с постановлением Президента Республики Узбекистан №ПФ-29 от 3 декабря 2021 года «О приоритетных направлениях государственной политики по развитию предпринимательства в микрорайоне, обеспечению занятости населения и сокращению бедности», как а также проведена эффективная организация деятельности помощников районных (городских) хокимов по вопросам развития предпринимательства в микрорайоне, обеспечения занятости населения и сокращения бедности.

Как отметил Президент нашей страны: «Назначая новый год, мы изучали мнение широкой общественности. На основании этих предложений предлагаю объявить Новый – 2022 год «Годом почитания человеческих ценностей и активного соседства» в нашей стране. Уважение человеческого достоинства означает обеспечение прав и свобод и законных интересов каждого человека, живущего в нашей стране. В этом плане решающую роль играет соседство, которое является основой нашего общества» [3]. Президент подчеркнул, что отныне главным критерием деятельности станет эффективная работа в каждом микрорайоне.

Социальное предпринимательство – это деятельность юридических лиц или индивидуальных предпринимателей, направленная на решение определенных социальных и экологических проблем или смягчение их последствий. Социальным предприятием является субъект хозяйствования, целью которого является обеспечение рабочими местами социально нуждающихся категорий населения, производство социальных товаров и оказание социальных услуг или иных социальных целей и включенный в реестр социальных предприятий в порядке, установленном настоящим Законом.

Определяя основные направления поощрения предпринимательства, главное управление экономического развития и сокращения бедности Кашкадарьинской области уделяет внимание вопросам всестороннего развития предпринимательства и создания возможностей, что указывает на актуальность темы данной монографии.

Большие возможности создаются для развития субъектов предпринимательства в нашей стране. Что касается основного вопроса, то задачи, связанные с кредитованием, гарантируются нормативными актами. Исходя из задач, определенных в Постановлении Президента Республики Узбекистан от 4 мая 2018 года № PQ-3694, основной целью банка на

финансово-кредитном рынке является оказание розничных банковских услуг населению, малым предприятиям. расширение их размеров предприятий, семейного бизнеса, предметов народного промысла и прикладного искусства, содействие внедрению эффективного использования сельскохозяйственных земель, особенно в сельской местности, повышение финансовой устойчивости и привлекательности предоставляемых услуг, внедрение современных инновационных видов банковских услуг. , особенно кредитование. Принят Закон Республики Узбекистан PQ-328 от 2 мая 2012 года «О гарантиях свободы предпринимательства». Основными задачами настоящего Закона являются создание гарантий и условий для свободного участия и заинтересованности граждан в предпринимательской деятельности, повышение их предпринимательской активности, а также защита прав и законных интересов субъектов предпринимательства.

Принятие постановления Президента Республики Узбекистан от 5 марта 2021 года № PQ-5020 «О мерах по дальнейшему совершенствованию системы поддержки женщин и девушек, обеспечению их активного участия в жизни общества» считается правовой основа поддержки.

В этом решении «повышение активности женщин во всех сферах экономической, политической и социальной жизни страны, всестороннее содействие в обеспечении их образования и профессиональных навыков и трудоустройства, дальнейшая поддержка предпринимательской инициативы, на местах «в целях создания» Женская тетрадь» и вывести на качественно новый уровень работу по систематическому изучению, анализу и решению включенных в нее проблем, потребностей и интересов женщин[1], а также «Новый Указ Президента Республики Узбекистан Шавката Мирзиёева № ПФ-60 «О стратегии развития Узбекистана на 2022-2026 годы» предполагается реализовать в соответствии с государственной программой «Восславление человеческого достоинства и реализация в год активного соседства».

будет пойман» [2].

Предпринимательство и предпринимательство всегда играли важную роль в жизни нашего народа, сохранялись его уникальные традиции, ценились люди, обладающие такими достоинствами.

Это подтверждается и мнением великого Амира Темура о том, что **«Один решительный, предприимчивый, бдительный, смелый и амбициозный человек лучше тысячи бездеятельных и равнодушных людей»** [10]. Потому что уже в то время мы видим, что предприниматель и деловой человек выделялся среди всех с определенной степенью превосходства.

В 2019-2021 годах субъекты естественных монополий злоупотребили своим положением в Кашкадарьинской области и допустили ограничение интересов 669 предпринимателей на сумму 90,2 млрд сумов. 16 сентября 2021 года на заседании комитета Сената по бюджету и экономическим реформам Олий Мажлиса председатель антимонопольного комитета по разработке программы повышения конкурентной среды и развития предпринимательства

в Кашкадарьинской области, как а также варианты для потребителей по результатам исследования количество субъектов хозяйствования в регионе по состоянию на 1 января 2021 года составляет 54,8 тыс., а их количество за год выросло на 17%. [12]

Есть резервы для развития предпринимательства в таких сферах, как строительные материалы, туризм, сельское хозяйство, местная промышленность. В частности, большие возможности для промышленного развития имеются в сфере выращивания и переработки хлопка-текстиля, фруктов и овощей, производства строительных материалов. Как сообщили в антимонопольном комитете, было отмечено, что среди проводимых в регионе работ есть проблемы и недостатки.

В частности:

в регионе с большим промышленным потенциалом доля импортных товаров сохраняется на высоком уровне;

неизученность потребности внутреннего рынка в местной продукции;

недостаточное эффективное использование возможностей предприятий по производству готовой одежды и кожи.

Сегодня внутренний рынок региона слабо обеспечен местной продукцией, пользующейся повышенным спросом. Нет предприятий по производству гипсокартона, различного гофрокартона, одноразовой тары, бумажных пакетов, комплектующих для строительной и сельскохозяйственной техники, зубной пасты и шампуня, товаров для ногтей.

Хотя существует большой потенциал для развития животноводства, основная часть молока и молочных продуктов импортируется из других регионов. Из-за отсутствия инфраструктуры в 11 малых промышленных зонах региона, неплановой газоснабжения в Камашинском, Миришкорском, Яккабогском и Китабском районах, а также в городе Шахрисабз возникают трудности в организации работы субъектов хозяйствования.

В сфере обслуживания 758 ремонтов, 1078 ветеринарных служб и мясных цехов, 1214 санузлов и ремонт обуви (ремонт), 1319 химчисток (химчисток) и ремонта бытовой техники, Несмотря на потребность населения в услугах 938 парикмахерских и салонов красоты. салонов, то, что на поля не привлекаются субъекты предпринимательства, также является проблемой социальной сферы региона. указывает на необходимость развития и поощрения предпринимательства.

Факторы, ограничивающие конкуренцию в сфере государственных закупок, сохраняются. За истекший период текущего года требования законов “О конкуренции” и “О государственных закупках” были нарушены в 486 случаях. В 2019-2021 годах субъекты естественных монополий злоупотребили своим положением и допустили ограничение интересов 669 предпринимателей на сумму 90,2 млрд сумов. Кроме того, за последние два года местными органами власти были приняты и приняты меры 164 антиконкурентных правовых документов. Кроме того, случаи непропорционального установления банковских тарифов приводят к

ограничению интересов потребителей. Производственная часть банковских кредитов, выделяемых на предпринимательство, также составляет небольшой объем.

Кашкадарьинский оазис занимает свое место в нашей стране своей славной историей, несравненным антиквариатом и объектами культурного наследия. В то же время красивая и уникальная природа нашей любимой страны, благоприятный климат, богатые фрукты, богатые природные ресурсы и плодородная земля позволяют нам вести обширную и эффективную предпринимательскую деятельность по всем направлениям. Сегодня в нашем регионе действуют более 58,3 тысяч субъектов предпринимательства. Их доля в валовом региональном продукте за последующие 3 года увеличилась с 51,1% до 61,4%.

Усилиями и личными инициативами нашего Президента Ш.Мирзиёева укрепилась правовая основа предпринимательства в нашей стране. Путем изучения опыта развитых стран, таких как Китай, Германия и Россия, привлечения международных консультантов и экспертов сформировалась благоприятная среда для развития отрасли.

Например: Значительно сократились бюрократические и бюрократические процессы при лицензировании и регистрации предпринимательской деятельности.

Был объявлен двухлетний мораторий на непроверку субъектов предпринимательства, строго прекращены проверки органов государственного управления, правоохранительных и контрольных органов всех уровней.

В отношениях с коммерческими банками был введен принцип приоритета прав и интересов предпринимателей, несколько упрощены процессы, связанные с оформлением кредитов.

На основе более 50 указов и решений, принятых в нашей стране в ближайшие три года, развитие предпринимательства и малого бизнеса поднялось сегодня на уровень государственной политики. В головы органов исполнительной власти внедряется животворящая идея, выдвинутая главой нашего государства: «Только путем активного предпринимательства, неустанного труда и стремления мы можем добиться развития и благополучной жизни». В нашей стране проводится юридически позитивная работа по поощрению предпринимательства и стимулированию его деятельности. В рамках требований решения Президента Республики Узбекистан от 27 марта 2021 года «О дополнительных мерах, подлежащих реализации в рамках программ развития семейного предпринимательства» PQ-5041 для поддержки – эквивалент 50 миллионов долларов США;

на улучшение системы теплоснабжения, сетей питьевого водоснабжения и канализации, строительство и ремонт автомобильных дорог, а также на

укрепление материально-технической базы районных (городских) отделов благоустройства Ташкентской области - эквивалент 50 миллионов долларов США. В этом:

на восстановление и развитие системы теплоснабжения - эквивалент 19 миллионов долларов США;

на улучшение сетей питьевого водоснабжения и канализации – эквивалент 17 миллионов долларов США;

На строительство и ремонт автодорог будет выделено эквивалент 10 миллионов долларов США.

Средства, выделенные на программу “Каждая семья – предприниматель”, будут выделены уполномоченным коммерческим банкам сроком на 7 лет, равными долями с 3-летним льготным периодом, по ставке на 4 процента ниже основной ставки ЦБ. Банк»[11]

В целях развития предпринимательства в регионах и обеспечения занятости населения в таможенной сфере создается ряд льгот и льгот. Если ориентироваться на существующие таможенные льготы в сфере развития предпринимательства, то в 2020 году всего субъектам предпринимательства будет предоставлено 36,8 трлн сумов, а за 7 месяцев 2021 года - 15,7 трлн сумов.

Таблица 1

Точки роста («драйверные» территории) районов и городов Кашкадарьинской области[12]

№	Название района и города	Точки роста O'sish nuqtalari
1.	Гузорский район	Нефтегазовая и химическая промышленность, выращивание сои, пищевая промышленность
2.	Дехканабадский район	Промышленность строительных материалов, животноводство, садоводство (в предгорьях)
3.	Касбийский район	Животноводство, текстиль
4.	Китабский район	Рыболовство (форель), садоводство, виноградарство, туризм, промышленность строительных материалов.
5.	Косонский район	Животноводство, пищевая промышленность, здравоохранение
6.	Камашинский район	Садоводство, виноградарство, промышленность строительных материалов, пищевая промышленность, тепличное хозяйство.
7.	Каршинский район	Тепличное хозяйство, овощеводство, текстильная промышленность
8.	Миришкорский район	Животноводство, хлопководство, рыболовство, текстильная промышленность.
9.	Мубаракский район	Химическая промышленность, теплицы, медицинский туризм, животноводство
10.	Нишанский район	Животноводство, текстиль, рыбалка

11.	Чиракчинский район	Садоводство, виноградарство, промышленность строительных материалов
12.	Шахрисабзский район	Садоводство, виноградарство, туризм, текстиль, пчеловодство, рыбалка (форель)
13.	Яккабогский район	Садоводство, виноградарство, текстильная, пищевая промышленность
14.	город Шахрисабз	Туризм, ремесла, текстиль
15.	город Карши	Кожаная обувь, сервис, туризм

В целях развития малого бизнеса и частного предпринимательства осуществляется обмен информацией между бизнесменами Узбекистана и Китая. В целях дальнейшего укрепления связей сотрудничества и повышения эффективности региональное управление Торгово-промышленной палаты Узбекистана, особенно Наманганской области, использует оборудование китайского производства, современные мини-технологии, высокопроизводительные производства в сфере малого бизнеса, в частности, в промышленном производстве линии становятся все более популярными. Такая деятельность служит эффективным инструментом привлечения их к субъектам предпринимательства региона, заключения контрактов и помощи в привнесении технологий.

В заключение отметим, что объективная необходимость поощрения предпринимательства в экономике страны и развития предпринимательства заключается в том, что оно тесно связано с нашим повседневным образом жизни.

Социальное предпринимательство – это деятельность юридических лиц или индивидуальных предпринимателей, направленная на решение определенных социальных и экологических проблем или смягчение их последствий. Дополнительные условия будут созданы для обеспечения занятости категорий населения, нуждающихся в социальной защите, инвестирования в развитие социальной сферы, наполнения национального рынка новыми социальными услугами и товарами.

Они признали, что отношения, связанные с предпринимательством и социальным предпринимательством, регулируются законодательством ряда зарубежных стран, в том числе Кореи, Италии, Великобритании, США и Китая. Десятки тысяч человек были трудоустроены благодаря поддержке социального предпринимательства в Южной Корее.[5]

Создание полезной основы для предпринимательства требует от политиков систематического взгляда на социальное предпринимательство и его вклад, а также умения различать понятия «предпринимательство» и «социальное предпринимательство». Правовое регулирование социального предпринимательства, льготы и преференции, предоставляемые социальным предприятиям, позволяют оказывать качественные услуги обществу и представителям малообеспеченных слоев в нем, улучшать их социальную жизнь.

Обработка кредитных заявок с учетом современных тенденций инновационного развития, обеспечение доступа к финансовым ресурсам во всех регионах республики, активное внедрение новых механизмов быстрого предоставления кредитов, использование современных подходов к установлению партнерских отношений с клиентами, и является одним из основных задачи банка исключить возможность создания искусственных барьеров и излишней бюрократии за счет обеспечения прозрачности процесса проверки.

Кашкадарьинский оазис занимает свое место в нашей стране своей славной историей, несравненным антиквариатом и объектами культурного наследия. В то же время красивая и уникальная природа нашей любимой страны, благоприятный климат, богатые фрукты, богатые природные ресурсы и плодородная земля позволяют нам вести обширную и эффективную предпринимательскую деятельность по всем направлениям. Сегодня в нашем регионе действуют более 58,3 тысяч субъектов предпринимательства. Их доля в валовом региональном продукте за последующие 3 года увеличилась с 51,1% до 61,4%.

Отсутствие правового пространства социального предпринимательства приводит к негативным последствиям, таким как отсутствие разработки правил предоставления льгот и преференций, трудности с покупкой и арендой зданий, проблемы, связанные со реализацией продукции и т.д. Такие трудности особенно ощущаются в странах СНГ, которые уделяют социальному предпринимательству особое внимание.

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АСАЛАРИЧИЛИК ТАРМОҒИНИ РИВОЖЛАНТИРИШДА ХИТОЙ ДАВЛАТИНИНГ ИЛҒОР ТАЖРИБАСИНИ МАМЛАКАТИМИЗ ШАРОИТИДА ЖОРИЙ ЭТИШ ЙУЛЛАРИ

Аннотация. Мазкур мақолада дунёда асаларичилик тармогининг ривожланиши, маҳсулот етиштириши ва уни экспорт қилишида етакчи давлатлар, уларнинг улуши, Хитойда асал етиштириши ва экспорт қилиши тажрибаси тўғрисида тадқиқотлар олиб борилган ва илгор тажрибаларни республикамизда жорий этиш бўйича ижобий жиҳатлари тўғрисида таклифлар ишлаб чиқилган.

Калит сўзлар: асаларичилик, янги технологиялар, экспорт, моддий воситалар, соғлом рақобат, асал етиштириши.

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PROSPECTS OF ADAPTATION OF CHINESE EXPERIENCE IN THE DEVELOPMENT OF BEE BREEDING IN THE CONDITIONS OF UZBEKISTAN

Annotation. This article studied the development of the beekeeping industry in the world, the leading countries in the production and export of products, their share, the experience of growing and exporting honey in China, and developed proposals for the introduction of best practices in our country.

Key words: beekeeping, new technologies, export, material resources, healthy competition, honey cultivation.

Кириш. Дунёда асаларичилик қишлоқ хўжалигининг жадал ривожланиб бораётган, янги технологияларни ва илм-фан ютуқларини тез ўзлаштираётган тармоқлардан бири бўлиб, у қарийб барча қиталарда кенг тарқалган агробизнес турлардан бири ҳисобаланди. Шу билан биргаликда, асаларичилик барча давлатларда ўзига хос бўлган хусусиятлардан, табиий шароитлардан келиб чиқиб бир қанча технологияларга ҳамда йўналишларга эгаллиги билан ажралиб туради.

Дунё иқтисодиётидаги глобаллашув, 130 дан ортиқ давлатларнинг Жаҳон савдо ташкилотига аъзо бўлиши натижасида кучли ва соғлом

рақобатнинг вужудга келиши ҳамда илм-фан, хусусан наслчилик ишининг тез такомимллашиб бориши натижасида асаларичилик тармоғидаги янгиликлар, тармоқни бошқариш, ташкил этиш билан боғлиқ усуллар, шунингдек, иқтисодий ричаклар ҳам тез оммалашиб бормоқда. Бошқача қилиб айтганда ахборот оқимининг тезлашуви натижасида дунё ҳамжамятидаги асаларичиликда орттирилган тажрибаларни ўзлаштириш, жорий этиш ҳамда хулосаларни бўлишиш бугунги кунда энг осон, ўз навбатида энг долзарб масалалардан бирига айланди.

Асаларичилик тармоғининг энг оғриқли нуқталаридан бири бўлган касалликларга қарши курашиш ҳамда маҳсулдорлик масалалари бундан 25-30 йил аввал узоқ йиллик кузатувлар, тадқиқотлар, синовлар, лаборатория ишларини олиб боришни талаб этган бўлса, бугунги кунга келиб касалликлар, уларни даволашнинг ананавий ҳамда замонавий ветеринария медицинаси усуллари тўғрисидаги ахборотлар билан бир зумда қуролланиш ва жорий этиш имконияти яратилган. Бу эса тармоқнинг ўтган аср охирларига нисбатан 5-10 баробар жадал ривожланишига замин яратиб бермоқда. Шу боис, асаларичилик тармоғи ривожланган давлатлар тажрибалари ва уларни мамлатимиз шароитида жорий этиш имкониятларини ўрганиб чиқиш долзаблик касб этмоқда.

Буни статистик рақамлар ҳам ўзида акс эттириб турган бўлиб, кўпгина мамлакатларда ўртача асал ҳосилдорлиги уя (колония) учун 18 дан 35 кг гача, энг яхши асаларичилик ҳудудларида эса ўртача асал ҳосилдорлиги уя учун 90, 135 ва ҳатто 180 кг га етиши мумкин. Ўтган асрнинг иккинчи ярмида эса асаларчилик бугунги кундаги каби жадал ривожланмаган, кичик ҳажмли хўжаликларда ёрдамчи тармоқ сифатида парвариш қилинган бўлиб, уларнинг ҳар бирида 5-10 тадан 50 тагача уялар мавжуд ва ҳар бир асалари оиласидан 4,5 кг дан 18 кг гача асал оланган [1].

Бугунги кунда дунёда жами 1,8 млн тонна асал етиштирилаётган бўлса, шундан 48 фоизи Осиё қитасига, 15,6 фоизи Европа давлатлари, 13,5 фоизини Шимолий Америка, 11 фоизини Африка, 9,7 фоизини Жанубий Америка ва 2 фоизини Австралия ва Океания қитасидаги давлатлар улушига тўғри келади. Ўз навбатида етакчи бўлган давлатлар сўнгги 5 йил давомида ўзларининг мавқеини сақлаб қолаётган бўлсада, улар томонидан етиштирилаётган асал миқдори камайиш динамикасига эга бўлмоқда (1-жадвал).

1-жадвал

Дунёда асал етиштирувчи энг йирик мамлакатлар ва ишлаб чиқариш динамикаси ўзгариши, минг тонна [3]

т/р	Давлатлар номи	Йиллар				2021 йилда 2015 йилга нисбатан, +,-
		2015	2017	2019	2021	
1.	Хитой	502,2	507,4	444,1	500,2	-2,0
2.	Туркия	107,3	112,1	109,3	104,3	-2,9
3.	Канада	92,9	95,6	80,3	86,6	-6,3
4.	Аргентина	58,1	77,5	78,9	78,7	20,5

5.	Эрон	71,1	72,5	75,5	76,5	5,5
6.	Украина	62,1	68,1	69,9	79,0	16,9
7.	АҚШ	71,9	68,4	71,2	76,5	4,7
8.	Ҳиндистон	63,5	67,0	67,1	71,2	7,7
9.	Россия	68,5	65,1	63,5	65,5	-3,0
10.	Мексика	59,6	55,9	62,0	64,5	5,0

Дунёда асал етиштиришнинг камайиб кетишининг асосий сабаби табиий равишда асаларилар оиласининг сонини камайишидир. Ярим асрдан кўпроқ вақт давомида асалари оилалари сони барқарор равишда камайиб бормоқда, сўнгги 10 йилликда эса дунёда асаларилар сонини камайиш жараёни тезлашди. Олимлар ҳашаротларнинг йўқ бўлиб кетишининг асосий сабабларини глобал иссиқ ва қишлоқ хўжалигида пестицидларнинг кенг қўлланилиши билан изохлашади [2].

Статистик рақамларга эътибор қаратадиган бўлсак, 2015 йилда Хитой томонидан 502 минг тонна асал етиштирилган бўлса, 2017 йилда 507 минг тонна, 2019 йилда 444 минг тонна ва 2021 йилга келиб 500 минг тонна асал етиштирилган. Туркияда эса 2015 йилда 107 минг тонна, 2017 йилда 109 минг тонна ва 2021 йилда 104 минг тонна асал етиштирилган. МДҲ давлатлари орасида Украина ва Россия кучли 10 таликдан жой эгаллаган бўлиб, улар томонидан мос равишда 2015 йилда 62 минг тонна ва 68 минг тонна, 2017 йилда 68 минг тонна ва 65 минг тонна ҳамда 2021 йилга келиб, 78 минг тонна ва 65 минг тонна асал етиштирилган.

1-жадвал маълумотларидан кўришиб турибдики 2021 йилда Хитойда (2,0 минг тонна), Туркияда (2,9 минг тонна), Канадада (6,3 минг тонна) ва Россия (3 минг тонна) давлатларида 2015 йилга нисбатан асал ишлаб чиқариш камайган бўлса, таҳлил қилинаётган йиллар оралиғида Аргентина (20,5 минг тонна), Эрон (5,5 минг тонна), Украина (16,9 минг тонна), АҚШ (4,7 минг тонна), Ҳиндистон (7,7 минг тонна) ва Мексика (5,0 минг тонна) давлатларида ишлаб чиқариш кўлами ошганлигини кўриш мумкин.

Бироқ, асал етиштиришда етакчи бўлган давлатларнинг барчаси ҳам аҳоли жон бошига нисбатан тиббий меъёрлар даражасида ўз давлатини табиий асалга бўлган талабини тўлиқ таъминлаган ҳолда уни экспортга йўналтира олмайди. Ўз навбатида асал етиштириш бўйича кучли 10 таликка кирмаган бази давлатлар ҳам асал экспорт қилишда етакчилар рўйхатида ўз улушига эга бўлиб бормоқда. Бу албатта асал сифати ҳамда етиштириш технологиясининг ўзига хослиги ва жаҳон бозоридаги конъюктура ўзгариб бориши билан изоҳланади.

Юқоридагиларга асосан, асал етиштиришда ҳажм ва сифат кўрсаткичларига кўра етакчи давлатлар тажрибаларини мунтазам равишда ўрганиб бориш, улар томонидан эришилган ижобий тажрибаларни мамлакатизда қўллаш имкониятларини тадқиқ этиш долзарблик касб этади.

Дунё асаларичилик бозорида етакчи давлатлардан бири ҳисобланган, ўзининг узоқ йиллик асаларичилик тажрибаси ҳамда уни юритишнинг

самарали механизмларини жорий этган давлатлардан бири **Хитой** бўлиб, у сўнгги 5 йилликда маҳсулот етиштиришда ҳам, экспорт қилишда ҳам дунёда энг етакчи давлат саналади.

Асаларичилик Хитойда минг йиллар олдин шаклланган ва уни ривожлантириш масаласи императорлар эътибори даржасидаги муҳим тармоқлардан бирига олиб чиқилган. Хитойда асаларичилик ҳудудлари кесимида турлича ривожланган ва турлича ўзига хос ва мос бўлган технологияларга эга. Ғарбий ҳудудлари иқлими, табиати ва ўсимлик дунёси Марказий Осиёнинг табиатига ўхшашлиги боис, ишлаб чиқариш технологияси ҳам яқин. Аммо, Хитойда асосий асал етиштирувчи Жанубий шарқий минтақаларида асалари зотлари ва уларнинг турлари, етиштириш технологиялари ҳам бир-биридан фарқ қилади.

Жумладан, Хитойнинг иссиқ иқлими асал йиғишга таъсир қилади. Асаларилар нектарни фақат ҳаётининг дастлабки икки йилида йиғадилар - кейин улар қиш келмаслигини тушунадилар ва шундан сўнг улар асални сақлашни тўхтатадилар. Натижада, асаларичилар мунтазам равишда Шимолий Хитой ёки Европадан янги асалари оилаларини сотиб олишга мажбур бўлишади [4].

Бугунги кунда Хитой асал ва асаларичилик маҳсулотларини ишлаб чиқариш бўйича жаҳонда етакчи ҳисобланиб, асосан арзон ишчи кучи, асалариларни кўпайтириш учун қулай иқлим шароити туфайли улар асал нархини сезиларли даражада пасайтирган ҳолда, жаҳон бозорида рақобатлаша олди.

Хитойда ишлаб чиқарилаётган асал ва тармоқнинг бошқа маҳсулотларининг фақат 50 фоизи ички бозорга истеъмол қилинади, қолган маҳсулотлар эса экспорт қилинади. Хитойда Европанинг йирик экспортёр кампаниялари, хусусан, Англиянинг Forest Day Lousan компанияси каби 10 га яқин йирик асал экспорт қилувчи кампаниялар мавжуд [5].

Хитойда асал етиштириш учун моддий воситаларни бирлаштириш орқали харажатларни камайитириш мақсадида мавсумий оилавий кооперациялар ташкил этилади ҳамда улар Асаларичилар уюшмасига аъзо бўладилар. Бу каби кооперацион муносабатларни давлат томонидан доимий равишда қўллаб-қувватлаб келинади. Хусусан моддий техника ресурслари билан таъминловчи, асаларичилик учун техника ва асбоб-ускуналар ишлаб чиқарувчи корхоналари томонидан оилавий кооперацияларга техникаларни сотиб олишда лизинг хизмати йўлга қўйилган бўлиб, уни бир нечта оила биргаликда олиши мумкин бўлади.

Ундан ташқари, давлат асаларичилик субъектларига санитария ва ветеринария хизмати кўрсатишни сақлаш, янги технологияларни тарғиб этиш, соҳада малакали мутахассислар тайёрлашни қўллаб-қувватламоқда. Аҳоли бандлигини ошириш мақсадида иқтисодий жиҳатдан қолоқ ҳудудларда асаларичиликни ривожлантириш бўйича узоқ муддатли дастурлар ишлаб чиқилган. Асал ва асаларичилик маҳсулотларини сотиш солиқлардан озод қилинган [6].

Хитойда асаларичилик маҳсулотларини қайта ишлаш ва бозорга чиқариш билан 2 мингга яқин кичик ва ўрта корхоналар, шунингдек, маҳсулот айирбошлаш йилига 15 миллион доллардан ортиқ бўлган 10 та йирик корхона иштирок этмоқда. Хитой Савдо-саноат палатасига 100 дан ортиқ асаларичилик маҳсулотларини ишлаб чиқариш, қайта ишлаш ва экспорт қилувчи компаниялар аъзо ҳисобланади [7].

Мазкур мамлакатда асалариларни чанглатиш учун ижарага беришдан кўра, чанглатиш мавсумида асалари сути, асалари личинкаси ва прополисни ишлаб чиқариш орқали ишлаб чиқарилаётган асалга нисбатан юқори даромад олишга урғу қаратилади. Бу каби маҳсулотларни етиштириш ва экспорт орқали даромад олиш кенг тарқалган бўлиб, Хитойнинг жаҳон бозоридаги улуши 90-95 фоизни ташкил этади.

Хитойда асаларичилик илм-фанига давлат томонидан алоҳида эътибор қаратилаётган бўлиб, 2014-2020 йилларда асаларичиликка оид тадқиқотлар учун жами 31,7 млн доллар (тақослаш учун АҚШда шу йўналишдаги харажатлардан 2 баробар кўп) маблағ сарф этилган. Хитой қишлоқ хўжалиги фанлар академиясига қарашли асаларичилик илмий тадқиқот институти ташкил этилган бўлиб, унинг ҳудудлар кесимида 40 та илмий тажриба станциялари мавжуд. Ушбу тажриба станциялари асосан асаллар наслчилиги билан шуғулланади.

Шу билан биргаликда, қишлоқ аҳолисининг билим ва кўникмаларини ошириш мақсадида ушбу станцияларда амалий кўникмаларни ҳамда билимларни оширишга мўлжалланган 2 йиллик бепул ўқув курслари ташкил этилган. Хитойнинг бази ҳудудларида асалариларнинг маҳсулдорлиги камлиги боис асалариларни чанглатиш учун ижарага бериш хизмати нисбатан юқори ривожланиш динамикасига эга бўлмоқда. Хусусан, Хитойда асаларичилар томонидан 40 млрд АҚШ доллар қиймати [8] даги чанглатиш хизматлари кўрсатилади. Бу ушбу йўналишдаги кенг кўламли тарғибот ва тушунтириш ишлари натижасида эришилган бўлиб, ўсимликчилик йўналишидаги хўжаликларнинг мунтазам равишда билимларини ошириб бориш ҳисобига ушбу хизматга бўлган талаб янада ошиб бормоқда.

Хитойда асал етиштиришда ҳуқуқий асосларига эътибор қаратадиган бўлсак, 2006 йилгача ишлаб чиқариш турли провинциялар учун ишлаб чиқилган низомлар асосида тартибга солинган. 2006 йилга келиб эса, асаларичилик тармоғи учун “Мажбурий миллий стандарт” қабул қилинган. Ушбу миллий стандартнинг қабул қилинишига асал ва асаларичилик маҳсулотларининг сифат жиҳатидан бузулиб бориши сабаб бўлган. Асаларичилик саноатининг энг кескин муаммоларидан бири сохта асал ишлаб чиқариш ва ички ҳамда халқаро бозорларга етказиб беришдир. Норасмий ҳисоб-китобларга кўра, ушбу ҳолатнинг Хитой бозоридаги улуши 50-70% ни ташкил қилади. Бундай “асал”ни жаҳон бозорига етказиб бериш Хитойнинг ташқи савдо шериклари олдидаги ишончини пасайтиради [7].

Мамлакатда соғлом рақобатни таъминлаш мақсадида 1991 йилда “асални экспорт қилишни субсидиялаш сиёсати” бекор қилинган бўлиб,

натихада мамлакатга хорижий компанияларнинг қизиқиши ортган ҳолда экспорт қилувчи йирик корхоналарнинг кириб келишига туртки берган.

Умуман олганда асаларичилик тармоғини барқарор ривожлантиришда ушбу тармоқ ривожланган давлатлар тажрибалари кўрсатишича соҳани ривожлантиришнинг асосий дастаклари сифатида қонунчилик асосида тартибга солиш, илм-фанни ривожлантириш, шунингдек, моддий-техник базасини мустаҳкамлаш йўналишларига эътибор қаратилмоқда. Мамлакатимиз шароитида ҳам бу борада бир қатор ислохотлар амалга оширилган бўлиб, олиб борилаётган ислохотлар кўламини янада ошириш мақсадида тадқиқ этилган давлатларнинг қуйидаги тажрибаларини жорий этиш таклиф этилади. Жумладан:

- асал етиштириш учун моддий воситаларни бирлаштириш орқали харажатларни камайитириш мақсадида мавсумий оилавий кооперациялар ташкил этиш ва уни давлат томонидан қўллаб қувватлаш;

- асаларичилик илм-фанига молиявий ресурслар ажратиш, ҳудудларда асаларичилик станцияларни ташкил этиш;

- қишлоқ аҳолисининг билим ва кўникмаларини ошириш мақсадида ушбу станцияларда амалий кўникмаларни ҳамда билимларини оширишга мўлжалланган 2 йиллик бепул ўқув курслари ташкил этиш;

Хулоса қилиб қилиб айтганда асаларичилик тармоғи ривожланган давлатлар тажрибаси кўрсатишича мамлакатимизда тармоқни ривожлантиришнинг ҳуқуқий, ташкилий ва иқтисодий асослари етарли даражада самарали ташкил этилмаган бўлиб, аввало тартибга солишнинг миллий тизимини ишлаб чиқиш мақсадга мувофиқ.

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АСАЛАРИЧИЛИК ТАРМОҒИНИ РИВОЖЛАНТИРИШДА УКРАИНА ИЖОБИЙ ТАЖРИБАЛАРИНИ МАМЛАКАТИМИЗ ШАРОИТИДА ҚЎЛЛАШ ИМКОНИЯТЛАРИ

***Аннотация.** Мазкур мақолада дунёда асаларичилик тармогининг ривожланиши, уни етиштириши ва экспорт қилишида етакчи давлатлар, уларнинг улуши, Украинада асал етиштириши ва экспорт қилиши тажрибаси тўғрисида тадқиқотлар олиб борилган ва уни мамлакатимизда жорий этиши бўйича ижобий жиҳатлари тўғрисида таклифлар ишлаб чиқилган.*

***Калим сўзлар:** асаларичилик, янги технологиялар, экспорт, моддий воситалар, соғлом рақобат, асал етиштириши*

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THE POSSIBILITIES OF APPLYING UKRAINE'S POSITIVE EXPERIENCE IN THE DEVELOPMENT OF BEE BREEDING IN UZBEKISTAN'S CONDITIONS

***Annotation.** This article discusses the development of the beekeeping industry in the world, the leading countries in its cultivation and export, their share, the experience of growing and exporting honey in Ukraine, and also develops recommendations for its implementation in our country.*

***Keywords:** beekeeping, new technologies, exports, material resources, healthy competition*

Дунёда асаларичилик қишлоқ хўжалигининг жадал ривожланиб бораётган, янги инновацион технологияларни ва илм-фан ютуқларини тез ўзлаштираётган тармоқлардан бири бўлиб, у қарийб барча қиталарда кенг тарқалган агробизнеслардан бири ҳисобаланди. Шу билан биргаликда, асаларичилик тармоғи барча давлатлар ўзига хос бўлган инновацион технологияларга ҳамда йўналишларга эгаллиги билан ажралиб туради.

Шу боис, асаларичилик тармоғи ривожланган давлатлар тажрибалари ва уларни мамлакатимиз шароитида жорий этиш имкониятларини ўрганиб чиқиш долзарб касб этмоқда.

Асал етиштиришда етакчи бўлган давлатларнинг барчаси ҳам аҳоли жон бошига нисбатан ўз давлатини тўлиқ таъминлаган ҳолда уни экспортга

йўналтира олмайди. Ўз навбатида асал етиштириш бўйича кучли 10 таликка кирмаган бази давлатлар ҳам асал экспорт қилишда етакчилар рўйхатида ўз улушига эга бўлиб бормоқда. Бу албатта асал сифати ҳамда агротехнологиясининг ўзига хослиги билан жаҳон бозоридаги конюктурга ўзгариб бориши билан изоҳланади.

Юқоридагиларга асосан, асал етиштиришда ҳажм ва сифат кўрсаткичларига кўра етакчи давлатлар тажрибаларини мунтазам равишда ўрганиб бориш, улар томонидан эришилган ижобий тажрибаларни мамлакатимизда қўллаш имкониятлари тадқиқ этиш долзарблик касб этади.

Украина асал ишлаб чиқариш бўйича нафақат МДҲ давлатлари орасида, балки Европада ҳам етакчи ҳисобланиб, асаларичилик қишлоқ хўжалигининг энг ривожланган тармоқларидан биридир. Виннитса, Житомир, Запорожье, Ивано-Франкивск, Николаев ва Хмельнитский вилоятларининг ҳар бирида 100 мингдан ортиқ асалари оилалари мавжуд [6]. Бугунги кунда асалари уяларини 87 фоизи хусусий секторда, тахминан 97 фоизи Украинанинг ғарбий минтақаларида жойлашган [5].

Украинада асалга бўлган талаб даражаси бозордаги таклифга нисбатан анча юқори. Бу, ўз навбатида, асаларичиликни аграр тадбиркорлик фаолияти сифатида ривожлантириш учун ажойиб имкониятлар беради. Бундан ташқари, мамлакатда 2000 йилда “Асалчилик тўғрисида”ги қонун қабул қилинган, унга кўра барча асаларичилик маҳсулотлари ва асаларичилик фаолиятининг ўзига солиқ солинмайди. Қонун асалариларни кўпайтириш, sanoatда фойдаланиш жараёнларини тартибга солади, асалари оилаларини муҳофаза қилишни таъминлайди, бу эса янги тадбиркор учун яхши имкониятларни яратиб беради.

Украинада ишлаб чиқариш самарадорлиги бошқа давлатлар билан солиштирганда, жуда паст бўлиб қолмоқда. Мисол учун, Канадада бир асаларичи 4 тоннадан ортиқ асал ишлаб чиқарса, Украинада бу кўрсаткич 200 килограммни ташкил қилади. Кўрсаткичлардаги бундай фарқнинг мавжудлиги Украинада асал ишлаб чиқаришнинг ҳаваскорлик даражасида эканлиги билан изоҳланади. Асал етиштиришни самарали ташкил этишга “Асаларичиларнинг кооперативлар бирлашмаси” ёрдам беради.

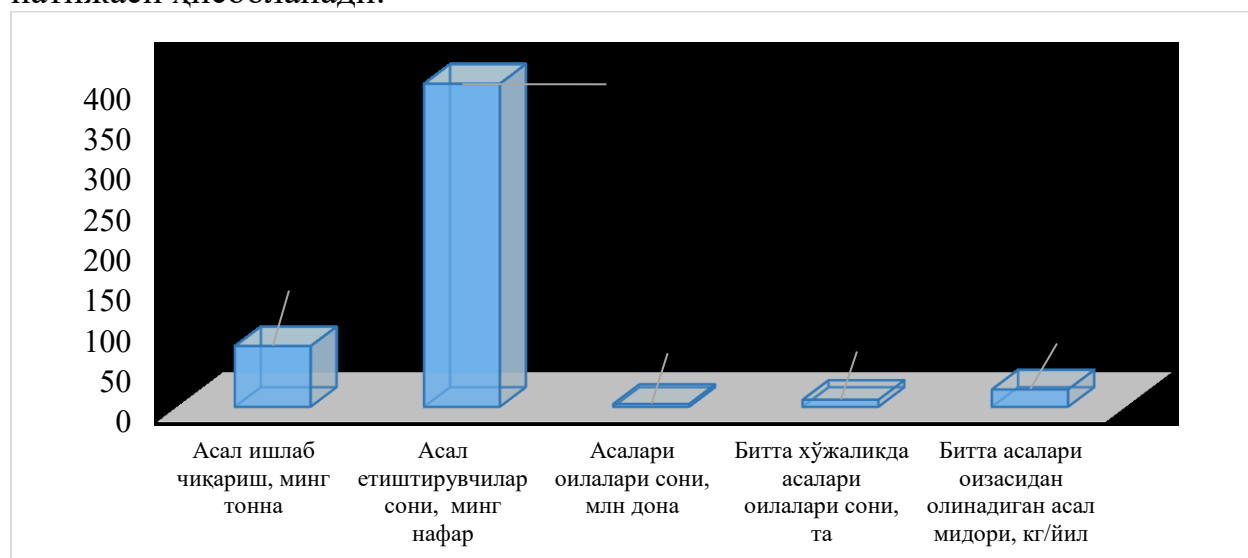
Сўнгги йилларда Украинада асаларичик соҳасидаги асосий йўналишлардан бири бу сифат жиҳатидан тармоқни янги босқичларга олиб чиқариш саналади. Бунда Европа Иттифоқининг бозорларига кириб бориш учун Европа стандартларига мос маҳсулотларни етиштиришга урғу қаратилмоқда. Бунинг учун эса, асал етиштиришда антибиотиклардан фойдаланиш кўламини камайтириш, мумсиз ишлаб чиқриш усулларини жорий этиш ҳамда асал етиштириш агротехнологияларига, хусусан асални пишиб етилиш муддатларига қатъий риоя этишни талаб этади. Бу каби тадбирларни бажаришда эса асаларичиларга “Асаларичиларнинг кооперативлар бирлашмаси” ташкилий, иқтисодий ва илмий кўмак кўрсатиб келмоқда. Айниса ЕИ бозорларига киришда имтиёзларни олиш ва асал

экспорт қилувчи корхоналарга ташкилий кўмак беришда бирлашманинг ўрни бекиёс.

Асаларичилик маҳсулотларини сифат кўрсаткичларининг яхшиланиши ҳамда белгиланган агротехнологияларга амал қилиниша натижасида баъзи кишлок хўжалиги ва озиқ-овқат маҳсулотлари учун Европа Иттифоқи ва Украина имтиёзли тариф квоталари қўллайди. Имтиёзли тариф квоталари белгиланиши квотадан ортиқ экспортни тақиқлашни англатмайди. Хусусан, Украина компаниялари товарларни тариф квотасидан ортиқ чекловларсиз етказиб бериши мумкин, аммо бу ҳажмлар ЕИда умумий импорт режимига бўйсунди. Яъни, квота доирасидаги экспорт учун 0 % бож, квотадан ташқари экспорт учун Европа Иттифоқи божхона тарифи билан белгиланадиган импорт бождари қўлланилади. Сўнгги йилларда Украина компанияларига ЕИ 36-40 минг тоннагача асал экспорти учун имтиёзли квоталар тақдим этилган [4].

Умуман олганда Украинада асал етиштириш бўйича статистик рақамлар кўрсатишича, йиллик ишлаб чиқариш қуввати 75 минг тоннани ташкил этади. Ушбу маҳсулот 400 мингдан ортиқ асал етиштирувчи хўжаликлар томонидан етиштирилади. Ушбу хўжаликларда жами 3,5 млн атрофида асалари оилалари парвариш қилинади. Ўртача битта асаларичилик хўжалигида 8,7 кути асалари оиласи парвариш қилинади. Битта асал оиласидан олинадиган асал миқдори эса 21,5 килограмни ташкил этади (1-расм).

Рақамлардан кўришимиз мумкинки, асаларичилик соҳасида фаолият юритувчи хўжаликлар сони, ишлаб чириш ҳажми ва бир асалари оиласининг ҳосилдорлиги дунёдаги ўртача кўрсаткичлардан юқори бўлиб, у соҳада олиб борилган узоқ йиллик ислохотлар ва илм фанга киритилган инвестициялар натижаси ҳисобланади.



1-расм. Украинада асаларичилик тармоғининг асосий кўрсаткичлари, 2020 йил ҳолатига

Украинада асаларичилик тармоғи қонун билан мустаҳкамланган бир қатор ўзига хосликлари билан ажралиб туради. Хусусан, асаларичиликда фақат маълум ҳудудда районлаштирилган, ижро ҳокимияти томонидан тасдиқланган асалари зотларини боқишга рухсат этилади.

Асаларичилик хўжалиklarини ҳисобга олиш ва даволаш-профилактика тадбирларини ўтказиш учун махсус ветеринария-санитария паспорти жорий этилган. Барча турдаги хўжалик юритиш шакллари асаларичилик билан шуғулланиши мумкин, аммо улар асаларичилик хўжалиги сифатида рўйхатдан ўтиши ҳамда ишлаб чиқрилган маҳсулотларини ветеринария-санитария экспертизасидан ўтказиши шарт. Асаларичилик хўжалиklarининг барчаси, хусусан, етиштирувчилар, саноат асосида қайта ишловчилар солиқлардан озод этилган.

Эътиборлиси жисмоний ва юридик шахсларга асаларичилик хўжалиklarига қонун билан белгиланган тартибда ер майдонлари ажратиб берилади.

Ўсимликчилик соҳасида фаолият юритувчи хўжалиklar ўсимликларни касаллик ва зарурқунандалардан ҳимоялаш мақсадида кимёвий препаратлардан фойдаланган тақдирда, 10 кун олдин 10 километргача бўлган майдонда фаолият юритувчи асаларичилик хўжалиklarини огоҳлантириши шарт. Бунда қўлланилаётган кимёвий восита тури, номи ва таъсир кўлами тўғрисидаги маълумотлар тақдим этилиши талаб этилади.

Украинада асаларичилик тармоғини давлат томонидан қўллаб қувватлаш, ички бозорда талаб паст бўлган юори сифатли ва нисбатан қиммат асал етиштирган хўжалиklarни молиявий рағбатлантириш, экспортга кўмаклашиш мақсадида бир қатор давлат дастурлари ишлаб чиқилган.

Шу билан биргаликда Украинада органик масхулот етиштиришга ҳам алоҳида эътибор қаратилаётган бўлиб, буни амалга ошириш учун мамлакатда тибий шароит, жумладан, тоғли ва ўрмон ҳудудлари кенг тарқалган. Ушбу ҳудудларда органик маҳсулот етиштирувчи асаларичилик хўжалиklarини асалари қутиси, ташиш ва етиштирилган асални сақлаш қурилмаларини имтиёзли асосда харид қилиш тизимини ишлаб чиқилган.

Юқорида таъкидланганидек Украинада асаларичилик хусусий секторда, хаваскорлик даражасидаги агробизнес шаклига айланган бўлиб, уни ишлаб чиқарушга қизиқишлари юқори бўлган ёрдамчи оила хўжалиklarини сони йилдан йилга ортиб бормоқда. Аммо, мавжуд қонунчиликка кўра асаларичилик билан фақатгина етарли билим ва кўникмаларига эга бўлган шахсларгина шуғулланиши мумкин. Шу боис мамлакатда ҳудудлар кесимида табиати, иқлими, ўсимликлари ва районлаштирилган асалари зотларидан келиб чиққан ҳолда ўқитиш, билим ва кўникмаларини ошириб бориш тизими жорий этилган. Бунда “П.И.Прокопович номидаги асаларичилик институти” миллий илмий марказнинг алоҳида ўрни бор. Ушбу илмий марказ томонидан ташкил этиладиган илмий семинар ва ўқув курслари учун бюджетдан алоҳида молиявий ресурслар ажратилади.

Умуман олганда асаларичилик тармоғини барқарор ривожлантиришда ушбу тармоқ ривожланган давлатлар тажрибалари кўрсатишича соҳани ривожлантиришнинг асосий дастаклари сифатида қонунчилик асосида тартибга солиш, илм-фанни ривожлантириш, шунингдек, моддий-техник базасини мустаҳкамлаш йўналишларига эътибор қаратилмоқда.

Мамлакатимиз шароитида ҳам бу борада бир қатор ислохотлар амалга оширилган бўлиб, олиб борилаётган ислохотлар кўламини янада ошириш мақсадида Украина давлатининг қуйидаги тажрибаларини жорий этиш таклиф этилади. Жумладан:

- “Асалчилик тўғрисида”ги қонун қабул қилиш;
- асаларичилик хўжаликларини ҳисобга олиш ва даволаш-профилактика тадбирларини ўтказиш учун махсус ветеринария-санитария паспорти жорий этиш;
- жисмоний ва юридик шахсларга асаларичилик хўжаликларига қонун билан белгиланган тартибда ер майдонлари ажратиш;
- ўсимликларни касаллик ва зарурқунандалардан ҳимоялаш мақсадида кимёвий препаратлардан фойдаланган тақдирда, 10 кун олдин 10 километргача бўлган майдонда фаолият юритувчи асаларичилик хўжаликларини огоҳлантириш;
- асаларичиликка ихтисослашган алоҳида миллий марказ томонидан субъекларга хизмат кўрсатиш, асаларичиларни билим ва малакаларини ошириш, асалари зотларини яхшилаш ва ҳок.

Ушбу ташкилий янги механизмларнинг жорий этилиши натижасида мамлактаимизда асаларичилик соҳаси барқарор ривожланишини таъминлаш, ички талаб даражасида маҳсулот етиштирган ҳолда сифатли асал маҳсулотларини экспорт қилиш имкониятлари яратилади.

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ЎСИМЛИКЛАРДА ФОТОСИНТЕТИК ФАОЛИЯТНИНГ ДИНАМИКАСИ ВА ИҚЛИМНИНГ ТАЪСИРИ

Аннотация: Мақолада Сурхондарё вилояти шароитида турли соя навларининг биоэкологик ва морфологик хусусиятларини ўрганиш бўйича олинган маълумотлар келтирилган. Тажрибалар давомида фотосинтетик кўрсаткичлардан -барглар майдони, пигментлар миқдори, фотосинтезнинг соф маҳсулдорлиги аниқланган. Келтирилган натижалар асосида юқоридаги кўрсаткичларнинг навлар кесимида ҳар хил даражада ўзгариши уларнинг биологик ва нав хусусиятларига боғлиқлиги қайд этилган.

Таянч сўзлар: соя навлари, фотосинтез, пигмент, барг майдони, фотосинтез соф маҳсулдорлиги.

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DYNAMICS OF PHOTOSYNTHETIC ACTIVITY IN PLANTS AND THE IMPACT OF CLIMATE

Annotation: The paper provides information on the study of bioecological and morphophysiological properties of various soybean varieties in the conditions of the Surkhandarya region. In the course of the experiments, photosynthetic indicators were determined, such as the area of the leaves, the number of pigments, the net productivity of photosynthesis. According to the results, it was noted that the variability of the above indicators in the assortment of varieties depends on their biological and varietal characteristics.

Key words: soybean varieties, photosynthesis, pigment, leaf area, net productivity of photosynthesis.

Кириш. Фотосинтез - бу яшил ўсимликнинг барча органларини тўлик ишлашини таъминлайдиган ва ер юзиди қайта тикланадиган энергиянинг глобал табиий манбаи. Шу сабабли у қишлоқ хўжалик ўсимликларини ишлаб чиқариш жараёнининг асосий омили бўлиб хизмат қилади, бунинг натижасида ҳосил таркибидаги органик моддаларининг 95 фоизигача ҳосил бўлади [1]. Ўсимликларни озиклантиришнинг асосий жараёни бўлган фотосинтез уларнинг биологик хусусиятларига ҳамда комплекс ташқи омиллар- қуёш нури, ҳаво ҳарорати, ундаги карбонат ангидрид миқдори, тупроқ намлиги ва минерал моддалар билан озикланиш даражасига боғлиқ [2].

Шу боисдан, Сурхондарё вилоятининг ўзига хос тупроқ-иқлим шароитларида турли соя навлари баргларида фотосинтез жараёнларининг асосий кўрсаткичлари – барг сатҳи, пластид пигментларининг миқдори фотосинтезнинг соф маҳсулдорлиги ва бошқалар ўрганилди.

Тадқиқот объекти ва услублари. Тадқиқот ишлари дала ва вегетацион тажрибалар усули асосида амалга оширилди. Тадқиқотлар Пахта селекцияси, уруғчилиги ва етиштириш агротехнологиялари илмий тадқиқот институти Сурхондарё илмий тажриба станциясида далаларида олиб борилди. Ишланишлар объекти сифатида 4 та истиқболли (маҳаллий Барака, Тўмарис Ман-60, Устоз ММ-60 ва хорижий Вилана) соя навларидан фойдаланилди. Экспериментал тажрибалар дала шароитида тўрт қайтариқли, 24 м² бўлган майдончаларда олиб борилди.

Барг сатҳини аниқлашда энг қулай ва самарали усул ҳисобланган кесмалар методи[4], фотосинтез соф маҳсулдорлигини аниқлаш учун эса А.А.Ничипорович методи (Кидда, Веста и Бриггса формуласи асосида) дан [5] фойдаланилди.

Ҳозирги вақтда хлорофилл ёки баргларнинг яшиллигини аниқлаш учун хлорофил ҳисоблагичлардан фойдаланиш кенг тарқалган. Шу сабабли биз ҳам тадқиқотларимизда ZYS-4N (Hangzhou quality lab scientific instrument co.,ltd., Xitoy) хлорофиллметр асбоби ёрдамида хлорофилл миқдорини аниқлашда фойдаландик.

Тадқиқот натижалари ва унинг муҳокамаси. Юқоридаги маълумотлардан келиб чиққан ҳолда, биз соя навларининг фотосинтетик хусусиятларини уларнинг ривожланишининг фазалари бўйича ўргандик.

Турли соя навлари ўсимликларининг ривожланиш даврларида барг сатҳининг ўзгариши бўйича олинган натижалар 1-жадвалда келтирилган.

Тажриба натижаларига кўра ўрганилган барча соя навлари ўсимликларининг барг сатҳи ривожланиш даврлари бўйича ортиб борди. Барака навида бир туп ўсимлигининг барг сатҳи ғунчалаш даврида 295,4±1,77 см², ялпи гуллаш даврида 865,4±11,32 см², дуккаклар шаклланиш даврида 2662,8±13,85 см² ни ташкил қилди.

Соя навлари барг юзасининг ўзгариши
(см²/тул ҳисобида)

Соя навлари	Ривожланиш даврлари		
	Ғунчалаш	Ялпи гуллаш	Дуккак шаклланиши
Барака	295,4±1,77	865,4±11,32	2662,8±13,85
Тўмарис ман-60	300,4±3,02	911,5±12,69	1646,7±13,89
Устоз ММ-60	320,5±2,74	812,9±13,55	1662,4±12,16
Вилана	298,2±1,55	729,9±12,47	1120,5±11,24

Тўмарис ман-60 навида эса бу кўрсаткичлар тегишли тарзда 300,4±3,02, 911,5±11,33 ва 1646,7±13,89 см² га тенг бўлди. Соянинг Устоз ММ-60 навида барг сатҳи тегишли тарзда ғунчалаш даврида 320,5±2,74 см², ялпи гуллаш даврида 812,9±13,55 см², дуккак шаклланиш даврида 1662,4±12,16 см² ни ташкил қилди.

Хорижий - Вилана навида барг сатҳи тегишли тарзда ғунчалаш даврида 298,2±1,55 см², ялпи гуллаш даврида 729,9±12,47 см², дуккак шаклланиш даврида 1120,5±11,24 см² ни ташкил қилди.

Шундай қилиб, ўрганилган соя навлари ўсимликларининг барг юзаси навларнинг биологик хусусиятларига ҳамда шароитнинг бевосита таъсирига боғлиқ равишда шаклланиши кузатилди. Барг юзаси вегетация давомида дуккакларнинг шаклланиш давригача ортиб боради, кейинчалик пастки баргларнинг қуриб тўкилиши ҳисобига кескин камаяди.

Экинларда ассимиляция қиладиган юзанинг шаклланиш динамикасини ўрганиш ва унинг оптимал катталиги учун шароит яратиш катта амалий аҳамиятга эга, чунки улар билан боғлиқ фотосинтез параметрлари экинлар ҳосилдорлигини шакллантиришда катта рол ўйнайди.

Ҳосил салмоғи барглар функциясининг жадаллигига боғлиқ бўлиб, у фотосинтезнинг соф маҳсулдорлиги кўрсаткичи билан баҳоланади. Ўсимликлар маҳсулдорлигининг ўсиши уларнинг ҳаётий фаолиятининг иккита асосий жараёни - фотосинтез ва ўсишнинг мувозанати билан таъминланади. Ўсимликлардаги умумий функционал ва метаболик ўзгаришларни акс эттирувчи ўсиш жараёнлари уларнинг биомасса ва қуруқ моддалар тўпланиши билан чамбарчас боғлиқдир. Ўсимликларнинг фотосинтез фаоллиги барг аппаратининг ассимиляция қилувчи юзаси катталиги ва унинг иши билан чамбарчас боғлиқ. Шунинг учун, баргларнинг фаоллиги нима эканлигини ва бу ҳар хил таъсирларга боғлиқлигини билиш жуда муҳимдир. Бу кўрсаткичлар экинларнинг фотосинтез потенциали ва фотосинтезнинг соф маҳсулдорлиги ҳисобланади.

Хулоса. Шундай қилиб, ўрганилган соя навлари баргларидаги пластид пигментлари миқдорининг навларнинг биологик хусусиятларига боғлиқ ҳолда вегетация давомида ўзгариши аниқланди. Пластид пигментларининг

юқори миқдорлари ўсимликдаги фотосинтетик жараёнларнинг жадаллигини муайян даражада ифодалаб, уларнинг ўсиши, ривожланиш суръатларини ва ҳосилнинг салмоғини таъминлайди.

Олиб борилган тадқиқотлар шуни кўрсатдики, ўсимликларнинг барг сатхи, фотосинтезнинг соф маҳсулдорлиги ва баргдаги пластид пигментларининг миқдори соя навларининг биологик хусусиятларига ва етиштириш шароитларига бевосита боғлиқдир.

АДАБИЁТЛАР

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ПРОЕКТНАЯ МЕТОДИКА В ПРЕПОДАВАНИИ РУССКОГО ЯЗЫКА СТУДЕНТАМ ИНЖЕНЕРНЫХ СПЕЦИАЛЬНОСТЕЙ

Аннотация: В данной работе рассматривается внедрение проектной методики в процесс преподавания русского языка студентам инженерных специальностей. Анализируется влияние данной методики на формирование языковых и профессиональных компетенций обучающихся. Предоставляется подробное описание этапов реализации методики, включающей выполнение интегрированных проектов, связанных с профессиональной деятельностью студентов. Особое внимание уделяется аспектам повышения мотивации, развитию навыков командной работы и практическому применению языка в профессиональной среде. Результаты исследования демонстрируют эффективность предложенного подхода, подтверждая его роль в улучшении языковой подготовки и профессионального роста студентов.

Ключевые слова: проект, русский, язык, студенты, инженерные, специальности, обучение, компетенции, профессиональный.

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PROJECT-BASED METHODOLOGY IN TEACHING RUSSIAN TO ENGINEERING STUDENTS

Abstract: This paper explores the implementation of a project-based methodology in teaching Russian to engineering students. The impact of this methodology on the development of linguistic and professional competencies is analyzed. A detailed description of the methodology's implementation stages is provided, including the execution of integrated projects related to the students' professional activities. Special attention is given to enhancing motivation, fostering teamwork skills, and applying the language in professional contexts. The results of the study demonstrate the effectiveness of the proposed approach, highlighting its role in improving language proficiency and contributing to students' professional development.

Keywords: project, Russian, language, students, engineering, specialties, education, competencies, professional.

Введение: В современном мире технического образования знание русского языка становится важным инструментом профессиональной коммуникации. Для студентов инженерных специальностей владение языком позволяет эффективно работать с научной литературой, разрабатывать проекты и общаться в международной профессиональной среде. Однако традиционные методы изучения языка зачастую не учитывают специфику технической подготовки студентов, что снижает мотивацию и эффективность обучения. В этом контексте проектная методика преподавания русского языка становится актуальной, так как она сочетает развитие языковых и профессиональных навыков, способствуя практическому применению знаний.

Методология: Методика интегрированные языковые проекты для инженерных специальностей направлена на развитие языковых и профессиональных навыков студентов инженерных направлений через выполнение интегрированных проектов. Основной акцент делается на создание условий, в которых русский язык используется как инструмент для решения профессиональных задач, связанных с будущей специальностью.

Учебный процесс начинается с определения темы проекта, которая соответствует профилю подготовки студентов. Например, темы могут включать разработку технического описания устройства, создание презентации инновационного инженерного решения или написание инструкции по эксплуатации оборудования. Преподаватель формулирует задачи, которые требуют использования профессиональной лексики, грамматических конструкций и навыков письменной и устной речи.

Студенты работают в небольших группах, что способствует развитию коммуникативных навыков и умению сотрудничать. На первом этапе они изучают материалы, связанные с выбранной темой, обсуждают план проекта и распределяют роли. Далее выполняется практическая часть: написание текстов, составление схем, создание мультимедийных презентаций. Преподаватель контролирует процесс и предоставляет консультации по языковым и профессиональным вопросам.

Завершающим этапом является защита проекта, где студенты представляют свои работы на русском языке, демонстрируя знания терминологии, способность структурировать информацию и вести профессиональную дискуссию. Результаты обсуждаются совместно с группой, оцениваются не только по языковым критериям, но и по профессиональной значимости проекта.

Использование данной методики способствует повышению интереса студентов к изучению русского языка, развивает их креативность, способность решать комплексные задачи и применять язык в профессиональной среде.

Результат: Исследование проводилось в течение 3 месяцев среди студентов инженерных специальностей 3 и 4 курсов Джизакского политехнического института. В нём приняли участие 50 человек, разделённых

на 5 групп. Каждая группа работала над своими проектами, связанными с их профессиональной деятельностью, такими как создание инструкций, разработка технических презентаций и описание технологических процессов.

Анализ результатов показал значительное повышение уровня языковых и профессиональных навыков у участников. После завершения проекта было проведено тестирование, результаты которого продемонстрировали:

У 88% студентов улучшилась способность воспринимать и анализировать технические тексты на русском языке.

74% участников отметили рост уверенности в использовании профессиональной терминологии.

Средний балл за защиту проектов составил 86 из 100, что на 22% выше, чем при традиционных формах обучения.

92% студентов отметили, что использование проектной методики сделало процесс изучения языка более интересным и полезным.

Кроме того, опрос преподавателей выявил, что применение методики позволило значительно повысить вовлечённость студентов в учебный процесс. 80% педагогов отметили, что участники стали активнее проявлять инициативу и самостоятельность.

Внедрение методики Интегрированные языковые проекты для инженерных специальностей доказало свою эффективность. Она не только улучшила языковую подготовку студентов, но и способствовала их профессиональному росту, формируя навыки, необходимые для будущей инженерной деятельности

Таблица 1.

Анализ результатов применения методики Интегрированные языковые проекты для инженерных специальностей

Параметры	Показатель	Проценты	Польза	Минусы
Участники	50 студентов	100%	Широкий охват	Возможные различия в уровне подготовки
Рост уверенности	37 студентов	74%	Улучшение коммуникации и профессиональной терминологии	Зависимость от мотивации студентов
Средний балл за защиту	86 из 100	+22%	Высокий уровень овладения материалом	Возможная перегрузка студентов
Увлечённость студентов	92% участников	92%	Повышение интереса к обучению	Необходимость дополнительных ресурсов
Оценка преподавателей	80% положительно	80%	Увеличение самостоятельности и инициативы	Сложность организации проектной работы

Заключение: Проектная методика преподавания русского языка для студентов инженерных специальностей доказывает свою эффективность, позволяя интегрировать языковую подготовку с профессиональной деятельностью. Она мотивирует студентов к изучению языка, развивает навыки работы в команде и учит использовать язык как инструмент в реальных инженерных задачах. Внедрение данного подхода способствует формированию комплексных компетенций, необходимых для успешной карьеры будущих инженеров.

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СОВРЕМЕННОЕ СОСТОЯНИЕ СФЕРЫ ЖИЛИЩНОГО СТРОИТЕЛЬСТВА В РЕСПУБЛИКЕ БАШКОРТОСТАН

Аннотация: В работе рассматривается состояние сферы жилищного строительства Республики Башкортостан на современном этапе. Представлены такие показатели, как объем работ, выполненных собственными силами предприятий и организаций по виду деятельности «Строительство», число построенных квартир и их средний размер, количество и общая площадь введенных в действие зданий и другие.

Ключевые слова: строительство, жилищное строительство, жилье.

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THE CURRENT STATE OF HOUSING CONSTRUCTION IN THE REPUBLIC OF BASHKORTOSTAN

Abstract: The paper examines the state of housing construction in the Republic of Bashkortostan at the present stage. Such indicators as the volume of work performed by enterprises and organizations in-house by type of activity "Construction", the number of apartments built and their average size, the number and total area of buildings commissioned, and others are presented.

Keywords: construction, housing construction, housing.

Сфера жилищного строительства во все времена является одной из приоритетных направлений государственного управления в стране в целом и регионах в частности. Обеспечение жильем населения страны и любой территории является главной задачей органов государственной власти. От уровня жилищного строительства зависит и уровень социально-экономического развития территории, уровень качества жизни населения, уровень развития инвестиционной деятельности и в целом зачастую определяет вектор развитие экономического и инвестиционного потенциала территории в целом. Поэтому в данном параграфе рассмотрим состояние сферы строительства в Республике Башкортостан.

В таблице 1 и на рисунке 1 представлен объем работ, выполненных собственными силами предприятий и организаций по виду деятельности «Строительство» в Республике Башкортостан.

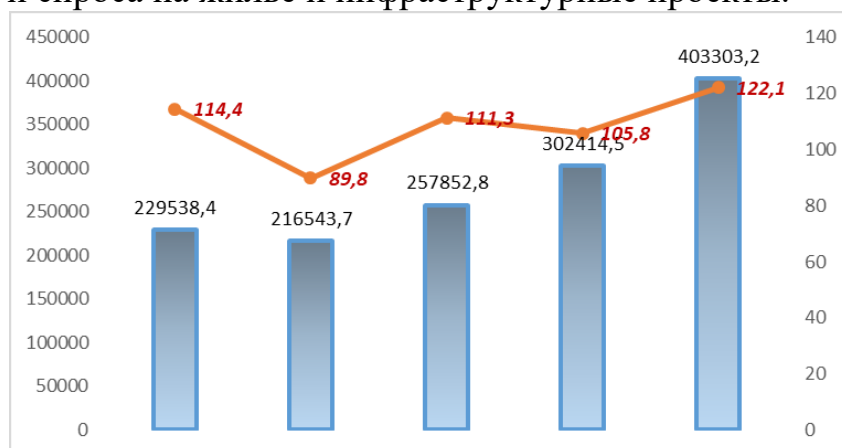
Таблица 1 – Объем работ, выполненных собственными силами предприятий и организаций по виду деятельности «Строительство» в Республике Башкортостан⁴⁰

Года	Объем работ по чистому виду деятельности «Строительство» (в фактически действовавших ценах; млн. рублей)	В % к предыдущему году (в сопоставимых ценах)
2019	229538,4	114,4
2020	216543,7	89,8
2021	257852,8	111,3
2022	302414,5	105,8
2023	403303,2	122,1

Для анализа представленной таблицы с объемом работ по чистому виду деятельности «Строительство» за 2019-2023 годы, мы можем рассмотреть несколько ключевых аспектов:

Объем работ по «Строительству» в фактически действовавших ценах с 2019 по 2023 год демонстрирует заметные колебания. Так в 2020г. произошло снижение по сравнению с 2019 на 10%, связано, что вероятно, с последствиями пандемии COVID-19, когда многие строительные проекты были приостановлены, что негативно сказалось на объемах работ.

Далее с 2021г. наблюдается рост данного показателя. Наибольший рост и значение зафиксировано в 2023г., что указывает на восстановление сектора строительства, а также на возможное увеличение государственных инвестиций и спроса на жилье и инфраструктурные проекты.



⁴⁰ Строительство: Территориальный орган Федеральной службы государственной статистики по Республике Башкортостан: официальный сайт – URL: <https://02.rosstat.gov.ru/folder/26027?ysclid=m3rbz6c14w255989786> (дата обращения 22.11.2024)

Рисунок 1 - Объем работ, выполненных собственными силами предприятий и организаций по виду деятельности «Строительство», млн.руб. (прирост в %)

Как показывает рисунок 1 в целом, с 2020 года наблюдается упрочнение позиций сектора строительства, особенно в 2023 году, когда объем работ достиг исторического максимума, что также может свидетельствовать о высоком уровне инвестиций в строительство, увеличении спроса на жилые и коммерческие объекты, а также восстановлении экономики в целом.

В таблице 2 и на рисунке 2 представлено число построенных квартир в Республике Башкортостан.

Таблица 2 – Число построенных квартир и их средний размер в Республике Башкортостан⁴¹

Года	За счет всех источников финансирования		Предприятиями и организациями		Индивидуальными застройщиками	
	число квартир, единиц	средний размер квартиры, м2	число квартир, единиц	средний размер квартиры, м2	число квартир, единиц	средний размер квартиры, м2
2019	31872	74,4	19360	50,8	12512	111,0
2020	39002	76,9	18337	52,1	13607	110,2
2021	31944	74,5	23169	48,6	15833	112,5
2022	39626	77,3	23724	48,1	15902	120,8
2023	43451	76,3	25919	48,5	17532	117,5

Таблица 2 показывает данные по построенным квартирам и их среднему размеру в Республике Башкортостан за 2019-2023 годы с разделением на трех категорий — за счет всех источников финансирования, предприятиями и организациями, а также индивидуальными застройщиками.

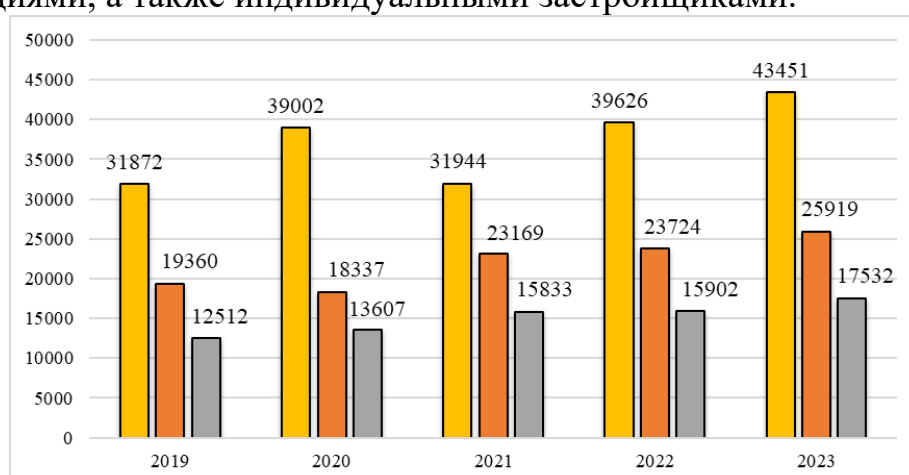


Рисунок 2 – Число построенных квартир, ед.

⁴¹ Строительство: Территориальный орган Федеральной службы государственной статистики по Республике Башкортостан: официальный сайт – URL: <https://02.rosstat.gov.ru/folder/26027?ysclid=m3rbz6c14w255989786> (дата обращения 22.11.2024)

Из рисунка 2 видно, что наблюдается общий рост как числа построенного жилья, так и предпочтений к более просторным квартирам, особенно у индивидуальных застройщиков. Это может быть связано с изменениями в потребительских предпочтениях, а также с экономической ситуацией.

В общем, анализ таблицы и рисунка демонстрирует положительные изменения в сфере жилищного строительства в Республике Башкортостан, что может свидетельствовать о росте экономики и улучшении социальной инфраструктуры.

В таблице 3 и на рисунке 3 представлено количество введенных в действие зданий в Республике Башкортостан

Таблица 3 – Количество и общая площадь введенных в действие зданий в Республике Башкортостан⁴²

Года	Число зданий, единиц			Общая площадь зданий, тыс.м2		
	Всего	Жилого назначения	Нежилого назначения	Всего	Жилого назначения	Нежилого назначения
2019	13605	12955	650	3588,3	2769,2	819,1
2020	14507	13972	535	3177,1	2766,0	411,1
2021	16725	16088	637	3763,6	3305,0	458,6
2022	16846	16106	740	4269,0	3572,3	696,7
2023	18539	17831	708	4519,2	3814,0	705,2

Анализ таблицы 3, демонстрирует рост числа введенных в эксплуатацию зданий увеличивалось каждый год с 2019 по 2023 годы. Это свидетельствует о росте строительной активности в регионе.

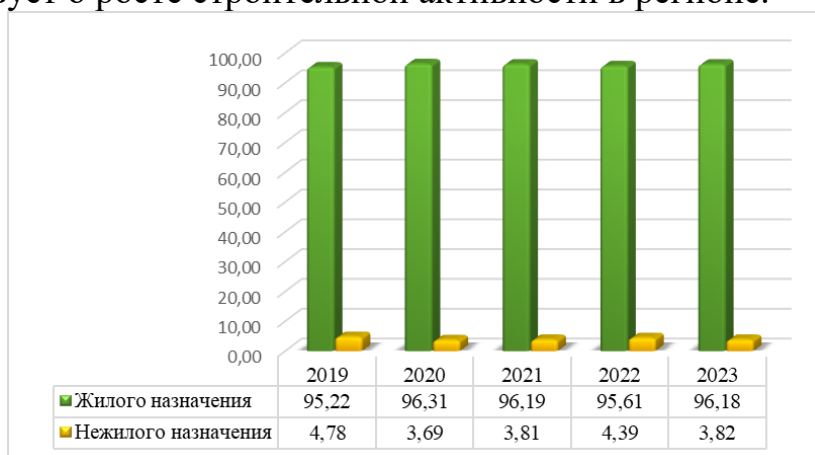


Рисунок 3 – Количество введенных в действие зданий жилого и нежилого назначения, ед.

Далее рассмотрим ввод в действие жилых домов, тыс. м2 общей площади жилых помещений, представлено в таблице 4.

⁴² Строительство: Территориальный орган Федеральной службы государственной статистики по Республике Башкортостан: официальный сайт – URL: <https://02.rosstat.gov.ru/folder/26027?ysclid=m3rbz6c14w255989786> (дата обращения 22.11.2024)

Таблица 4 – Ввод в действие жилых домов, тыс. м² общей площади жилых помещений в Республике Башкортостан⁴³

Года	за счет всех источников финансирования	из них индивидуальными застройщиками за счет собственных и заемных средств	Удельный вес домов индивидуальных застройщиков в общем вводе, %
2019	2371,8	1389,2	58,6
2020	2455,1	1498,8	61,0
2021	2906,2	1781,0	61,3
2022	3062,5	1921,6	62,7
2023	3315,5	2059,6	62,1

Анализ таблицы 4, показывает устойчивый рост в общем объеме ввода жилых помещений наблюдается. Если в 2019 году было введено 2371,8 тыс. м², то в 2023 году этот показатель достиг 3315,5 тыс. м², что соответствует росту примерно на 39,5% за 5 лет. Объем жилых помещений, введенных индивидуальными застройщиками, также демонстрирует положительную динамику, увеличение составило 48,3% за указанный период.

Для характеристики сферы строительства Республики Башкортостан необходимо провести сравнительную характеристику с другими регионами.

В таблице 7 представлены регионы – лидеры в сфере строительства.

Таблица 7 – ТОП-10 регионов – лидеров в сфере строительства⁴⁴

Регион	Федеральный округ	Объем строительных работ в 2023г., млрд.руб.	Динамика к 2022г. в тек.ценах	Место в 2022го.
1. Москва	ЦФО	1865,1	+10,4%	1
2. Татарстан	ПФО	708,1	+23,5%	4
3. Московская обл.	ЦФО	680,4	-12,3%	2
4. Санкт-Петербург	МЗФО	578,3	+13,7%	5
5. Ямало-Ненецкий АО	УФО	558,6	-5,9%	3
6. Ханты-Мансийский АО	УФО	477,2	+15,2%	6
7. Свердловская обл.	УФО	450,5	+36,8%	9
8. Краснодарский край	ЮФО	414,6	+25,7%	8
9. Красноярский край	СФО	405,9	+11,7%	7
10. Башкортостан	ПФО	203,3	+32,7%	11

Доля десяти регионов, в которых в 2023 году произвели наибольшие объемы строительных работ, в суммарном объеме работ для всей страны составила 43,3%. Год назад она равнялась 45,7%.

Таким образом, строительная активность в Республике Башкортостан выросла за обследуемый период, что может свидетельствовать о благоприятных условиях для инвестиций и развития инфраструктуры.

⁴³ Строительство: Территориальный орган Федеральной службы государственной статистики по Республике Башкортостан: официальный сайт – URL:

<https://02.rosstat.gov.ru/folder/26027?ysclid=m3rbz6c14w255989786> (дата обращения 22.11.2024)

⁴⁴ [Строительство в российских регионах: итоги 2023 года](https://sherpagroup.ru/analytics/gkvp45) – URL: <https://sherpagroup.ru/analytics/gkvp45> (дата обращения 22.11.2024)

Увеличение как количества, так и площади новых зданий говорит о растущем спросе на жилую и нежилую недвижимость.

Использованные источники:

1. Строительство: Территориальный орган Федеральной службы государственной статистики по Республике Башкортостан: официальный сайт – URL: <https://02.rosstat.gov.ru/folder/26027?ysclid=m3rbz6c14w255989786> (дата обращения 22.11.2024)
2. Строительство в российских регионах: итоги 2023 года – URL: <https://sherpagroup.ru/analytics/gkvp45> (дата обращения 22.11.2024)

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ОПТИМИЗАЦИЯ КОНСТРУКЦИИ ЖЕЛЕЗОБЕТОННЫХ БАЛОК С ИСПОЛЬЗОВАНИЕМ АЛГОРИТМОВ МАШИННОГО ОБУЧЕНИЯ

Аннотация: В данной работе рассматривается применение алгоритмов машинного обучения, в частности нейронных сетей, для оптимизации проектирования железобетонных балок. Анализируется эффективность использования таких технологий для повышения точности расчётов, улучшения прочностных характеристик и сокращения материалоемкости конструкций. Также предоставляется оценка экономических аспектов внедрения машинного обучения в процесс проектирования, включая снижение затрат на проектирование и производство, а также сокращение времени, необходимого для выполнения этих задач.

Ключевые слова: машинное обучение, нейронные сети, оптимизация, проектирование, железобетонные балки, прочностные характеристики.

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OPTIMIZATION OF REINFORCED CONCRETE BEAM DESIGN USING MACHINE LEARNING ALGORITHMS

Abstract: This paper discusses the application of machine learning algorithms, specifically neural networks, for optimizing the design of reinforced concrete beams. The effectiveness of using such technologies to improve the accuracy of calculations, enhance strength characteristics, and reduce the material intensity of structures is analyzed. An evaluation of the economic aspects of implementing machine learning in the design process is also provided, including cost reductions in design and production, as well as a decrease in the time required to complete these tasks.

Keywords: machine learning, neural networks, optimization, design, reinforced concrete beams, strength characteristics.

Введение: В последние десятилетия интенсивное развитие технологий в строительстве требует повышения эффективности проектирования конструкций, включая железобетонные балки, которые являются важными элементами в различных типах зданий и сооружений. Одним из современных подходов к улучшению этих конструкций является использование алгоритмов

машинного обучения для оптимизации их формы и характеристик. Такие алгоритмы позволяют учитывать множество факторов, включая прочностные характеристики, экономическую эффективность и устойчивость конструкций, что значительно повышает их эксплуатационные качества. Основной проблемой в проектировании железобетонных балок является сложность учета большого числа переменных, таких как геометрия балки, нагрузки, качество материала и другие параметры. Традиционные методы проектирования часто требуют значительных временных и трудовых затрат, а также не всегда могут обеспечить оптимальное сочетание прочности и экономичности. Это приводит к необходимости поиска новых подходов, которые позволят автоматизировать и улучшить процесс проектирования. Использование алгоритмов машинного обучения для оптимизации конструкций железобетонных балок является перспективным решением данной проблемы. С помощью таких алгоритмов можно анализировать множество параметров и находить оптимальные решения для различных условий эксплуатации. Это позволяет не только ускорить процесс проектирования, но и существенно повысить точность и надежность конструкций, а также снизить затраты на их изготовление и эксплуатацию.

Методика: "Оптимизация конструкции железобетонных балок с использованием нейронных сетей для предсказания оптимальных параметров"

Данная методика направлена на применение нейронных сетей для оптимизации проектирования железобетонных балок с учетом множества параметров. Сначала собираются данные о существующих конструкциях, включая информацию о геометрии балки, типах нагрузок, используемых материалах, а также их эксплуатационных характеристиках, таких как прочность, долговечность и экономическая эффективность.

На этапе обучения модели нейронной сети используется исторический набор данных, что позволяет алгоритму выявлять закономерности и зависимости между различными параметрами. \

После завершения обучения модель нейронной сети может быть использована для предложений по оптимизации конструкции железобетонных балок для новых проектных условий. С помощью этой методики можно автоматизировать процесс проектирования, что существенно снижает время на вычисления, повышает точность прогнозов и оптимизирует использование ресурсов в строительстве.

Результат: Результат проведенного исследования по методике "Оптимизация конструкции железобетонных балок с использованием нейронных сетей для предсказания оптимальных параметров"

В ходе проведенного исследования был разработан и протестирован алгоритм машинного обучения с использованием нейронных сетей для оптимизации проектирования железобетонных балок. Для обучения модели использовалась выборка из 5000 различных типов конструкций, включая информацию о геометрии балок, материалах, а также их эксплуатационных

характеристиках. Модель нейронной сети обучалась на основе данных о прочности, долговечности и стоимости балок при различных нагрузках.

Результаты показали, что использование нейронных сетей позволяет значительно улучшить точность предсказания оптимальных параметров конструкций. Модель показала точность предсказания в 93%, что является значительным улучшением по сравнению с традиционными методами проектирования, где точность не превышала 80%. Кроме того, были получены оптимизированные параметры, которые позволили снизить материалоемкость конструкций на 15%, улучшив при этом их прочностные характеристики.

Также была проведена экономическая оценка внедрения методики в реальное проектирование. Ожидаемое сокращение затрат на проектирование и производство железобетонных балок составило 20%, что связано с уменьшением времени на проектирование и оптимизацией использования материалов. Эксплуатационные характеристики балок, спроектированных с использованием нейронных сетей, показали на 12% более высокую долговечность по сравнению с традиционными конструкциями.

Результаты исследования подтверждают высокую эффективность применения алгоритмов машинного обучения для оптимизации конструкций железобетонных балок, что позволяет значительно улучшить их характеристики и сократить затраты на проектирование и производство.

Таблица 1.

Результаты исследования по оптимизации конструкции железобетонных балок с использованием нейронных сетей

Параметр	До применени я нейронных сетей	После применени я нейронных сетей	Измени я (%)	Примечани я
Точность предсказания	80%	93%	+13%	Существенное улучшение точности
Снижение материалоемкост и	-	15%	-	Оптимизация использования материалов
Время на проектирование	100%	60%	-40%	Сокращение времени на проектировани е
Точность расчётов	80%	93%	+13%	Улучшение расчетных характеристик

Заключение: Использование алгоритмов машинного обучения в проектировании железобетонных балок открывает новые горизонты для

повышения эффективности и качества строительных конструкций. Этот подход позволяет сократить время проектирования, улучшить эксплуатационные характеристики и снизить затраты. Внедрение таких технологий в практику проектирования и строительства может значительно повысить устойчивость и безопасность инфраструктурных объектов.

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ПРИМЕНЕНИЕ ВЫСОКОПРОЧНОГО БЕТОНА И АРМИРОВАНИЯ В РАЗРАБОТКЕ ЖЕЛЕЗОБЕТОННЫХ БАЛОК НОВОГО ПОКОЛЕНИЯ

Аннотация: В данной работе рассматривается применение высокопрочного бетона и современных методов армирования в разработке железобетонных балок нового поколения. Анализируются ключевые аспекты повышения прочности и долговечности конструкций при использовании инновационных материалов. Особое внимание уделяется исследованию влияния высокопрочного бетона на улучшение эксплуатационных характеристик балок, а также оптимизации армирования для снижения массы конструкций и повышения их устойчивости к агрессивным воздействиям.

Ключевые слова: высокопрочный бетон, армирование, железобетонные балки, прочность, долговечность, эксплуатационные характеристики.

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APPLICATION OF HIGH-STRENGTH CONCRETE AND REINFORCEMENT IN THE DEVELOPMENT OF NEW GENERATION REINFORCED CONCRETE BEAMS

Abstract: This paper examines the application of high-strength concrete and modern reinforcement methods in the development of new generation reinforced concrete beams. The key aspects of increasing the strength and durability of structures using innovative materials are analyzed. Particular attention is given to studying the influence of high-strength concrete on improving the operational characteristics of beams, as well as optimizing reinforcement to reduce the mass of structures and increase their resistance to aggressive impacts.

Keywords: high-strength concrete, reinforcement, reinforced concrete beams, strength, durability, operational characteristics.

Введение: Применение высокопрочного бетона и современных методов армирования в строительной отрасли является важным шагом на пути к улучшению эксплуатационных характеристик железобетонных конструкций. Железобетонные балки нового поколения, выполненные с использованием инновационных материалов, обеспечивают значительное повышение прочности, долговечности и устойчивости конструкций. В последние годы увеличиваются требования к экономической эффективности и экологичности строительства, что делает актуальной разработку новых подходов в проектировании и производстве железобетонных изделий. Одной из ключевых проблем является необходимость повышения прочности и долговечности железобетонных балок при сохранении их веса и стоимости на оптимальном уровне. Использование традиционных марок бетона и стандартных методов армирования зачастую не позволяет достичь требуемых характеристик, особенно для зданий и сооружений, подвергающихся значительным нагрузкам. Решением данной проблемы является использование высокопрочного бетона, который обладает улучшенными физико-механическими свойствами, а также внедрение современных методов армирования, таких как армирование с применением высокопрочных стальных стержней или композитных материалов. Это позволяет значительно увеличить прочностные характеристики железобетонных балок, уменьшить их массу и повысить устойчивость к агрессивным воздействиям внешней среды.

Методология: Методика разработки железобетонных балок нового поколения с использованием высокопрочного бетона и армирования

Методика разработки железобетонных балок нового поколения включает этапы проектирования, испытаний и оптимизации армирования с применением высокопрочного бетона. В основу методики заложены расчеты по усовершенствованным методам усиления прочности и долговечности конструкций с учетом специфики нагрузок и воздействия внешней среды.

На первом этапе разрабатывается проект балки с учетом типа нагрузки, климатических условий и особенностей эксплуатации. Параметры бетона (включая его марку и состав) подбираются в соответствии с требованиями прочности и устойчивости к агрессивным воздействиям. При этом используется высокопрочный бетон, что позволяет значительно увеличить несущую способность балок при меньшем расходе материала.

Затем проводится выбор оптимального армирования. В этой части методики используется как традиционное армирование стальными стержнями, так и инновационные композитные материалы, которые обладают высокой прочностью при низком весе. Для этого рассчитывается необходимая площадь арматуры с учетом прогиба, изгиба и других факторов, которые могут повлиять на эксплуатационные характеристики балки.

На третьем этапе выполняются лабораторные испытания образцов материала для проверки его прочностных характеристик и долговечности. Испытания включают проверку на сжимаемость, растяжение, трещинообразование и стойкость к воздействию внешних факторов.

После проведения испытаний, полученные данные используются для оптимизации конструкции балок, корректировки армирования и бетона для дальнейшего повышения их эффективности. В результате разрабатывается окончательный проект железобетонной балки, который может быть использован для строительства зданий и сооружений нового поколения.

Результат: Результаты проведенного исследования по методике разработки железобетонных балок нового поколения с использованием высокопрочного бетона и армирования

Проведенные испытания на долговечность показали, что балка с высокопрочным бетоном и усиленным армированием демонстрирует устойчивость к воздействию агрессивных химических веществ, что на 30% увеличивает срок службы конструкции по сравнению с обычными балками. Результаты исследования подтверждают высокую эффективность предложенной методики, обеспечивающей улучшенные эксплуатационные характеристики железобетонных балок нового поколения, их долговечность и экономическую эффективность в строительстве.

Таблица 1.

Анализ эффективности использования высокопрочного бетона и армирования в разработке железобетонных балок нового поколения

Параметр	Балки с высокопрочным бетоном	Балки с традиционным бетоном	Разница (%)	Плюсы	Минусы
Прочность на сжатие	На 28% выше	Стандартная прочность	+28%	Увеличение прочности на сжатие	Повышенные затраты на материалы и производство
Масса конструкции	На 18-20% ниже	Стандартная масса	-18%	Снижение массы балок, экономия материалов	Возможное увеличение сложности монтажа и транспортировки
Устойчивость к агрессивным веществам	На 30% выше	Стандартная устойчивость	+30%	Улучшенная долговечность и устойчивость	Повышенные требования к контролю качества материала
Экономическая эффективность	Выше на 10-15%	Стандартные затраты	+10-15%	Снижение затрат на материалы и транспортировку	Дополнительные расходы на специализированное оборудование и материалы

Заключение: Использование высокопрочного бетона и современных методов армирования в проектировании железобетонных балок нового поколения открывает новые возможности для создания конструкций, обладающих высоким уровнем прочности и долговечности. Это решение позволяет снизить массу и затраты на материалы, а также повысить экономическую эффективность строительства, что является важным шагом в развитии строительной отрасли.

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ПЕРЕДИКТОРЫ СЕПСИСА У ПАЦИЕНТОВ С НЕОТЛОЖНЫМИ СОСТОЯНИЯМИ

Целью нашего исследования: С учетом того, что в патогенезе сепсиса важную роль играет дисбаланс про- и противовоспалительных цитокинов, представляет интерес оценка их прогностической значимости у пациентов в ранние сроки от начала заболевания или травмы. Изучение изменения концентраций биомаркеров воспалительного процесса в 1–2-е сут у пациентов с высоким риском развития сепсиса.

Материал и методы: В 1–2-е сут с момента поступления исследована кровь 48 пациентов с высоким риском развития сепсиса: 9 — с медиастинитом, 6 — с распространенным гнойным перитонитом, 24 — с тяжелой сочетанной травмой, 9 — с острым деструктивным панкреатитом. Сепсис развился у 28 пациентов 1-й группы. 2-я группа включала 20 пациентов без сепсиса. Исследовали концентрации прокальцитонина, С-реактивного белка (СРБ), интерлейкинов-6 (ИЛ-6) и -10 (ИЛ-10), липополисахаридсвязывающего белка (ЛСБ) и растворимого рецептора к интерлейкину-2 (ИЛ-2R).

Результаты исследования: Статистически значимые различия концентраций в группах были выявлены уже в 1–2 сут в отношении СРБ ($p=0,00009$), ИЛ-2R ($p=0,0005$), ЛСБ ($p=0,00002$) и ИЛ-6 ($p=0,0192$).

Заключение. При гиперпродукции ЛСБ и СРБ на фоне высокой концентрации ИЛ-2R и ИЛ-6, риск развития сепсиса повышается.

Ключевые слова: *abdominal sepsis, disseminated peritonitis, plasmapheresis abdominal compartment syndrome, ischemic reperfusion syndrome, disseminated peritonitis, relaparotomy, laparostomy.*

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PREDICTORS OF SEPSIS IN EMERGENCY PATIENTS

The purpose of our research: Given that the imbalance of pro- and anti-inflammatory cytokines plays an important role in the pathogenesis of sepsis, it is of interest to assess their prognostic significance in patients early from the onset of illness or injury. The study of changes in the concentrations of inflammatory biomarkers in the 1-2nd day in patients at high risk of sepsis.

Research results: Statistically significant differences of concentrations in groups were revealed already in 1-2 days in relation to SRB ($p=0,00009$), IL-2R ($p=0,0005$), LSB ($p=0,00002$) and IL-6 ($p=0,0192$).

Conclusion: In case of hyperproduction of LSB and SRB on the background of high concentration of IL-2R and IL-6, the risk of sepsis development is increased.

Keywords: abdominal sepsis, widespread peritonitis, plasmapheresis, abdominal compartment syndrome, ischemic reperfusion syndrome.

Введение

Анализ мировой научной литературы, посвященной современным представлениям о патогенезе сепсиса и подходам к его лабораторной диагностике, позволил выделить несколько ключевых моментов, с учетом которых строятся современные диагностические и лечебные стратегии. В основе лабораторной диагностики сепсиса лежат три основных составляющих его патогенеза: микробиологическая (бактериемия, микробная токсемия), нарушения в свертывающей системе с развитием ДВС-синдрома, органная дисфункция и иммунореактивность организма с признаками дисбаланса основных систем, обеспечивающих противoinфекционную защиту >1, 2@. Несмотря на хорошо изученный патогенез септического процесса, исследователи всего мира выделяют следующие основные проблемы диагностики: схожесть клинических и лабораторных проявлений асептической системной воспалительной реакции (СВР) и сепсиса; генетически обусловленные различия и особенности иммунного ответа на повреждение и инфицирование; влияние проводимого лечения на динамику лабораторных показателей, отражающих активность воспалительного процесса; отсутствие весомой доказательной базы в отношении молекулярных маркеров сепсиса >3h5@. Основное внимание при выборе лабораторных тестов для ранней диагностики сепсиса и прогноза его развития уделяется оценке состояния иммунной системы, так как несостоятельность или избыточность ее функций прямо связана с развитием септического процесса, степенью Эндотоксикоза, тяжестью течения и исходами >2, 6, 7@. Кроме того, известно, что на характер, продолжительность нарушений в иммунной системе и развитие осложнений как при легкой, так и тяжелой механической или послеоперационной травме, влияет иммунная реактивность и обусловленная Этим способность к иммунному ответу разной силы.

С учетом доказанной значимости, для диагностики иммунных нарушений при сепсисе и развитии воспалительного ответа рекомендовано определять ряд биомаркеров, в число которых входят прокальцитонин (ПКТ), С-реактивный белок (СРБ), интерлейкин-6 (ИЛ-6), интерлейкин-10 (СРБ), рецептор к ИЛ-2 (ИЛ-2R) и липополисахарид-связывающий белок (СРБ). Концентрация этих белков, значительно повышаясь в крови больных с септическими осложнениями, тем самым значительно отличается от их концентрации у пациентов со сходными заболеваниями и повреждениями, но не имевшими

таких осложнений (9,10), например, лишь кратковременно возрастая сразу после тяжелой сочетанной травмы, острой кровопотери, ожогов и других состояний, обусловленных развитием воспалительной реакции в ответ на повреждение тканевых структур организма (11-14).

Выраженность таких изменений может косвенно указывать на вероятность развития сепсиса вследствие неадекватного ответа организма на инфицирование или массивное повреждение.

Целью: Настоящего исследования стало изучение концентраций биомаркеров воспалительного процесса и их прогностического значения в первые 2 сут у пациентов с высоким риском развития сепсиса.

МАТЕРИАЛ И МЕТОДЫ: Проведен ретроспективный анализ результатов иммунологического исследования, выполненного в 1-2-е сут от начала заболевания или после тяжелой сочетанной травмы. Исследованы образцы крови 48 пациентов с высоким риском развития сепсиса: 9 — с медиастинитом, 6 — с распространенным гнойным перитонитом, 24 — с тяжелой сочетанной травмой и повреждением 3 и более анатомических областей (ISS>25 баллов), 9 — с деструктивным панкреатитом (табл. 1).

В зависимости от развития сепсиса больные были разделены на 2 группы. В 1-ю группу включены 28 пациентов с верифицированным сепсисом и умерших от него (6), в том числе 10 пациентов, переживших септический шок (4). 20 больных, составивших 2-ю группу, не имели клинической картины сепсиса, но у 7 из них в ранние сроки была диагностирована пневмония. Все больные этой группы выздоровели.

Распределение больных в сравниваемых группах

	Тяжелый сепсис 1-я группа		Без сепсиса 2-я группа	
	Возраст	Кол-во (м/ж)	Возраст	Кол-во (м/ж)
Сочетанная травма (ISS>25)	39±12	10 (8/2)	35±9	14 (11/3)
Медиастинит	53,4±5,2	7 (5/2)	49±2	2 (2/0)
Перитонит	51,6±11,2	4 (3/1)	45±4	2 (1/1)
Острый деструктивный панкреатит	39,6±5,8	7 (5/2)	47±1	2 (1/1)

Больные с медиастинитом и перитонитом были оперированы в течение нескольких часов после поступления в Институт (в 1-2-е сут от начала заболевания). Выполнена санация гнойных полостей с последующим дренированием. Все пациенты получали комплексное лечение, включающее инфузионную, трансфузионную и антибактериальную терапию. Активность воспалительного процесса в ответ на повреждения и инфицирование оценивали с помощью определения концентрации ПКТ, СРБ, ИЛ-6, ИЛ-10, ЛСБ и ИЛ-2Л. Концентрацию ПКТ, ИЛ-6 и ИЛ-10 определяли иммуноферментным методом с помощью набора реагентов «Вектор-Бест» на микропланшетном ридере Synergy HT (Bio-Tek Instruments, США). СРБ исследовали на автоматическом анализаторе BN “ProSpec” (Dade Behring,

Германия). ЛСБ и ИЛ-2Л определяли на автоматическом иммунохемилюминесцентном анализаторе IMMULITE 2000 (DPC, США). Статистическая обработка полученных данных проводилась с использованием пакетов прикладных программ MS Excel, STATISTICA и SPSS. Нормальность распределений оценивали с использованием критерия Шапиро-Уилка. Оценки центральных тенденций и их вариаций представлены средними значениями (M) и стандартными ошибками (m), а также медианами (Me) с квартильным размахом (1 и 3 квартиль), так как более половины распределений не соответствовало критерию нормальности. Данные в таблицах представлены в виде $M \pm m$; Me (1 кв.; 3 кв.). Сравнения независимых групп проводили с использованием непараметрического критерия Манна-Уитни. Р-значение теста для каждой пары сравнений представлено в тексте и таблицах. Для уточнения взаимосвязи между количественными признаками и их совместного влияния на зависимую переменную (есть сепсис или нет) использовались логистическая регрессия и ROC-анализ. Пороговым значением для статистических критериев считалось $p=0,05$.

РЕЗУЛЬТАТЫ И ОБСУЖДЕНИЕ

Средние концентрации маркеров сепсиса в сыворотке крови пациентов сравниваемых групп в 1-2-е сут от начала заболевания, после операции или травмы были существенно выше величин, соответствующих верхним границам норм (табл. 2). У больных, составивших группу 1, были зарегистрированы более высокие концентрации биомаркеров ИЛ-6, ИЛ-2Л, ЛСБ и СРБ по сравнению с группой 2. Различия для последних трех маркеров показали высокий уровень статистической значимости (p 0,0005, p 0,00002, p 0,00009 соответственно для критерия Манна-Уитни). Межгрупповые различия в концентрации ПКТ и ИЛ-10 в ранние сроки не были выявлены (p 0,54 и p 0,88 для критерия Манна-Уитни). На рис. 1 наглядно представлен разброс значений каждого из изученных маркеров для обеих групп. Высокая статистическая значимость межгрупповых различий для ИЛ-2R, ЛСБ и СРБ позволила предположить возможность их использования для раннего прогнозирования развития сепсиса. Последнее могло бы позволить принять превентивные меры — внести изменения в тактику интенсивной терапии, усилить детоксикацию и иммунокоррекцию для улучшения исхода и снижения летальности. При выявлении направленной связи между значениями концентрации ИЛ-2LR, ЛСБ, СРБ, ИЛ-6 и бинарным исходом (сепсис развился / сепсис не развился) методом логистической регрессии установлено, что наиболее эффективным показателем оказался ЛСБ с уровнем значимости p 0,0016. При пороговом значении, равном 0,5, общая доля верных предсказаний для показателя ЛСБ оказалась 83,3%. При ROC-анализе показано, что площадь под кривой (AUC) составила 0,849, ее 95 доверительный интервал — 0,734-0,964, что указывает на «очень хорошее» качество модели (рис. 2). Пороговое значение, рассчитанное на основе индекса Ядена (J 0,721), составило 30,7 мкг/мл. Определенные для этой точки показатели чувствительности и специфичности составили соответственно

82,1 и 90,0. Таким образом, показатель ЛСБ вполне может быть использован в качестве предиктора развития сепсиса. На диаграмме рассеяния (рис. 3) представлено распределение значений ЛСБ вокруг точки отсечения для «септических» и «несептических» пациентов. Хотя для биомаркеров СРБ, ИЛ-2R, ИЛ6 как предикторов сепсиса статистические показатели логистической регрессии были вполне удовлетворительные, доминирование ЛСБ было значительным. Это наглядно но подтверждается ROC-кривыми (рис. 3). Для СРБ, ИЛ-2R, ИЛ-6 площади под кривой (AUC) составили 0,821; 0,788; 0,700 соответственно, что указывает на сложный характер взаимоотношений между предикторами при прогнозировании сепсиса и, в то же время, на возможность улучшения статистической модели при увеличении объема выборки и перспективность дальнейшего изучения этих показателей как предикторов сепсиса.

С учетом того, что в сформированные группы вошли пациенты как с инфекционными хирургическими заболеваниями (медиастинит, перитонит), так и пациенты, не имевшие признаков инфицирования в ранние сроки от начала заболевания или травмы (острый панкреатит и тяжелая сочетанная травма), логично предположить, что продукция про- и противовоспалительных цитокинов и маркеров активности воспалительного процесса у них будет различаться. Однако скромный объем сравниваемых нозологических групп не позволил выполнить полноценный статистический анализ.

Результаты определения концентрации ПКТ в 1-2-е сут после травмы или начала заболевания показали, что Этот маркер не является специфическим и реагирует не только на инфекционный процесс. Показатели у большинства обследованных больных, вошедших в 1-ю и 2-ю группы, превышали верхнюю границу нормы в 2 и более раз. Только у 4 пациентов из 1-й группы (у 2 с медиастинитом и у 2 с панкреатитом) и у 4 — из 2-й группы (3 — с сочетанной травмой и 1 — с панкреатитом) концентрация ПКТ находилась на подпороговом уровне и колебалась в пределах 0,05-0,48 нг/мл.

С-реактивный белок, который всегда повышается при развитии воспаления, также многократно превышал верхнюю границу нормы у пациентов всех групп. Однако при асептическом воспалении (после тяжелой сочетанной травмы и при деструктивном панкреатите) в 1-2-е сут его концентрация была значительно выше у пациентов, вошедших в 1-ю группу: 264,0 (151,0); 290,7 и 201,0 (89,7); 232,0 против 57,8 (26,2); 102,6 и 88,1 (87,1); 89,05 мг\л у пациентов, вошедших во 2-ю группу.

(<i>M±m</i> ; Me [1 кв.; 3 кв.])						
Группы Больных	ПКТ, мкг/мл	ИЛ-10, пг/мл	ИЛ-6, пг/мл	ИЛ-2R, Е/мл	ЛСБ, мкг/мл	СРБ, мг/л
Референтные значения	0-0,5	0-20,0	0-5,9	158-625	2,2-11,4	0-5,0
1-я группа, n=28	Me 5,83 [1,65; 10,72]	Me 31,9 [17,9; 150,5]	Me 95,2 [5,5; 346,5]	Me 1783,0 [104,0; 1206,5]	Me 50,4 [2,4; 70,4]	Me 198,5 [115,6; 278,5]
2-я группа, n=20	Me 4,55 [1,17; 5,34]	Me 39,2 [14,43; 44,0]	Me 56,5 [42,0; 95,4]	Me 682,5 [50,5; 1151,5]	Me 22,1 [10,9; 78,7]	Me 71,5 [4,2; 134,0]
p-данные Манна-Уитни	0,54	0,88	0,019	0,0005	0,0002	0,0009

Примечания: ИЛ-6 – интерлейкин-6; ИЛ-10 – интерлейкин-10; ИЛ-2R – рецептор к интерлейкину-2; ЛСБ – липополисахарид-связывающий белок; ПКТ – прокальцитонин; СРБ – С-реактивный белок

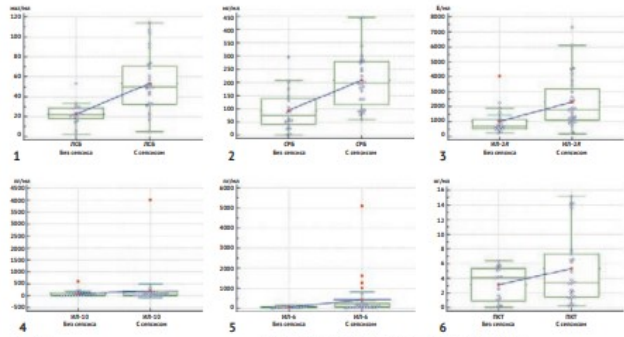


Рис. 1. Диаграммы распределения по концентрации ЛСБ (1), СРБ (2), ИЛ-2R (3), ИЛ-6 (4), ИЛ-10 (5) и ПКТ (6) для пациентов с тяжелым сепсисом (1-я группа) и без сепсиса (2-я группа).
Примечания: ИЛ-6 – интерлейкин-6; ИЛ-10 – интерлейкин-10; ИЛ-2R – рецептор к интерлейкину-2; ЛСБ – липополисахарид-связывающий белок; ПКТ – прокальцитонин; СРБ – С-реактивный белок

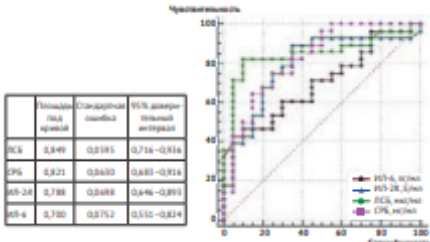


Рис. 2. ROC-кривые ЛСБ, СРБ, ИЛ-2R и ИЛ-6 для оценки риска развития септических осложнений в 1-2-е сут от начала заболевания или травмы.
Примечания: ИЛ-6 – интерлейкин-6; ИЛ-2R – рецептор к интерлейкину-2; ЛСБ – липополисахарид-связывающий белок; СРБ – С-реактивный белок

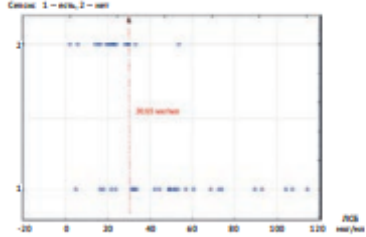


Рис. 3. Диаграмма рассеяния. Уровень ЛСБ у пациентов с верифицированным сепсисом и без него. Точка отсечения 30,65 мкг/мл.
Примечание: ЛСБ – липополисахарид-связывающий белок

При хирургических заболеваниях инфекционного характера (медиастинит, перитонит) разница между концентрациями СРБ в 1-2-е сут у больных, вошедших в 1-ю и 2-ю группы, практически отсутствовала и составила 196,0 (174,0); 276,0 и 139,7 (95,3); 188,5 у пациентов 1-й группы и 247,5 (223,7); 271,2 и 135,6 (99,9); 171,3 у пациентов 2-й группы. Цитокинам отводится ведущая роль в развертывании медиаторного механизма сепсиса, для которого характерен дисбаланс про- и противовоспалительных цитокинов за счет их неотрегулированной экспрессии. Считается, что важную роль в развитии генерализованного воспалительного каскада при сепсисе играют такие цитокины, как ФНО- α , ИЛ-1 β , ИЛ-2 и его растворимый рецептор (ИЛ-2R), ИЛ-6, ИЛ-8, ИЛ-10 >1, 12. При длительно сохраняющемся дисбалансе цитокинов развивается или гиперактивный воспалительный процесс, приводящий к формированию ранней полиорганной дисфункции, или воспаление принимает ареактивный характер, клинически проявляющийся торпидным течением септического процесса, также приводящего к органной дисфункции в более поздние сроки (2). Спектр биологического действия цитокинов проявляется в многообразных изменениях метаболизма, гемопоэза, свойств сосудистой стенки, функции регуляторных систем, в том

числе центральной нервной и иммунной систем. Поэтому с учетом индивидуальной реактивности пациентов несомненный интерес представляет оценка изменений концентрации цитокинов в ранние сроки от начала заболевания для определения характера реагирования организма на повреждающие воздействия и прогноза развития септических осложнений. Кроме цитокинов в патогенезе септических осложнений определенную роль играют такие белковые соединения, как ПКТ, СРБ и РСБ, продукция которых тесно связана с развитием воспаления. С практической точки зрения важным было указание на связь высокой концентрации ПКТ с системной воспалительной реакцией в ответ на разного рода повреждающие воздействия и инфекционную агрессию. Наши результаты подтвердили, что повышение концентрации ПКТ сразу после травмы или начала заболевания происходило как при асептическом, так и инфекционном характере системной воспалительной реакции. Это полностью согласуется с опубликованными данными, объясняющими значительное повышение ПКТ не только при септических, но и асептических процессах, таких как травма, ожоги, острый панкреатит вследствие того, что синтез ПКТ в мононуклеарных клетках, кодируемый мРНК, активируется провоспалительными цитокинами ИЛ-1 β , ИЛ-2, ИЛ-6 ФНО- α , уровень в крови которых при таких состояниях существенно повышается (15, 16). Таким образом, повышение уровня ПКТ сразу после механической или хирургической травмы более вероятно является маркером тяжести повреждений, а не индикатором септического статуса, так как на концентрацию ПКТ оказывают влияние множество факторов, в том числе — обширность и локализация повреждений, объем хирургического вмешательства, интенсивная трансфузионная терапия >17, что создает предпосылки к развитию сепсиса. Вне зависимости от характера воспалительного процесса, в 1-2-е сут после травмы, операции или начала заболевания концентрация ПКТ была повышена у большинства (у 40 из 48 обследованных больных). Известно, что пиковые концентрации ПКТ наблюдаются через 8-12 ч после тяжелой травмы, сохраняются до 48 ч и быстро снижаются в случае отсутствия инфекционных осложнений. Полученные нами результаты не позволили выявить статистически значимых различий этого показателя в 1-2-е сут в сравниваемых группах.

Это можно объяснить тем, что в их состав вошли разнородные по Этиологии, но примерно одинаковые по тяжести состояния пациенты. В то же время ранее нами было показано, что у пострадавших с тяжелой сочетанной травмой (ISS более 30 баллов) повышение в первые сутки концентрации ПКТ более 1,4 нг/мл является достоверным предиктором бронхо-легочных осложнений (18). Из литературы известно, что самые высокие концентрации СРБ и ПКТ регистрируются у пациентов с септическим шоком что для прогнозирования исхода необходимо исследовать этот показатель в динамике, тогда как однократное исследование не позволяет прогнозировать исход (19). Однако результаты настоящего исследования показали, что уже с первых суток от начала заболевания, после операции или травмы

концентрация СРБ в крови пациентов с воспалением асептического характера и развившимся впоследствии сепсисом значительно превышала таковую у пациентов без сепсиса, что подчеркивает прогностическую значимость данного показателя у этой категории больных. Отсутствие различий в концентрации СРБ у пациентов с воспалительным процессом инфекционного характера (медиастинитом и перитонитом), вошедших в 1-ю и 2-ю группы, косвенно указывает на отличие механизмов, стимулирующих продукцию этого белка в ранние сроки от начала заболевания.

Липополисахарид-связывающий белок — секретируемый белок, компонент острой фазы, усиливающий воспаление, с высокой аффинностью связывает бактериальный липополисахарид и усиливает соединение с ним макрофагального рецептора CD14, обеспечивая тем самым первый этап в процессе моноцитарного иммунного ответа. Высокие уровни ЛСБ являются предикторами неблагоприятного исхода, включая респираторный дистресс-синдром и смерть, поэтому измерение его концентрации может выявить пациентов, которым необходимо усилить превентивные лечебные процедуры, направленные на уменьшение интоксикации и коррекцию иммунных нарушений (20). В настоящем исследовании была установлена пороговая концентрация ЛСБ — 30,7 мкг/мл, превышение которой с высокой достоверностью указывает на вероятность развития сепсиса.

В последние годы внимание многих исследователей привлекает одновременное измерение ИЛ-6 и ЛСБ. Интерес обусловлен тем, что активный синтез ИЛ-6 начинается сразу после воздействия на клетки иммунной системы различных медиаторов, бактерий, вирусов, митогенов. Быстрая и выраженная реакция на всю эту многообразную группу эндогенных и экзогенных веществ указывает на то, что данный цитокин относится к категории ранних медиаторов. Период полувыведения у ИЛ-6 — 45 мин, поэтому, измеряя его содержание в сыворотке крови в динамике, можно контролировать развитие острого воспалительного ответа на хирургическую агрессию, травму или инфекции. В зависимости от того, развивается эта реакция быстро или медленно, можно прогнозировать степень риска развития септического осложнения и его исход (21). Полученные нами результаты позволили отнести ИЛ-6 к прогностически значимым параметрам даже при однократном исследовании у пациентов с тяжелой сочетанной травмой и медиастинитом. Одновременное повышение концентрации ИЛ-6 и ЛСБ в 1-2-е сут от начала заболевания позволяет с высокой степенью достоверности прогнозировать развитие сепсиса.

Интерлейкин-10 (ИЛ-10) относится к числу противовоспалительных цитокинов. Его продуцентами могут быть моноциты, макрофаги, активированные Тхелперы. ИЛ-10 ингибирует продукцию всех провоспалительных цитокинов макрофагами, в том числе продукцию ИЛ-1, ИЛ-6 и ФНО- α . В ряде случаев, например, под влиянием иммунных комплексов, продукция ИЛ10 резко усиливается. При этом избыток ИЛ-10

ведет к снижению противоинфекционной защиты и развитию хронических инфекций (22).

Наиболее информативным оказалось измерение растворимых рецепторов к ИЛ-2, которые при патологических состояниях в большинстве случаев находятся в периферической крови и связывают избыток ИЛ-2 в кровяном русле. ИЛ-2R играет решающую роль в регуляции иммунного ответа. Связывание ИЛ-2 с его рецептором (ИЛ-2R) на поверхности Т-лимфоцита запускает серию внутриклеточных сигнальных процессов, в результате которых происходит активация и пролиферация покоящихся Т-клеток с образованием субпопуляций Т-хелперов, Т-супрессоров и цитотоксических Т-лимфоцитов, которые реализуют иммунный ответ. Таким образом, растворимый ИЛ-2R можно использовать в качестве маркера для диагностики и мониторинга септических состояний, а также в качестве индикатора широкого спектра нарушений, в которых затрагивается иммунная активация (23, 24). В большинстве исследований, посвященных оценке диагностической значимости различных биомаркеров, представлены довольно противоречивые результаты, что обусловлено, скорее всего, тем, что в группы больных с сепсисом включали пациентов, отвечающих неспецифическим критериям системного воспалительного ответа в соответствии с рекомендациями согласительных конференций 1991, 2002 и 2012 гг. (25, 26).

ЗАКЛЮЧЕНИЕ

Полученные нами результаты показали, что, несмотря на то, что содержание исследованных маркеров у подавляющего большинства обследованных больных существенно превышало верхнюю границу нормы и менялось в широком диапазоне концентраций, наиболее высокие показатели выявлены у пациентов с развившимся сепсисом.

Не имея возможности проведения генетических исследований, которые по данным ряда научных исследований помогают выявить лиц с высоким риском развития септических осложнений (27), нам, тем не менее, удалось определить прогностически значимые показатели, с высокой степенью вероятности указывающие на риск развития сепсиса.

Оценивая полученные результаты, можно заключить, что в случае избыточной продукции провоспалительного цитокина ИЛ-6 и ЛСБ на фоне высокой концентрации СРБ, недостаточной продукции ИЛ-10 и гиперпродукции ИЛ-2R вероятность развития сепсиса многократно повышается.

Несмотря на малочисленность сравниваемых групп, полученные результаты указывают на возможность использовать в качестве предикторов сепсиса у пациентов с высоким риском его развития такие маркеры, как ЛСБ, СРБ, ИЛ-2R и ИЛ-6.

ВЫВОДЫ

1. Наиболее высокие концентрации маркеров активности воспалительного процесса в 1-2-е сутки от начала заболевания или травмы определяются в крови пострадавших с развившимся в более поздние сроки сепсисом.

2. В качестве предикторов сепсиса у пациентов с высоким риском его развития возможно использовать такие маркеры, как ЛСБ, СРБ, ИЛ-2R и ИЛ-6 в 1-2-е сутки от начала заболевания или после травмы.
3. Вероятность сепсиса многократно повышается при избыточной продукции в 1-2-е сутки провоспалительного цитокина ИЛ-6 и ЛСБ на фоне высокой концентрации СРБ, недостаточной продукции ИЛ-10 и гиперпродукции ИЛ-2R.

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РИВОЖЛАНТИРУВЧИ ТАЪЛИМИЙ ТЕХНОЛОГИЯЛАР ВОСИТАСИДА БОЛАЛАРНИ МАКТАБ ТАЪЛИМИГА ТАЙЁРГАРЛАШ

***АННОТАЦИЯ** Мазкур мақолада мактабга тойёрлов гуруҳининг мактаб таълимига тайёрлаш, узлуксиз таълимнинг бош бўғини ҳисобланган Мактабгача таълимнинг асосий вазифаларидан бири болани мактаб таълимига тайёрлаш эканлиги, МТМдаги таълим-тарбия шароитларида мактаб таълимига озорсиз ўтказишни таъминлаш зарурлигини ҳисобга олишлари лозимлиги ҳақида сўз боради.*

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PREPARING CHILDREN FOR SCHOOL EDUCATION THROUGH DEVELOPING EDUCATIONAL TECHNOLOGIES

***ANNOTATION** This article deals with preparing preschool group children to primary education which is fundamental base of continuously education. Also given some important methods on primary education.*

Замонавий мактабгача таълимнинг асосий тенденцияларидан бири ўқитишда кўпроқ ахборот шаклидан изланиш, тарбияланувчиларнинг мустақил ишлари, имкониятларидан кенг фойдаланиш асосида ўқитишнинг ҳамкорликдаги фаол метод ва шаклларига ўтишни кўзда тутди. Бу эса, тарбияланувчиларнинг индивидуаллиги, ўзига хослиги ва эҳтиёжлари доирасидан келиб чиқиб, мактабгача таълим ташкилотларидаги таълим-тарбия жараёнларини ташкил этишга инновацион ёндашувни шакллантириш, ривожлантирувчи таълим муҳитини яратиш эҳтиёжини вужудга келтирди.

Ривожлантирувчи таълим бу болага таълим жараёнини субъекти сифатида қарайдиган педагогик тизимдир. У индивидуал имкониятларидан келиб чиқиб, унинг ривожланишига имкон беришга йўналганлиги билан аниқ тавсиялар берувчи, ўқитувчи имкониятларига таянувчи анъанавий методикадан фарқ қилади. Унинг моҳиятини таълим-тарбия жараёнини шахсга йўналганлик асосида лойиҳалаш ва тизимли бошқариш ғояси ташкил этади. Бундай фаолият турида бола ўз тенгдошлари ва тарбиячиси билан ўзаро фаол “субъект ↔ субъект” муносабатларига киришади.

Маълумки, мактабга тайёрлов гуруҳи болалари билан олиб бориладиган машғулотлар мазмуни, шакли ва методлари тарбияланувчиларнинг мактаб таълимига тайёргарликларини шакллантиришга, уларнинг ижодий-тадқиқотчилик ва мустақил билиш фаолиятини ривожлантиришга хизмат қилиши, диагностик мақсадларга йўналтирилганлиги билан билан мактаб бошқа ёш гуруҳларидан ажралиб туради.

Илмий-педагогик адабиётлар ва тадқиқотлар асосида мактабга тайёрлов гуруҳи болаларининг мактаб таълимига тайёргарлигини диагностика қилиш ва ривожлантириш борасидаги қуйидаги МДХ ва республикамиз олимларининг дастурларини таҳлил этдик:

- “Школа-2100” таълимий дастури - А.А. Леонтьев ва бошқ.;
- 3-6 ёшли болаларни математик тасаввурларини шакллантириш дастури-Л.Г.Петерсон, Е.Е. Кочемасова, Н.П. Холина;
- “Ривожланиш” (Развитие) - Л.А. Венгер, О.М. Дьяченко, Н.Ф. Астаськова, Н.А. Короткова, Н.Я. Михайленко;
- “Болалик” (Детство) – В.И.Логинова, Т.И.Бабаева, Л.М.Гурович;
- “Иқтидорли бола” (Одарённый ребёнок) - Л.А. Венгер, О.М. Дьяченко, Е.Л.Агаева;
- “Илк қадам” мактабгача таълим муассасаларининг Давлат ўқув дастури – И.В.Грошева, Д.Т.МАхмудова, Г.Э.Джанпеисова ва бошқ.;
- мультимедиа технологиялари воситасида мактабгача ёшдаги болаларда математик тасаввурларни шакллантириш дастури – Х.Ё.Нажмиддинова кабилардир.

Бизга маълумки, “Илк қадам” давлат дастурида боланинг ривожланиш харитаси кўзда тутилган бўлиб, у бола ривожланишини хужжатлаштиришнинг асосий шакли ҳисобланади. Боланинг индивидуал ривожланишини кузатиш учун Ўзбекистон Республикаси давлат талабларидан бола ривожланишининг соҳалари ва кичик соҳалари ҳамда кутилаётган натижалар (кўникма ва малакалар) назарда тутилган. Ривожланиш харитаси турли соҳаларда боланинг фаолият даражаси ҳақида ахборотни тизимли йиғиш жараёни тузилмасини ҳосил қилади. Ривожланиш хариталарида қайд этилган маълумотлардан болалар олдида мақсадлар қўйиш ва уларни ривожлантиришга ёрдам берадиган ҳаракатларни режалаштиришда фойдаланамиз. Ривожланиш харитасида бола ривожланишининг барча соҳалари бўйича давлат талабларига мувофиқ мезонлар ва тагмезонлар келтирилган.

Боланинг ривожланиш харитаси ҳар бир бола учун ҳар йили камида уч марта алоҳида тўлдирилган 3 дан 7 ёшгача бўлган даврни ўз ичига олади. Ривожланиш харитасининг мақсади ривожланишнинг умумий қабул қилинган ёш меъёрларига (давлат талабларига) мувофиқ, болалар ривожланишининг индивидуал ва жамоавий ҳолатини аниқлашга имкон берувчи оддий ва қулай восита билан педагогни таъминлашдир ва зарур ҳолларда жорий таълим жараёнини ташкил этиш тактикасини ўзгартиришдир

(камчил соҳаларни тортиш ёки ривожланишнинг эришилган даражасини инобатга олган ҳолда мазмунни мураккаблаштириш).

Дастлабки кузатиш ўқув йилининг бошида ўтказилади (тахминан сентябрнинг биринчи икки ҳафтаси давомида). Бу болалар гуруҳдаги кун тартибига кўникишганида ва бир-бирлари билан яқиндан танишганларида амалга оширилиши лозим. Бу босқичда қуйидагилар аниқланади:

- ҳар бир боланинг бошланғич имкониятлари (ҳозирги даврда долзарб бўлган ривожланиш даражаси);

- шу вақтга қадар унинг ютуқлари ҳамда ўқув йили бошида ривожланишидаги эҳтиёж ва камчиликлар (муаммолар) аниқланиб, уларни ҳал этиш учун педагог ёрдами керак бўлади.

Педагог боланинг ривожланиш харитасини тўлдириб, эришилган натижани белгилади. Кузатиш ривожланишнинг барча соҳаларида амалга оширилади. Агар ривожланишнинг маълум бир соҳасида индикатор (кутилаётган натижа) “ишламаса”, педагог хошияларга қайдлар қилиши лозим. Боланинг баҳолаш натижалари асосида шакллантирилган таълим ва ривожланиш мақсадлари бола портфолиосининг бир қисмига айланиши мумкин. Боланинг ривожланиш даражаси қуйидаги изоҳлар ёрдамида ўлчаниши лозим:

- Т – турғун кузатилади – бола талаб даражасида асосий кўникма-ҳаракатни намоён қилади ҳамда буни такроран ва мустақил амалга оширади.

- М – мунтазам кузатилади – бола асосий кўникма/ҳаракатни тез-тез, тегишли вазиятларда намоён қилади.

- Б – баъзида кузатилади – бола асосий кўникма/ҳаракатни муайян вазиятларда ёки тўсатдан намоён қилади.

- К – кузатилмайди ёки камдан-кам кузатилади – бола асосий кўникма/ҳаракатни камдан-кам намоён қилади ёки умуман қилмайди.

Худди шу тамойил бўйича оралиқ кузатув ҳам ўтказилади. У биринчи ярим йилликнинг охирида (декабрь, январь) ўтказилади. Бу кузатишдан мақсад ўқув йили бошида болага нисбатан танланган методиканинг тўғрилигини ҳамда ривожланиш динамикасини аниқлашдан иборат. Дастлабки кузатиш натижалари бўйича белгиланган ривожланиш мақсадларига эришилган бўлса, ўқув йилининг иккинчи ярми учун янги ривожланиш мақсадлари белгиланади.

Ўқув йили охирида (одатда май ойида) педагог якуний кузатувни ўтказади, унинг натижалари бўйича бола эришган даража давлат талабларига мувофиқ баҳоланади.

Ана шу кузатиш асосида вазифалар қанчалик самарали ҳал этилгани тахмин қилинади. Учта баҳолаш натижалари асосида охириги якуний кузатувдан сўнг ўқув йили давомида боланинг ривожланиши ҳақида қисқача ҳисобот тузилади ва кейинги педагогик жараённинг мақсадлари шу боланинг ривожланишида янги кутилаётган натижаларни ҳисобга олган ҳолда кейинги ўқув йилида аниқланади.

Ўйинлар одатий ҳаётий вазиятларни тақлид қилиш имконини беради, ўйин давомида қизғин ақлий фаолият олиб борилади, назарий билим ва ўз амалий тажрибасидан фойдаланган ҳолда жамоавий равишда оптимал ечимларни излашади.

Бугунги кунда мактабгача таълим ташкилотларида ишбилармонлик ўйинлари кенг тарқалган бўлиб, бу ўйиннинг ижобий ва салбий томонлари мавжуд. Ижобий томони ишбилармонлик ўйинлари бола шахсини шакллантириш ва таълим-тарбия жараёнини такомиллаштириш воситаси сифатида ташкил этилади. Салбий томони ишбилармонлик ўйинининг моҳиятини, авваламбор, педагогик ҳодиса сифатида етарлича чуқур тушунмаслик билан боғлиқ, бунда асосийси ташқи шакл эмас, балки у орқали боланинг ривожланишига таъср этувчи мураккаб психологик ва педагогик омиллардир.

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ГИДРОЛОГИЯ АСПЕКТЫ ФОРМИРОВАНИЯ ПРОФЕССИОНАЛЬНОЙ КОМПЕТЕНТНОСТИ СТУДЕНТОВ ОБРАЗОВАТЕЛЬНОГО НАПРАВЛЕНИЯ

Аннотация: В статье представлены авторские взгляды на процесс становления студентов направления инженерного образования в высших учебных заведениях в качестве специалистов. В отличие от ранее выработанных взглядов на то, что становление личности как специалиста зависит от возрастных особенностей и стажа работы, автор указывал на то, что профессиональная компетентность личности определяется не функцией этих параметров, а скорее в зависимости от того, на каком этапе профессионального становления находится человек.

Ключевые слова и фразы: профессия, компетенция, индивид, знания, личность, умение, деятельность, профессиональное становление, профессиональное мастерство, профессиональное становление, индивидуальность.

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HYDROLOGY ASPECTS OF FORMATION OF PROFESSIONAL COMPETENCE OF STUDENTS OF THE EDUCATIONAL DIRECTION

Abstract: The article presents the author's views on the process of formation of students of the engineering education direction in higher educational institutions as specialists. In contrast to previously developed views that the formation of an individual as a specialist depends on age characteristics and work experience, the author pointed out that the professional competence of an individual is determined not by the function of these parameters, but rather depending on what stage of professional development a person is at.

Keywords and phrases: profession, competence, individual, knowledge, personality, skill, activity, professional development, professional mastery, professional development, individuality.

Введение: Как известно, в демократическом обществе, основанном на рыночных отношениях, существует каждый человек, занимающий ту или иную должность или должность степень, в которой профессионал имеет право на соответствующее место, зависит от насколько удовлетворены разнообразные требования к владельцу работы или услуги измеряется с

помощью. В последующие годы на пути разработки основ расчета такой степени приемлемости между должностью или должностью и лицом, претендующим на ту же должность или должность, в ряде стран мира возник ряд концепций, касающихся исследования профессиональных компетенций и практического применения результатов таких исследований.

Повышение эффективности обучения студентов в высших учебных заведениях, более качественная организация урока и образовательного процесса:

Сначала, высококвалифицированные педагоги в системе должны готовить кадры, непрерывно и качественно повышать свою квалификацию;

Во-вторых, к организации в образовательных учреждениях непрерывного качественного методического обслуживания, основанного на профессиональных трудностях и потребностях педагогов;

В-третьих, к эффективному использованию имеющихся предметных кабинетов, учебного лабораторного оборудования, оборудования и компьютерной техники в целом при любых условиях;

В-четвертых, внедрять в практику передовой опыт работы в организации качественного образовательно-воспитательного процесса, при сотрудничестве высших учебных заведений, институтов повышения квалификации и общеобразовательных школ;

Самое главное, непосредственно зависит от профессиональной компетентности и компетентности педагогов, осуществляющих деятельность в системе народного образования.

Степень изученности проблемы. Современное образование, требующее глубоких реформ, модернизации, само по себе ставит вопрос о компетентностном подходе на передний план. Это, безусловно, потребует подготовки будущего педагога с профессиональной компетентностью. Основной целью обучения является формирование у ученика общественно необходимых качеств и компетентности, самосознания как личности, постоянное совершенствование собственных знаний, повышение самоконтроля и активизации.

Конечно, степень изученности данной темы можно увидеть в научных исследованиях, проводимых многими зарубежными и отечественными высшими и специалистами. Если мы хотим взглянуть на деятельность системы высшего педагогического образования США, В.Д.Вулфсон, Т.Н.Курилова, З.А.Научные труды Малковой и др., Если мы хотим узнать о целях педагогического образования в США, Н.Д.Никандрова, В.Я.Пилиповский, г. по профессионально-педагогическому образованию будущих педагогов.

Г.Агапова, О.О.Боровикова, В.С.Работы Буденко и др., а о системе повышения квалификации учителей США-В.В.Гаргай, Н.И.Глядя на работы кустиновой и др., становится целесообразным. Из научных трудов вышеназванных ученых можно представить, что система образования России и США дополняет и обогащает друг друга. Очевидно, что в США,

Канаде, Австралии и ряде европейских стран создана сплошная система подготовки педагогических кадров, и они широко изучают эту проблему, вкладывая ее в определенную систему.

Результаты исследований и обсуждения. Авторское видение представлено в контексте процесса становления личности как специалиста. В отличие от ранее выработанных взглядов на то, что становление личности как специалиста зависит от возрастных особенностей и стажа работы, автор указывал на то, что профессиональная компетентность личности определяется не функцией этих параметров, а скорее в зависимости от того, на каком этапе профессионального становления находится человек. Необходимость непрерывного развития системы подготовки квалифицированных кадров и неспособность в полной мере реализовать свои возможности лица, имеющего многолетний стаж работы в различных отраслях производства, породили проблему самореализации личности во всесторонней профессиональной деятельности. Без решения этих проблем невозможно осуществить успешное качественное обучение и планирование будущей профессиональной деятельности.

Практическая значимость этой проблемы показала важность ее изучения как в рамках психологии, так и в различных областях науки. Трудности изучения процесса профессионального становления заключаются в том, что способности и профессиональные умения ориентированы на нормативную деятельность, основанную на определенном способе выполнения работы. Именно поэтому выделяется не уровень профессиональной зрелости, а только возрастная особенность и время, которое проводится в качестве специалиста.

Вопрос профессионального становления личности исследовался многими авторами. Это частый процесс в человеческом развитии. Часто специалист попадает под полный анализ личности, в то время как стадия профессионального становления личности рассматривается в соответствии со стадией жизненного пути. Поэтому он строго ограничен по времени.

Заключение. При изучении профессионального становления студентов инженерного образовательного направления в высших учебных заведениях важно придавать значение различным типам социальных связей между субъектом и социальной средой, которые полностью раскрывают возможности человека. Для нас важно, чтобы каждое социальное взаимодействие было разделено на подтипы, такие как человечность и коммуникабельность. *Birinchi tipda sub'ekt o'zini "topgan", o'zida va faoliyatida o'zini o'zgartirishni hoхlamasligi bilan tavsiflanadi.* Второй тип объясняется тем, что субъект "ищет" себя. Это переходное, промежуточное состояние. Индивид (или общество) покидает одну форму и достигает другого высшего уровня общества.

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ИҚТИСОДИЙ – ИЖТИМОЙ ГЕОГРАФИЯ ИЛМИЙ МАКТАБЛАРИНИНГ ШАКЛЛАНИШИ

Аннотация: *Мазкур мақолада Баранский-Колосовский илмий мактабининг собиқ Совет Иттифоқи иқтисодий географиясидаги ўрни ва унинг илмий-назарий ютуқлари ёритилган. Асосий эътибор ҳудудий меҳнат тақсимоти, иқтисодий районлаштириши, ва ҳудудий ишлаб чиқариш мажмуаларининг шаклланишига қаратилган. Ушбу мактаб нафақат назарий, балки амалий жиҳатдан ҳам иқтисодий географияни ривожлантиришига сезиларли ҳисса қўшган.*

Калит сўзлар: *иқтисодий география, Баранский, Колосовский, ҳудудий меҳнат тақсимоти, иқтисодий районлаштириши, ишлаб чиқариш мажмуалари, энергия ишлаб чиқариш цикллари.*

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FORMATION OF SCIENTIFIC SCHOOLS IN ECONOMIC AND SOCIAL GEOGRAPHY

ABSTRACT: *This article highlights the role and achievements of the Baranskiy-Kolosovskiy scientific school in the economic geography of the former Soviet Union. The focus is on the development of regional labor division, economic zoning, and territorial production complexes. This school significantly contributed to the theoretical and practical advancement of economic geography.*

KEY WORDS: *economic geography, Baranskiy, Kolosovskiy, regional labor division, economic zoning, production complexes, energy production cycles.*

АННОТАЦИЯ: В статье освещается роль и достижения научной школы Баранского-Колосовского в экономической географии бывшего Советского Союза. Основное внимание уделяется развитию территориального разделения труда, экономического районирования и территориальных производственных комплексов. Эта школа внесла значительный вклад как в теоретическое, так и в практическое развитие экономической географии.

КЛЮЧЕВЫЕ СЛОВА: экономическая география, Баранский, Колосовский, территориальное разделение труда, экономическое районирование, производственные комплексы, циклы производства энергии.

Ўтган асрнинг 1920-йилларининг бошларида иқтисодий географиянинг янги минтақавий йўналишлари таниқли собиқ иттифоқ географи, 20-аср рус илмий географик мактабининг асосчиси Николай Николаевич Баранский (1881–1963) томонидан ишлаб чиқилди. 1926 йилда у инқилобдан кейинги биринчи иқтисодий география дарслигини тайёрлади (СССР иқтисодий географияси). Иқтисодиёт ва география фанлари масалаларини назарий жиҳатдан ишлаб чиқиш соҳасидаги ажойиб хизматлари учун Социалистик Меҳнат Қаҳрамони унвонини олган биринчи олим-географлардан бири эди. 1929 йилда унинг ташаббуси билан иқтисодий географларнинг биринчи Бутуниттифоқ конференцияси бўлиб ўтди.

Н.Н.Баранскийнинг асарлари иқтисодий география назарияси ва амалиёти, вилоятлар ва шаҳарлар ҳақидаги таълимот, иқтисодий-географик жойлашув ва ҳудудий меҳнат тақсимоти ҳамда минтақашунослик ва хўжалик картографиясининг шаклланишида асос бўлди. Олим олий ўқув юртларида география ўқитишнинг конструктив методикасини ҳам ишлаб чиқди.

Н.Н.Баранский мамлакатда иқтисодий география фанининг энг йирик ташкилотчиси сифатида тан олинган. Унинг ташаббуси билан Коммунистик университетда иқтисодий география кафедралари ташкил этилди. Унинг фаол иштирокида “География саволлари”, “География ва иқтисод” туркум тўпламлари, “География мактабда” журнали нашр этилиши ташкил этилди.

Николай Николаевич Баранский ҳақли равишда собиқ иттифоқ ижтимоий-иқтисодий географиясининг асосчиси ҳисобланади, Унинг хизматлари қуйидагилардан иборат:

1. Фаннинг предметини - иқтисодий районни маълум табиий ва меҳнат ресурсларига эга бўлган ҳудуд, мураккаб, тарихан шаклланган иқтисодиёт мажмуаси ва мамлакат тизимининг бўғинини ташкил этувчи хилма-хил ички ва ташқи алоқалар сифатида белгилаб берди;

2. "Географиклаштирилган" иқтисодий география, яъни уни география фанлари тизимига киритди, бошқа фанлар билан алоқаларни ўрнатди;

3. Географиянинг фан сифатида бирлигини ҳимоя қилди, яъни иқтисодий ва табиий география ўртасидаги боғлиқликни кўрсатди;

4. "Антропогеография" ва "Географик детерминизм"нинг бир-бирига мос келмаслигини қайд этиб, одамларнинг хўжалик фаолиятида табиий муҳитнинг ўрни тўғрисидаги масалани ишлаб чиқди;

5. Ҳудудий меҳнат тақсимоти назариясини яратди, унинг асосий ҳаракатлантирувчи жиҳати уни амалга оширишдан олинган иқтисодий фойдани исботлади;

6. Иқтисодий-географик жойлашувнинг асосли назариясини, яъни фазовий алоқалар ва муносабатлар назариясини ҳамда уларнинг географик меҳнат тақсимоти жарайонида тарихий ўзгаришларини аниқлади;

7. Г.М.Киржижановский, И.Г.Александров ва бошқалар раҳбарлигида ишлаб чиқилган иқтисодий районлаштириш назариясини такомиллаштирди;

8. Иқтисодий-географик картографияга асос солди ва хаританинг фандаги ўрнини белгиловчи 6 та коидани шакллантирди.

Собиқ иттифоқ даври иқтисодий географиясининг яна бир асосчиси Госплан Районларини ишлаб чиқувчилардан бири **Николай Николаевич Колосовский** (1891-1954) эди. **Унинг илмий ютуқлари:**

1. Урал-Кузнецк комбинатини (УКК) яратишда қатнашган;
2. Прибайкал мажмуаси ва Ангарск энергетика тизимининг яратувчиларидан бири эди;

3. Уруш йилларида мамлакатнинг шарқий районларидан эвакуация қилинган корхоналарни жойлаштиришда қатнашган;

4. Худудий-ишлаб чиқариш мажмуалари (ХИЧМ) назариясини ишлаб чиқди, унинг моҳияти географик жойлашувини ҳисобга олган ҳолда, табиий ресурслар ва ижтимоий-иқтисодий салоҳиятдан оқилона фойдаланган ҳолда иқтисодиётни оқилона худудий ташкил этишдан иборат экнлигини исботлади;

5. Энергия ишлаб чиқариш цикллари (ЭИЧЦ) ғоясини одатий, бир қатор минтакаларда такрорланадиган энергия ишлаб чиқариш жарайонлари ва улар атрофида гуруҳланган саноат сифатида киритди.

Собиқ иттифоқ иқтисодий географиясининг муҳим асоси Баранский - Колосовский район илмий мактаби, жумладан иқтисодий ва географик жойлашув, иқтисодий районлаштириш ва худудий ишлаб чиқариш комплекслари назарияси эди. Николай Николаевич Колосовский иқтисодий-географик жойлашув назариясини ва собиқ иттифоқ иқтисодий географияси илмий мактабининг асосларини ишлаб чиқди. Николай Николаевич Колосовский яратган ХИЧМлар умумий инфратузилмада шаклланган тармоқларнинг ўзаро боғлиқ бирикмаси сифатида қаралди. ХИЧМни шакллантириш учун энергия ишлаб чиқариш цикллари (ЭПС) усулини таклиф қилди. Энергия ишлаб чиқариш цикллари – бу, маълум турдаги хом ашё ва энергия учун технологик ишлаб чиқариш цикллариининг ўзаро уйғунлигидир.

Хулоса. Мақолада собиқ Совет Иттифоқи иқтисодий географиясининг машхур Барановский-Колосовский илмий мактаби ва унинг аҳамияти батафсил ёритилган. Ушбу мактаб иқтисодий районлаштириш, худудий меҳнат тақсимооти, ва худудий ишлаб чиқариш мажмуаларининг илмий-назарий асосларини яратган ҳолда халқаро миқёсда эътироф этилган. Баранский-Колосовский илмий мактаби иқтисодий географиянинг асосий назарияларини ишлаб чиқиб, илмий ва амалий жиҳатдан катта аҳамият касб этган. У худудий тизимларни ўрганишда, уларнинг истиқболлари ва самарали ташкил этилишида муҳим рол ўйнаган. Мазкур мактаб нафақат собиқ Иттифоқ иқтисодий географиясининг балки бутун жаҳон илм-фанининг ривожига улкан ҳисса қўшган.

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ИСПОЛЬЗОВАНИЕ ВОДНЫХ РЕСУРСОВ В ГОСУДАРСТВЕННЫХ ЭКОНОМИЧЕСКИХ СЕТЯХ И ИХ ЭФФЕКТИВНОЕ ИСПОЛЬЗОВАНИЕ (ПРИМЕНИТЕЛЬНО К СУРХАНДАРЬИНСКОЙ ОБЛАСТИ)

АННОТАЦИЯ: на примере Сурхандарьинской области рассмотрены некоторые вопросы использования водных ресурсов в национально-экономических сетях и их эффективного использования, а также рассмотрены цели эффективного использования воды, водопотребления бассейна сурхандарьи.

КЛЮЧЕВЫЕ СЛОВА: Водопотребление, водопользование, устранение засоления почв, мелиоративные мероприятия, фильтрация, рациональное использование

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USE OF WATER RESOURCES IN STATE ECONOMIC NETWORKS AND THEIR EFFECTIVE USE (applicable to Surkhandarya region)

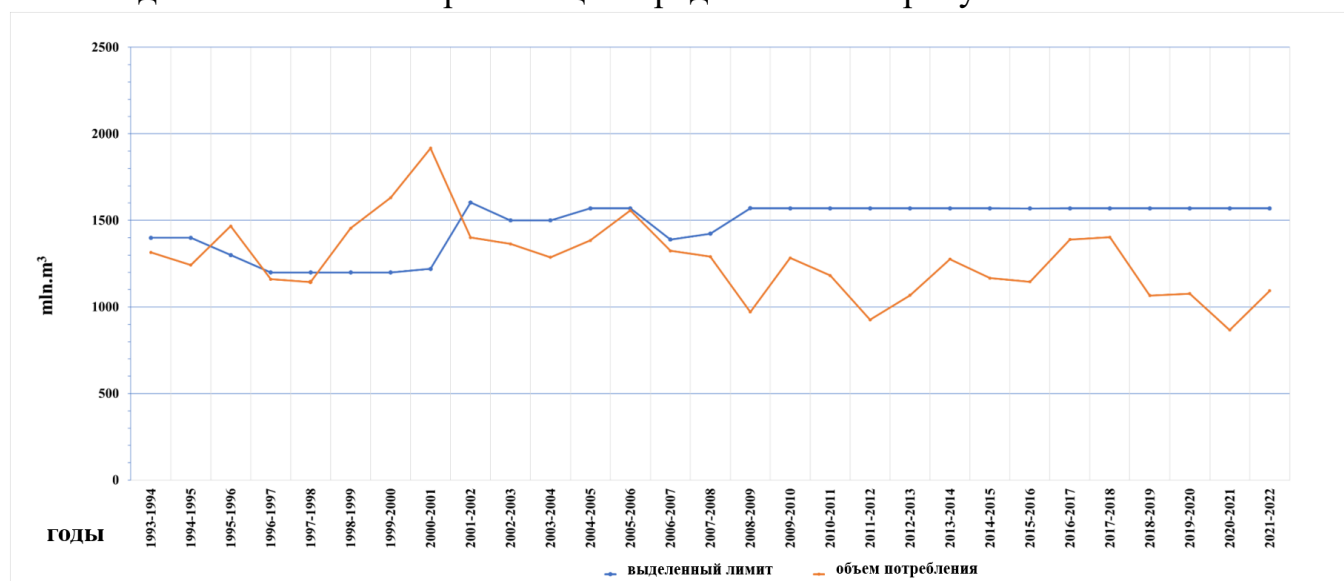
ABSTRACT: Using the example of the Surkhandarya region, some issues of the use of water resources in national economic networks and their efficient use are considered, and the goals of efficient use of water and water consumption in the Surkhandarya basin are considered.

KEY WORDS: Water consumption, water use, elimination of soil salinization, melioration measures, filtration, rational use.

ОСНОВНАЯ ЧАСТЬ: По мере увеличения численности населения мира увеличивается его потребность в продуктах питания, что, в свою очередь, определяет актуальность развития аграрного сектора и совершенствования территориальной структуры (на данный момент 51 процент), при этом глобальная аграрная и сельскохозяйственная промышленность. необходимо будет удвоить производство продуктов питания. Такая ситуация показывает необходимость интенсивного развития сельского хозяйства в засушливых регионах и пустынных районах Узбекистана, где расположена основная часть орошаемых земель [7].

В бассейнах Сурхандарьи и Шерободдарьи имеется 529 тыс. га орошаемых земель, из них орошаемых более 324,6 тыс. га.

В целях эффективного использования воды в 1957 году были построены Учкизильское водохранилище, в 1958 году – Дегрезское водохранилище и канал Хазорбог, а в 1962 году – Южно-Сурханское водохранилище. Водоемкость Южно-Сурханского водохранилища составляет 800 млн м³, Учкизильского водохранилища 165 млн м³, Дегрезского водохранилища 13 млн м³. Строительство этих водохранилищ создало прекрасные возможности для сбора напрасно стекающей осенью, зимой и весной воды и использования ее для орошения летом. Были освоены тысячи гектаров новых земель и улучшено водоснабжение нескольких тысяч гектаров земли [9]. Информация об ирригационных системах за счет средств региональных водохозяйственных организаций представлена на рисунке 1.



рисунк 1. Эксплуатационные данные по забору воды из Амударьи в 1993-2023 гг. по Сурхандарьинской области, (млн.м³)

Несомненно, такую солоноватую воду нельзя использовать для орошения. Для устранения засоления почв в Шерабадской долине необходимо разработать специальные мелиоративные мероприятия для этого места. Потому что, по данным С. Азимбоева (1980), в слое до 20 метров содержится от 1500 до 4300 тонн соли [5].

В результате проводимых в последние годы мелиоративных мероприятий на орошаемых землях области сократилась площадь средне- и сильнозасоленных земель, уровень фильтрационных вод снизился до 2 метров, а размеры площадей снижается.

В настоящее время на орошение одного гектара хлопка в Сурхандарьинской и Шерободарьинской долинах используется 10-12 тыс. м³ воды. Это намного больше нормы. По норме 1000 м³ воды достаточно для орошения 1 га хлопка. Даже если хлопок орошать 7-8 раз, на один гектар земли попадет 7000-8000 м³ воды. Есть несколько причин, по которым вода используется в больших количествах. Первая причина заключается в том, что количество воды, забираемой из канала или канавы из реки, уменьшается на 30-40%, прежде чем она достигнет хлопкового поля. Такое снижение

происходит за счет испарения в канале, фильтрации (инфильтрации), канавки и замены насоса. Вода, которая достигает хлопкового поля, также тратится на орошение.

С 90-х годов прошлого века из-за дефицита воды в Республике Узбекистан, в том числе в бассейне Сурхандарьи, освоение земель для орошаемого земледелия практически остановилось [3].

По мнению экспертов, в нынешней ирригационной системе тратится огромное количество воды. Сейчас коэффициент водопользования составляет 69%, в большинстве случаев он не превышает 50% (Антонов, Морозов, Севрюгин, 2003).



Вода также необходима для использования передовых технологий в ирригации. Бассейн Сурхандарьи обладает большими земельными ресурсами, но ограниченными водными ресурсами. Если существующие водные ресурсы будут использоваться разумно, можно будет освоить тысячи гектаров земли. Прежде всего, необходимо максимально рационально использовать имеющиеся речные воды. Один из них – строительство небольших водохранилищ на крупных ручьях. В бассейне Сурхандарьи и Шерободдарьи имеется более десяти ручьев, в которых могут быть построены водохранилища объемом воды до 10 млн м³. В этих ручьях могут собираться паводковые воды, вода, которая напрасно течет в зимние, осенние и весенние месяцы.

ЗАКЛЮЧЕНИЕ: Вода, собираемая в этих водохранилищах, не мешает построенным на реке Южно-Сурханскому и Учкизильскому водохранилищам. Напротив, воду, собранную в небольших резервуарах, при

необходимости можно сбрасывать в большие резервуары. Если учесть, что объем воды малых водохранилищ составляет 10 млн м³, и с помощью этой воды откроются возможности орошения 600-800 га земель вокруг водохранилища. Если использовать в орошении передовые технологии, можно освоить 1000-1500 га земли вокруг каждого небольшого водоема и разбить фруктовые сады.

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ПЕДАГОГИЧЕСКАЯ ЭТИКА В СИСТЕМЕ НАУЧНОГО ЗНАНИЯ И ПРОФЕССИОНАЛЬНОЙ ПРАКТИКИ

Аннотация:

Статья рассматривает педагогическую этику как междисциплинарную область знания, взаимодействующую с философией, психологией, социологией и юриспруденцией. Анализируется её роль в формировании профессиональной идентичности педагога и обеспечении этичности образовательного процесса. Особое внимание уделяется влиянию научных исследований на разработку и применение этических норм в педагогической практике.

Ключевые слова: педагогическая этика, профессиональная идентичность, этические принципы, образовательный процесс, междисциплинарный подход, профессиональная этика, кодекс поведения.

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PEDAGOGICAL ETHICS IN THE SYSTEM OF SCIENTIFIC KNOWLEDGE AND PROFESSIONAL PRACTICE

Annotation:

The article considers pedagogical ethics as an interdisciplinary field of knowledge interacting with philosophy, psychology, sociology and jurisprudence. Its role in the formation of a teacher's professional identity and ensuring the ethics of the educational process is analyzed. Special attention is paid to the impact of scientific research on the development and application of ethical standards in teaching practice.

Keywords *Keywords: pedagogical ethics, professional identity, ethical principles, educational process, interdisciplinary approach, professional ethics, code of conduct.*

Современное общество предъявляет все более высокие требования к качеству образования, отвечающего на вызовы глобализации и информатизации. Качество образования зависит не только от методической подготовки педагога и используемых технологий, но и от его этического самосознания и способности строить этичные отношения со всеми

участниками образовательного процесса. Педагогическая этика как научная дисциплина играет ключевую роль в формировании профессиональной идентичности педагога и обеспечении этичности образовательного процесса.

Педагогическая этика в профессиональной практике:

Применение принципов педагогической этики в профессиональной практике осуществляется через:

Разработку и применение кодексов профессиональной этики: кодексы формулируют основные этико-профессиональные нормы для педагогов, устанавливая правила поведения в различных ситуациях.

Формирование этического самосознания педагогов: педагоги должны быть способны к саморегуляции и принятию ответственных решений в сложных этических ситуациях.⁴⁵

Развитие профессиональной рефлексии: педагоги должны анализировать свою практику с точки зрения этичности, оценивать возможные последствия своих действий.

Повышение квалификации и профессиональное развитие: регулярное повышение квалификации и профессиональное развитие педагогов включают в себя и изучение вопросов педагогической этики.

Проблемы применения теоретических положений педагогической этики:

Несмотря на важность педагогической этики, на практике возникают проблемы ее применения:

Неоднозначность этических ситуаций: в реальных условиях педагоги часто сталкиваются с неоднозначными ситуациями, не имеющими простых решений.

Конфликт между этическими принципами: иногда приходится выбирать между конкурирующими этическими принципами.

Отсутствие четких инструкций: кодексы профессиональной этики не всегда могут предусмотреть все возможные ситуации.

Недостаток подготовки педагогов: не все педагоги имеют достаточную подготовку в области педагогической этики.

Кроме того, педагогическая этика требует от учителей постоянного самосовершенствования и рефлексии.

Педагог, осознающий и принимающий моральные и этические аспекты своей профессии, способен лучше распознавать потребности своих учеников и адаптировать свои методы преподавания. Это не только помогает индивидуализировать обучение, но и способствует формированию культуры взаимоуважения и толерантности в классе.

Также стоит отметить, что соблюдение норм педагогической этики способствует формированию гражданской позиции у учащихся.

⁴⁵ Добровольская Д. С. Педагогическая этика как профессиональная этика // Трибуна ученого. – 2020. – № 6. – С. 608-616.

⁴⁶ Педагоги, демонстрируя высокие моральные стандарты, становятся ролевыми моделями для своих студентов, формируя их ценностные ориентиры и социальные установки. Таким образом, педагогическая этика становится основой не только для профессионального роста, но и для формирования будущего общества.

Важнейшим аспектом формирования моральных норм и ценностей у обучающихся является взаимодействие между педагогом и учеником. Установление доверительных отношений, проявление интереса к внутреннему миру учащихся и создание атмосферы уважения способствуют тому, что обучающиеся начинают осознавать ценности, которые они могут перенести в свои жизни. Педагог, действующий в рамках высоких этических стандартов, становится не просто передатчиком знаний, но и активным участником процесса воспитания будущего поколения.

Ключевой задачей образовательных учреждений является не только обучение, но и воспитание личности, способной к самостоятельному моральному выбору. Для достижения этой цели важно, чтобы педагоги были ознакомлены с современными подходами к формированию нравственных ориентиров. Практические семинары, мастер-классы и методические рекомендации могут быть полезными для повышения их профессиональной этической культуры.

Таким образом, можно говорить о необходимости интеграции принципов педагогической этики в образовательные программы. Это обеспечит консистентный подход к обучению и воспитанию, где каждый участник образовательного процесса станет активным соавтором в формировании здоровой и морально ориентированной подростковой среды.

⁴⁷ В процессе педагогической практики особое внимание также уделяется взаимодействию с родителями и другими участниками образовательного процесса.

Педагог, обладая высоким уровнем нравственно-этической компетенции, способен наладить доверительные отношения с родителями, что способствует более продуктивному сотрудничеству и воздействует на успешное развитие учеников. Это взаимодействие должно основываться на уважении, открытости и готовности выслушать мнения всех сторон.

Кроме того, важно, чтобы педагоги принимали участие в профессиональных сообществах и повышали свою квалификацию. Посещение семинаров, конференций и курсов позволяет не только обмениваться опытом, но и находить новые подходы к обучению, учитывая современные тенденции и потребности учащихся. Такое стремление к

⁴⁶ Климкина Е.В. Формирование профессионально-речевой культуры социального педагога в процессе обучения в вузе: дис. ...канд. пед. наук. – М., 2001. – 192 с.

⁴⁷ Марон А.Е., Резинкина Л.В., Королева Е.Г. Педагог в пространстве дистанционного обучения: новые возможности // Человек и образование. – 2020. – №3. – С.22-26./

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профессиональному росту формирует у педагогов не только уверенность в своих силах, но и желание быть в авангарде современных педагогических методик.

В заключение, формирование нравственно-этической компетенции педагога является неотъемлемой частью его профессиональной идентичности. Это не только влияет на образовательный процесс, но и способствует созданию атмосферного пространства, в котором ценятся взаимопонимание и уважение к каждому ученику, что, несомненно, отражается на их личностном и социальном развитии.

Педагогическая этика является неотъемлемой частью системы научного знания и профессиональной практики в образовании. Ее роль заключается в формировании профессиональной идентичности педагога, определении целей и задач образовательного процесса, а также в обеспечении этичности взаимоотношений всех участников образовательного процесса. Однако для эффективного применения принципов педагогической этики необходима постоянная работа по совершенствованию как теоретической базы, так и практических методик ее применения в реальных педагогических ситуациях.

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1-TIP QANDLI DIABET ASORATLARINING MORFOFUNKSIONAL XUSUSIYATLARI

***Annotatsiya:** Ushbu maqolada 1-tip qandli diabetni kelib chiqishi, uning salbiy oqibatlari va jiddiy asoratlari, 1-tip qandli diabetda nerv tizimi va immun tizimida morfologik o'zgarishlarni o'rganish. 1-tip qandli diabet (ITQD)-bu avtoimmun kasallik bo'lib, unda organizm o'zining insulinga qarshi immun javobini ishga solib, pankreasning beta hujayralarini yo'q qiladi. Bu hujayralar insulinni ishlab chiqaradi va uning yo'qolishi natijasida organizmda insulinning yetishmasligi yuzaga keladi. Natijada, qonda glyukoza (shakar) darajasi ortib, qandli diabet simptomlari (ko'p siydik chiqarish, ochlik, charchoq, vazn yo'qotish) paydo bo'ladi. 1-tip diabetning paydo bo'lishi genetik omillar bilan chambarchas bog'liq. Agar oilada 1-tip diabet bilan kasallangan shaxs bo'lsa, bolada ushbu kasallik rivojlanishi ehtimoli ortadi. Yangi tadqiqotlar shuni ko'rsatadiki, HLA (gistokompatibilite kompleksi) tizimi genlaridagi o'zgarishlar bu kasallikning rivojlanishida muhim rol o'ynaydi.*

***Kalit so'zlar:** 1-tip qandli diabet, avtoimmun, beta hujayralar, diabetik retinopatiya, diabetik proteinuriya, diabetik neyropatiya*

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MORPHOPFUNCTIONAL FEATURES OF TYPE 1 DIABETES COMPLICATIONS

***Annotation:** This article studies the origin of type 1 diabetes, its negative consequences and serious complications, morphological changes in the nervous system and immune system in type 1 diabetes. Type 1 diabetes (T1D) is an autoimmune disease in which the body launches its own immune response against insulin and destroys the beta cells of the pancreas. These cells produce insulin, and*

as a result of its loss, insulin deficiency occurs in the body. As a result, the level of glucose (sugar) in the blood increases, and symptoms of diabetes (frequent urination, hunger, fatigue, weight loss) appear. The occurrence of type 1 diabetes is closely related to genetic factors. If there is a family member with type 1 diabetes, the likelihood of a child developing this disease increases. New research suggests that changes in the HLA (major histocompatibility complex) system genes play an important role in the development of this disease.

Keywords: *type 1 diabetes, autoimmune, beta cells, diabetic retinopathy, diabetic proteinuria, diabetic neuropathy*

Buyrakdagi morfologik o'zgarishlar: Proteinuriya - buyraklarning filtratsiya tizimi ishdan chiqqanida, qon oqsilini (masalan, albumin) siydikda paydo bo'ladi. Bu holat "proteinuriya" deb ataladi va buyrak yetishmovchiligining bosqichlarini ko'rsatadi. Buyrak yetishmovchiligi: diabetik nefropatiya rivojlanib, buyraklar butunlay ishlashini to'xtatishi mumkin. Bu holat dializ yoki buyrak transplantatsiyasini talab qilishi mumkin. Buyraklar faoliyatini yo'qotish nafaqat jismoniy salomatlikni, balki bemorning hayot sifatini sezilarli darajada pasaytiradi.

Ko'z retinasidagi morfologik o'zgarishlar: Diabetik retinopatiya - bu diabet natijasida ko'zning tomirli pardasidagi (retina) qon tomirlarining shikastlanishidir. Qondagi yuqori shakar darajasi retina tomirlarining zarar ko'rishiga olib keladi, bu esa ko'rish qobiliyatining yo'qolishiga olib kelishi mumkin. Jarayon va asoratlar: Erta bosqichlar: Retinada mayda qon tomirlarining torayishi va yallig'lanishi boshlanadi, bu esa ko'rish qobiliyatining pasayishiga olib kelishi mumkin. Ba'zi tomirlar o'chadi va o'rni yangi, zaif tomirlar bilan to'ladi. Og'ir bosqichlar: Retinaning ajralishi - bu retina butunlay ko'zdan ajralib, ko'rishni yo'qotish xavfi tug'diradi. Bu holatda jarrohlik operatsiyasi talab qilinishi mumkin. Makula o'zgarishlari: Diabetik makulopatiya - bu makula (retinaning markaziy qismi) shishishi va ko'rishning markaziy qismining yomonlashuvi.

Nerv tizimidagi morfologik o'zgarishlar: Diabetik neyropatiya - bu diabetning uzoq muddatli asorati bo'lib, asab tizimi (periferik va avtonom) shikastlanadi. Yuqori shakar darajasi nerv tolalarining shikastlanishiga olib keladi va bu sog'likni sezilarli darajada yomonlashtiradi. Periferik neyropatiya: Diabetli bemorlarda oyoqlarda, qo'llarda va boshqa tanada og'riq, yonish, titroq yoki sezgirlikni yo'qotish kabi alomatlar paydo bo'ladi. Bu asoratlar insonni harakatlanish va kundalik faoliyatni amalga oshirishda qiyinchiliklarga duchor qiladi.

Avtonom neyropatiya: Avtonom nerv tizimi (ichki organlar va avtonom jarayonlarni boshqaruvchi tizim) ham zararlanadi. Bu holat oshqozon, ichak, yurak va boshqa ichki organlarga ta'sir qiladi, bu esa quyidagi holatlarni keltirib chiqaradi. Hazm muammolari: Qorin og'rig'i, ich ketishi yoki ich qotishi, oshqozonning to'lishi. Yurak ritmi buzilishi: Yurak urishining tezlashishi yoki sekinlashishi. Gipoglikemik koma: Avtonom neyropatiya insulin darajalarini aniq nazorat qilishni

qiyinlashtiradi va bu gipoglikemiya (qonda shakar darajasining pastlashishi) xavfini oshiradi.

1-tip diabet yurak va qon tomir tizimiga jiddiy ta'sir qiladi. Qonda yuqori shakar darajasi va insulinning oshishi ateroskleroz (arteriyalarni torayishi va qattiqlashishi) rivojlanishiga olib keladi. Bu jarayon yurak kasalliklari xavfini oshiradi. Ateroskleroz: Diabet natijasida arteriyalar devorlarida yog'lar va o'sma (aterosklerotik plaklar) to'planadi, bu esa arteriyalarni toraytiradi va qon oqimini cheklaydi.

Diabetli bemorlarda teri o'zgarishlari keng tarqalgan bo'lib, ular ko'pincha 1-tip qandli diabet (1TQD) nerv tizimida morfologik o'zgarishlarga olib kelishi mumkin. Uzoq muddat davomida yuqori qon shakar darajalari va insulin yetishmasligi asab tizimining turli qismlarida shikastlanishlarga sabab bo'ladi. Diabetda nerv tizimida sodir bo'ladigan morfologik o'zgarishlar ko'pincha asab tolalari, myelin qoplamalari, va qon tomirlarining shikastlanishlari bilan bog'liq bo'ladi. Diabetik neyropatiya asab tizimining bir yoki bir nechta qismlariga ta'sir qilishi mumkin. Bu morfologik o'zgarishlar nerv tolalari, asab hujayralari va ularni o'rab turgan tuzilmalarni (masalan, myelin) shikastlaydi. Demyelinizatsiya: miyelinli nerv tolalarining miyelinsizlanishi. Diabetda yuqori shakar darajalari va oksidlovchi stress myelin qoplamalarini shikastlashi mumkin. Myelin qoplamasining yo'qolishi asab impulslarining uzatilish tezligini sekinlashtiradi va nervlarning funktsional faoliyatini pasaytiradi. Myelin va aksonning o'pirilishi: Periferik nervlar va myelin qoplamalaridagi shikastlanishi asab impulslarining uzatilishini sekinlashtiradi. Bu shikastlanish natijasida oyoqlar va qo'llarda og'riq, yonish yoki boshqa sezgi o'zgarishlari yuzaga keladi. 1-tip diabetda avtonom nerv tizimi zarar ko'rishi mumkin, bu esa qonda shakarni nazorat qilishni yanada qiyinlashtiradi.

Ichaklar va oshqozon tizimidagi morfologik o'zgarishlar: Ichak va oshqozonlarda harakatlanuvchi nerv tolalarining o'zgarishi hazm jarayonining yomonlashishiga olib keladi (masalan, oshqozonning to'lishi, ich ketishi yoki ich qotishi). Boshqa holatlarda esa oziqlanish va qabul qilingan oziqlarning qabul qilinishi qiyinlashadi. Ushbu morfologik o'zgarishlar va immun tizimining reaksiyasi diabetning boshlanishiga sabab bo'ladi. 1-tip diabetda immun tizimi me'da osti bezi beta hujayralarini antigen sifatida tanib ularga qarshi hujum qiladi. Beta hujayralari insulin ishlab chiqaradigan hujayralar bo'lib, ularning yo'qolishi insulin yetishmasligiga olib keladi. Bu hujayralarga qarshi hujumda ishtirok etadigan autoantikorlar (insulin, GAD65 (glutamat dekarboksilazasi), IA-2 (insulinoma-associated antigen 2) va IA-2 β) ishlab chiqariladi. Autoantikorlar: Beta hujayralariga qarshi ishlab chiqiladigan autoantikorlar ularning faoliyatini va hujayralarni yo'q qilishga olib keladi. Bu hujayralarning shikastlanishi va yo'qolishi bilan insulin ishlab chiqarishning to'xtashiga sabab bo'ladi. Makrofaglar: Immun tizimi faollashganda, makrofaglar (yallig'lanishning asosiy hujayralari) ham beta hujayralarini o'ldirishga yordam beradi. Ular beta hujayralarini tanib, ularni yo'q qilishga kirishadi. Beta hujayralarining degeneratsiyasi: Yallig'lanish jarayonlari davomida beta hujayralari zarar ko'radi va yo'qoladi. Buning natijasida

insulin ishlab chiqarish to'xtaydi va qon shakarining boshqarilishi buziladi. Fibrinli o'zgarishlar: Beta hujayralarining yo'qolishi bilan me'da osti bezining ichki tuzilmasida fibrin (to'qimalar orasidagi moddalar) to'planishi kuzatiladi. Bu fibrinli o'zgarishlar, me'da osti bezi tuzilmasining qattiqlashishiga va funksiyalarning pasayishiga olib keladi. Immun tizimining T-limfotsitlari beta hujayralariga qarshi agressiv reaksiyalarni boshlaydi. T-limfotsitlar, ayniqsa, CD4+ va CD8+ limfotsitlari, me'da osti beziga kirib, beta hujayralarni yo'q qilish uchun maqsadli hujum qiladi. CD8+ limfotsitlar: Bu hujayralar viruslar yoki o'zgargan hujayralarga qarshi kurashadi va beta hujayralarini o'ldirishda ishtirok etadi. Ular "killer" limfotsitlari sifatida faoliyat yuritadi. CD4+ limfotsitlar: Bu hujayralar esa boshqa immun hujayralarini faollashtirishga yordam beradi, shu jumladan, yallig'lanishni kuchaytiruvchi T-helper hujayralari sifatida faoliyat ko'rsati. B-limfotsitlar autoantikorlar ishlab chiqaradi, bu esa beta hujayralariga qarshi reaksiyalarni yanada kuchaytiradi. Autoantikorlar me'da osti bezi beta hujayralarining shikastlanishiga olib keladi va insulin ishlab chiqarishni to'xtatadi. Yallig'lanishning turli mediatorlari, masalan, interleykinlar (IL-1, IL-6, TNF- α) va interferonlar beta hujayralarini shikastlaydi. Bu molekulalar, ayniqsa, T-limfotsitlar tomonidan chiqariladi va me'da osti bezining beta hujayralarida apoptotik (o'lim) jarayonlarni keltirib chiqaradi.

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ИНФОРМАЦИОННЫЕ И КОММУНИКАТИВНЫЕ ТЕХНОЛОГИИ

УДК 339.138

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РОЛЬ ЛЕНДИНГА В ИНТЕРНЕТ-МАРКЕТИНГЕ ВЫСШЕГО УЧЕБНОГО ЗАВЕДЕНИЯ (НА ПРИМЕРЕ РАЗРАБОТКИ ЛЕНДИНГА ДЛЯ ЧЕМПИОНАТА ПРОФЕССИОНАЛЬНОГО МАСТЕРСТВА TAU SKILLS В ЧОУ ВО «ТОЛЬЯТТИНСКАЯ АКАДЕМИЯ УПРАВЛЕНИЯ»)

***Аннотация:** В статье автор описал отличия лендинга (от англ. - Landing page или посадочная страница) от основных сайтов организации, рассмотрел основные виды лендингов и их задачи. Обозначил роль лендинга в маркетинговой деятельности высшего учебного заведения, как инструмента совершения целевого действия (на примере разработки лендинга для конкретного мероприятия в высшем учебном заведении).*

***Ключевые слова:** маркетинг, лендинг, посадочная страница, целевое действие, высшее учебное заведение, чемпионат профессионального мастерства.*

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Annotation: In the article, the author described the differences between landing pages from the main sites of the organization, considered the main types of landing pages and their tasks. He outlined the role of landing pages in the marketing activities of a higher educational institution as a tool for performing a targeted action (using the example of developing a landing page for a specific event at a higher educational institution).

Keywords: marketing, landing page, landing page, target action, higher education institution, championship of professional skills.

Современный рынок стремительно переходит в онлайн-коммуникацию с потребителем. Сегодня потребители всё чаще ищут товары и услуги через интернет. Это способствовало стремительному развитию интернет-

маркетинга во всех сферах деятельности, в том числе и в сфере высшего образования [5]. Интернет-маркетинг стал незаменимым инструментом для продвижения и конкурентирования организации на рынке [5]. Так и в сфере образования особое значение в интернет среде приобретает имидж вуза и его позиционирование. Все это требует большой работы ИТ и маркетинговых служб вуза [2].

В условия цифровизации и высокой конкурентной борьбы за потребителей все организации, в том числе и высшего образования стремятся создать заинтересованные и долгосрочные отношения с потребителями, в случае с вузами с потенциальными абитуриентами. Одним из эффективных инструментов интернет-маркетинга вузов является официальный сайт организации и одностраничные сайты «landing pages» — посадочные страницы [4].

Актуальность данной работы состоит в том, что в условиях цифровой трансформации, для эффективной деятельности вуза, им нужно развивать технологии интернет-маркетинга, в частности технологии создания лендингов, которые позволяют точно выстроить коммуникацию с потенциальными абитуриентами за счет совершения ими целевого действия.

Автор статьи считает, чтобы понять роль лендинга в высшем учебном заведении нужно: изучить основные подходы к понятию интернет-маркетинг и лендинг, описать отличия официального основного сайта от лендинга, рассмотреть основные виды и задачи лендингов, определить роль лендингов в маркетинговой деятельности вуза в условиях цифровой трансформации общества, на примере разработки лендинга для чемпионата профессионального мастерства TAY SKILLS в ЧОУ ВО «Тольяттинская академия управления».

Существует несколько подходов к понятию «интернет-маркетинг». Д.А. Шевченко считает, что интернет-маркетинг направлен на привлечение потребителей к приобретению товаров и услуг компании [5]. Юрасов А.В. рассматривает интернет-маркетинг как комплекс методов онлайн-коммерции, направленных на увеличение прибыли организации за счет сайтов, которые, в том числе могут содержать интернет-рекламу и способствуют привлечению и удержанию посетителей, стимулированию к покупке и другим целевым действиям (регистрация, подписки) [6]. И.М. Синяева определяет интернет-маркетинг как «использование различных медиа ресурсов для продвижения продукции к клиенту» [7].

Таким образом, можно сказать, что интернет-маркетинг в вузе — комплекс цифровых инструментов, который направлен на привлечение и удержание потенциальных абитуриентов (потребителей). Одним из таких инструментов является сайт вуза. Перед тем, как переходить к видам и задачам лендингов, определению роли лендингов в маркетинговой деятельности вуза нужно изучить подходы к понятию «лендинг» и описать чем он отличается от официального основного сайта вуза.

Лендинг (от англ. - Landing page или посадочная страница) — эффективный инструмент для передачи конкретного сообщения целевой аудитории. В отличие от многостраничного сайта, в котором информация представлена в разных разделах, лендинг фокусируется на одном предложении и побуждает потребителя к конкретному целевому действию [3]. Официальный сайт вуза содержит общую информацию, услуги и контакты, в то время как лендинг сконцентрирован на одном мероприятии, услуге или предложении [1, с. 9]. Для этого используются яркие элементы, мотивирующие офферы, крупные кнопки, минималистичный дизайн, таймеры и другие инструменты.

На основании описанных выше подходов можно выделить несколько отличий основного сайта вуза от лендинга (Таблица 1).

Таблица 1. Отличие основного сайта вуза от лендинга

Критерий	Основной сайт вуза	Лендинг
Информация	Общая информация о вузе и его деятельности.	Конкретное сообщение про услугу или мероприятие и др.
Структура	Многостраничная структура (несколько страниц и разделов).	Одностраничный сайт.
Пользователи	Различные целевые группы вуза.	Конкретная группа лиц, на которых направлено сообщение.
Цель взаимодействия с пользователем	Информирование пользователя о вузе в целом.	Приглашение или информирование о конкретном мероприятии, услуги.
Цель посещения	Разные цели для разных целевых групп.	Совершение целевого действия (регистрация, покупка, звонок).
Срок действия	Функционирует постоянно.	Может функционировать как постоянно, так и для конкретного случая (мероприятия и т.п.).

Анализ данных из таблицы 1 позволяет сделать вывод, что лендинг — эффективный и точечный инструмент работы с конкретной группой потребителей, который позволяет донести конкретное сообщение и удержать внимание пользователя, а затем совершить целевое действие. В зависимости от целей и задач существует несколько видов лендингов (Таблица 2).

Таблица 2. Виды лендингов в зависимости от задач

Вид лендинга	Цель	Задача	Описание
Справочный	Захват пользователей (получение представления о потенциальных клиентах)	Информирование пользователя об услуге или товаре и др., которые он увидел в рекламном объявлении [3].	Содержат информацию, за которой посетитель пришел на них с интернет-рекламы или др. (текст, изображения, ссылки на схожую тематику). На таком сайте есть форма, в которой пользователи оставляют контактную информацию, которую можно использовать для дальнейшей коммуникации.
Транзакционный	Получение целевого пользователя (совершение целевого действия пользователем)	Побуждение пользователя совершить целевое действие: заполнить форму, позвонить и др. [3].	Может быть не привязан к рекламному объявлению, существовать как самостоятельный проект. На такой странице есть кнопка призыва к действию, которая перенаправляет пользователей на совершение действия.

Анализ данных из таблицы 2 позволяет сделать вывод, что в зависимости от ситуации лендинг позволяет решить различные задачи в маркетинговой деятельности вуза. Например, это может быть как продажа услуг через рекламные объявления, так и привлечение потребителей на имиджевые мероприятия вуза и др. Это демонстрирует и опыт разработки лендингов в ЧОУ ВО «Тольяттинская академия управления». Так, один из лендингов создан для привлечения потенциальных абитуриентов Академии на чемпионат профессионального мастерства TAY SKILLS.

Так, в 2023-2024 учебном году в ЧОУ ВО «Тольяттинская академия управления» с 17 по 18 апреля 2024 года был организован чемпионат профессионального мастерства TAY SKILLS. Основными участниками чемпионата стали школьники 14-17 лет города Тольятти, которые в свою очередь являются потенциальными абитуриентами Академии. Соревнования проходили по шести компетенциям (на каждой было не более семи участников): Веб-технологии, Интернет-маркетинг, Разработка мобильных игр и приложений, Графический дизайн, 3D дизайн и анимация, Робототехника. С целью эффективной коммуникации и организации

регистрации участников на чемпионат был разработан фирменный стиль и лендинг чемпионата на платформе (конструктор сайтов) — Tilda по адресу <https://taomskills.ru>. Ключевая задача лендинга — организация регистрации участников на соревнования по шести компетенциям. Для достижения этой цели было разработано несколько смысловых блоков (экранов) лендинга. Первый блок содержит основную информацию про чемпионат: даты, название, количество экспертов и компетенции и др. Также в этом блоке есть элемент навигации по лендингу — меню (рисунок 1).

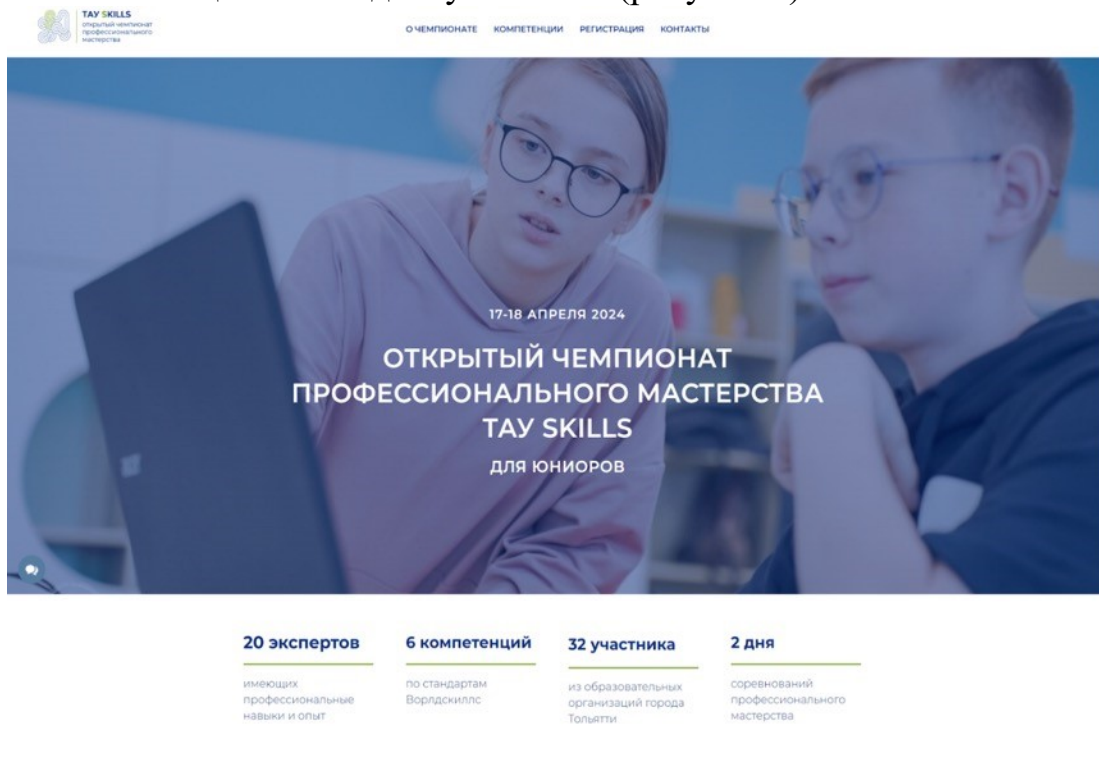


Рисунок 1 – Первый блок лендинга чемпионата профессионального мастерства TAU SKILLS. Информация про чемпионат

Второй блок лендинга посвящен программе чемпионата и перечислению организаторов чемпионата (рисунок 2).

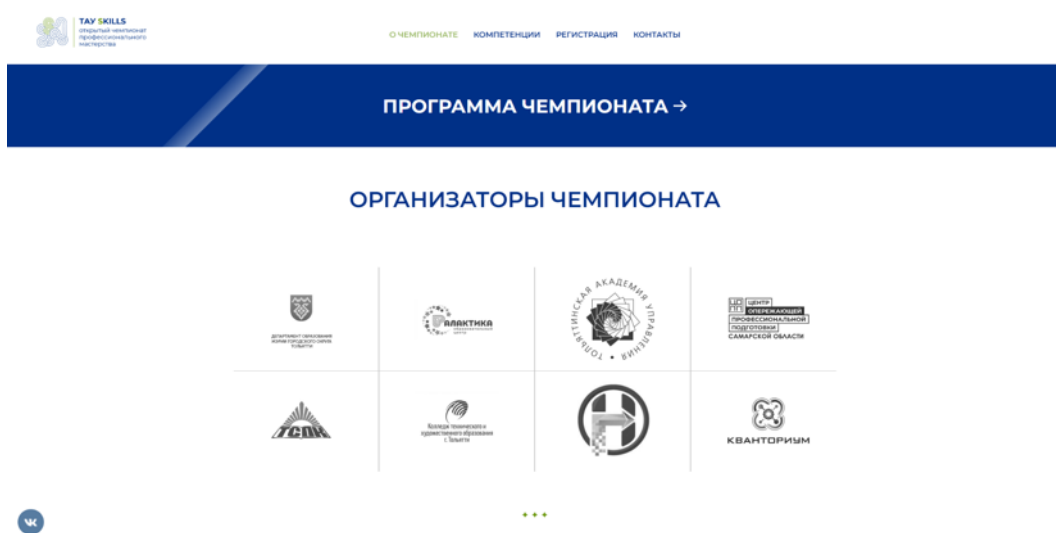


Рисунок 2 – Второй блок лендинга чемпионата профессионального мастерства TAY SKILLS. Программа и организаторы чемпионата

Каждый элемент этого блока кликабельный и позволяет пользователю совершить целевое действие. Так, кнопка «Программа чемпионата» содержит ссылку на программу и позволяет подробнее узнать о регламенте проведения чемпионата конкретно по каждой компетенции. Раздел «Организаторы чемпионата» содержит логотипы организаторов, каждый из которых ведет на сайт компании. Это необходимо для того, чтобы пользователи могли ознакомиться с организаторами перед тем, как переходить к регистрации.

Следующий и самый главный блок лендинга — перечисление компетенции чемпионата (рисунок 3).

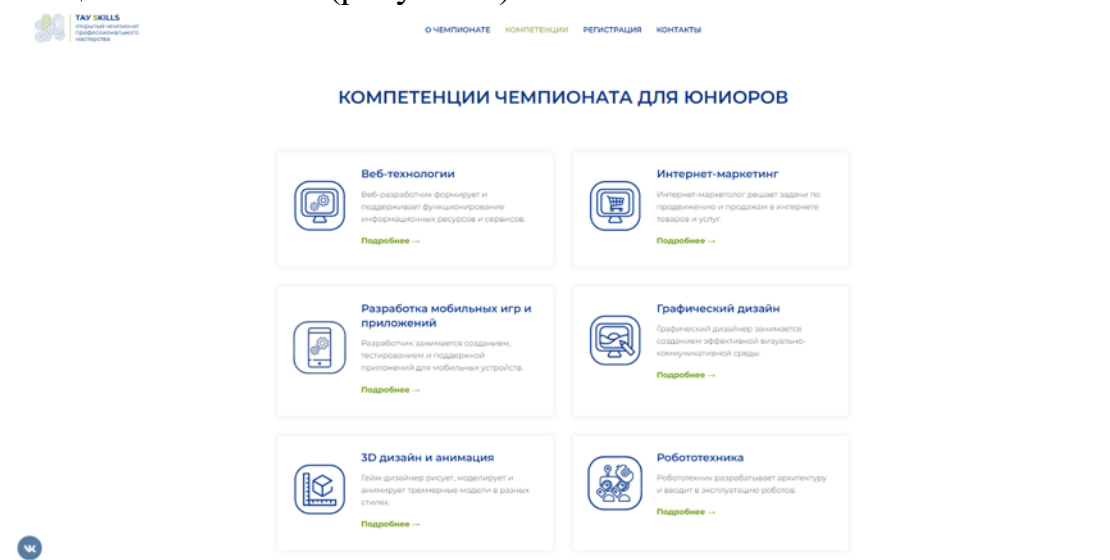


Рисунок 3 – Третий блок лендинга чемпионата профессионального мастерства TAY SKILLS (Компетенции чемпионата)

Этот блок представлен карточками компетенции. Каждая карточка содержит информацию про одну компетенцию: иконку компетенции, название компетенции и краткое описание компетенции и кнопку

«Подробнее» с детальным описанием компетенции и примером конкурсного задания. Такое устройство позволяет пользователю быстро найти нужную информацию про компетенцию, которая его интересует и принять решение о целевом действии — регистрации на соревнования. В свою очередь каждая карточка содержит подробную информацию про компетенцию: техническое описание компетенции, пример конкурсного задания и кнопку для совершения целевого действия «Подать заявку» (рисунок 4).

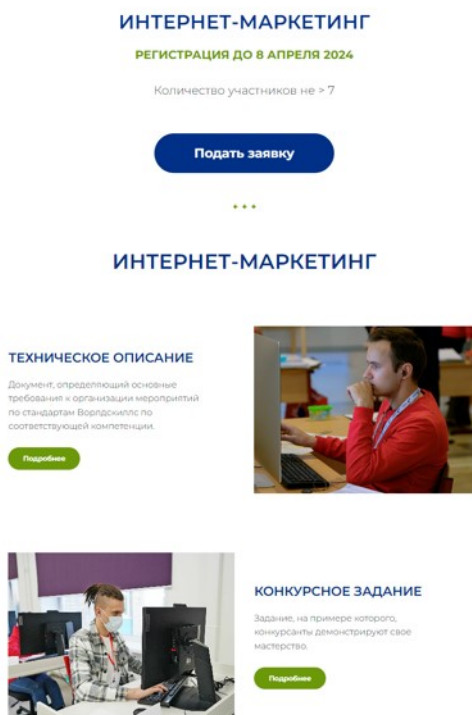


Рисунок 4 – Пример карточки компетенции «Интернет-маркетинг» на лендинге чемпионата профессионального мастерства TAY SKILLS

Один из важнейших для коммуникации с пользователем блок лендинга — новости (рисунок 5). Данный блок позволяет выстроить коммуникацию с пользователем на долгосрочную перспективу и повысить его лояльности к мероприятию и вузу в целом. Так как чемпионат проводится ежегодно и лендинг ежегодно обновляется, то раздел новости позволяет погрузить пользователя в мероприятие, оживить его воспоминания и напомнить о важных датах (например, начале или конце регистрации).

НОВОСТИ

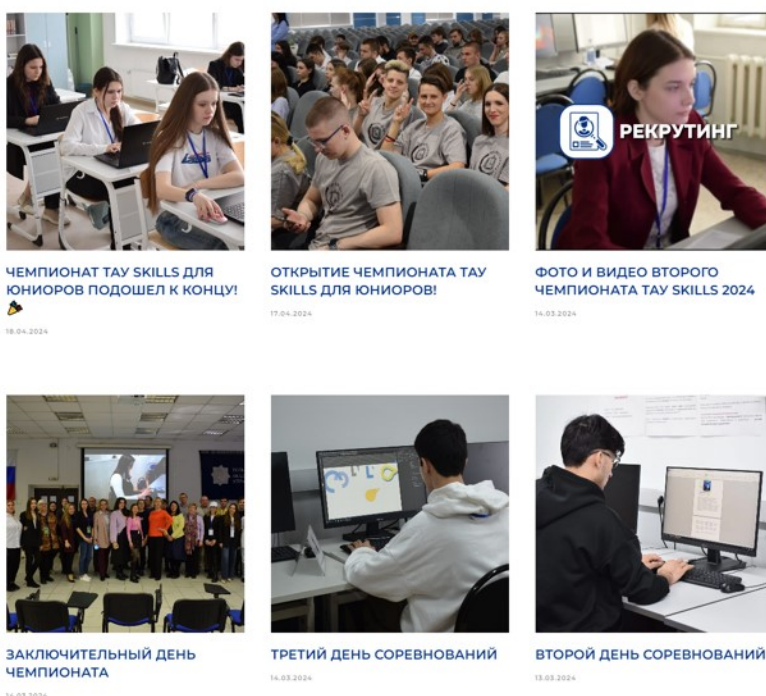


Рисунок 5 – Четвертый блок лендинга чемпионата профессионального мастерства TAY SKILLS (Новости)

Таким образом, можно сказать, что лендинг играет важную роль в интернет-маркетинге вуза. Лендинг не только позволяет работать с конкретными группами потребителей и привлекать их, но и позволяет добиться конкретного результата, который выражается в целевых действиях пользователей. Так, в чемпионате профессионального мастерства TAY SKILLS в 2024 году приняло участие более 30 школьников, при этом регистраций через лендинг было почти в два раза больше (около 55 человек). Данные этих пользователей можно использовать для целевой работы вуза (например, для повторного приглашения на чемпионат или другие мероприятия Академии), так как они являются потенциальными абитуриентами Академии.

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ЗНАЧЕНИЕ СРОКОВ, НОРМЫ ПОСЕВА И СЕВООБОРОТА В ВЫРАЩИВАНИИ ОЗИМОЙ ПШЕНИЦЫ

АННОТАЦИЯ

В статье анализируются результаты эксперимента, проведенного по изучению влияния севооборота на рост, развитие и продуктивность озимой пшеницы. Также в опыте изучалось влияние сроков посева семян озимой пшеницы и агротехнических мероприятий в период вегетации на урожайность озимой пшеницы. Сделаны предложения и рекомендации по влиянию правильной организации агротехнических мероприятий на повышение урожайности озимой пшеницы при оптимальных сроках посева семян.

Ключевые слова: пшеница, севооборот, рост, урожайность, продолжительность, норма.

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THE IMPORTANCE OF TIMING, SOWING RATES AND CROP ROTATION IN WINTER WHEAT GROWING

ABSTRACT

The article analyzes the results of an experiment conducted to study the effect of crop rotation on the growth, development and productivity of winter wheat. The experiment also studied the effect of the timing of sowing winter wheat seeds and agrotechnical measures during the growing season on the yield of winter wheat. Suggestions and recommendations are made on the effect of proper organization of agrotechnical measures on increasing the yield of winter wheat at optimal seed sowing times.

Keywords: wheat, crop rotation, growth, productivity, duration, norm.

При посадке озимой пшеницы важно правильно чередовать ее посадку. Потому что категорически нельзя выращивать пшеницу в одиночку. При хроническом посеве озимой пшеницы на одном поле в течение десяти лет урожайность зерна составляет 14,2 ц с гектара, при регулярном посеве на одном поле в течение пяти лет - 17,1 ц, при попеременном посеве с хлопчатником - 51,2 ц. центнеров, а в системе хлопко-люцернового севооборота - 62,8. Поэтому посев озимой пшеницы после бобовых культур, таких как люцерна и соя, а также хлопка, является фактором, обеспечивающим высокие урожаи зерна. Еще одним важным аспектом этого мероприятия является то, что озимая пшеница, посаженная на полях чередующихся культур, растет очень стабильно, быстро развивается, не поражается болезнями и вредителями. Такие поля также меньше поражаются сорняками, в результате чего сокращаются затраты и увеличиваются доходы (Турсунов С. 2019,).

Озимая пшеница требовательна к предшественникам. Опыты показывают, что постоянная двухлетняя посадка зерновых культур, в том числе озимой пшеницы на одном поле, приводит к увеличению и накоплению болезней и вредителей, сорняков, снижению урожайности (Турсунов С. 2013). Озимая пшеница очень требовательна к плодородию почвы и удобрениям. Для получения 1 ц зерна и соответствующей соломы почвой осваиваются 3,7 кг азота, 1,3 кг фосфора и 2,3 кг калия, внесение удобрений повышает урожайность озимой пшеницы на всех типах почв. На орошаемых землях одним из условий получения высокого урожая озимой пшеницы является внесение достаточного количества удобрений.

Опыты показывают, что на орошаемых землях удобрения повышают урожайность озимой пшеницы на 26-36 ц/га.

Если годовая норма минеральных удобрений установлена из расчета 180 кг/га азота, 90 кг/га фосфора и 60 кг/га калийных удобрений, то эти удобрения следует вносить в почву следующим образом: 70% годовой нормы фосфорных и калийных удобрений следует вносить перед вспашкой земли, а оставшуюся часть вносить под озимую пшеницу ранней весной в период подкормки. Азотные удобрения при культивации перед посадкой вносят 20 кг, ранней весной – 70 кг, в фазу клубней пшеницы – 60 кг и в начале фазы колошения пшеницы – 30 кг. Внесение азотных удобрений по 30 кг/га в фазу колоска не сильно увеличивает урожайность, но повышает содержание белка и клейковины в зерне (Х.Атабаева 2000, Р.Орипов 2007).

Самым актуальным, важным и весьма ответственным мероприятием в агротехнике озимой пшеницы является проведение посадки в оптимальные сроки. Известно, что озимая пшеница в нашей стране насыщена светом – жизненно важным фактором.

В среднем за год на землю нашей страны выпадает 2,5-3 тысячи часов солнечного света. Поэтому в земледелии есть возможность определить сроки посева, соответствующие биологическим особенностям озимой пшеницы.

Биологическая природа озимой пшеницы не позволяет сажать ее ни слишком рано, ни слишком поздно. Озимая пшеница раннего посева (кроме краснодарских сортов) подвергается чрезмерному воздействию света и температуры осенью, в результате чего резко снижается рост, развитие и урожайность растений. Озимая пшеница, посаженная очень поздно, всходит медленно, даже не прорастает полностью и не успевает прорасти. Количество продуктивных стеблей уменьшается. В результате урожайность зерна низкая. В результате многолетних научных исследований определены оптимальные сроки посева озимой пшеницы. Опираясь на многолетние показатели специалистов мы на проводимом опыте посеяли озимую пшеницу 20 сентября, 10 и 30 октября. Конечный результат показал, что посаженные 20 сентября семена сорта Крошка проросли и начали расти.

На каждом квадратном метре земли образовалось 547 крепких стеблей и колосьев, а урожайность зерна составила 66 центнеров с гектара. Озимая пшеница, посаженная 10 октября, взошла на два дня позже первой и росла медленнее. На одном квадратном метре этой площади образовалось 538 стеблей с шипами, а на гектар убрано 68,7 ц зерна. При посадке 30 октября прорастание рассады было крайне медленным, всходы были более редкими, чем в вышеописанных вариантах. В зимний период он перешел еще до того, как полностью вырос. На каждом квадратном метре этой площади сформировалось 365 продуктивных стеблей, а урожайность составила 56 ц/га. Поздно засеянное, слаборазвитое, редкостебельное пшеничное поле было засорено сорняками, и озимая пшеница не могла полноценно использовать необходимые факторы жизнедеятельности: свет, температуру, влагу, питательные вещества и воздух. Длина колоса и количество зерен в одном колосе у озимой пшеницы, посаженной в поздние сроки, несколько ниже, чем у пшеницы, посаженной в оптимальные сроки. Многолетний опыт показывает, что оптимальные сроки посадки семян озимой пшеницы с 20 сентября по 10 октября (Турсунов С. 2023).

Норму высева семян определяют в зависимости от срока и способа посева. Нормы высева варьируются в зависимости от качества семян, плодородия почвы и наличия воды. В исследованиях научно доказано, что расход семян, высеваемых на гектар озимой пшеницы, является фактором, влияющим на урожайность зерна. В результате проведенных опытов установлено, что для получения 44,2 ц/га озимой пшеницы засеяно 2 млн. жизнеспособных семян/га, 62 ц/га, 62 ц/га и 71 ц/га (Турсунов С. 2023). Поэтому при выращивании озимой пшеницы очень важно правильно определить место пшеницы в севообороте, правильно определить сроки посева семян пшеницы, правильно определить норму вносимых под пшеницу минеральных удобрений, правильно определить норму посева озимой пшеницы.

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ПРОБЛЕМЫ НЕОБХОДИМОСТИ РАЗРАБОТКИ И ВНЕДРЕНИЯ НОРМАТИВНО-ПРАВОВЫХ АКТОВ ОБ АЛЬТЕРНАТИВНОМ РАЗРЕШЕНИИ СПОРА, ПРИ ПОДГОТОВКЕ ГРАЖДАНСКОГО ДЕЛА К СУДЕБНОМУ РАЗБИРАТЕЛЬСТВУ

Аннотация: в данной научной статье рассматриваются проблемы необходимости разработки и внедрения нормативно-правовых актов об альтернативном разрешении спора, при подготовке гражданского дела к судебному разбирательству.

Ключевые слова: судебное разбирательство, гражданское дело, разрешение спора.

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THE PROBLEMS OF THE NEED TO DEVELOP AND IMPLEMENT NORMATIVE LEGAL ACTS ON ALTERNATIVE DISPUTE RESOLUTION IN PREPARING A CIVIL CASE FOR TRIAL

Abstract: this scientific article examines the problems of the need to develop and implement normative legal acts on alternative dispute resolution in preparing a civil case for trial.

Keywords: judicial proceedings, civil case, dispute resolution.

Отсутствие нормативно установленных средств примирения сторон зачастую на практике приводит к неохотному движению к миру в стадии подготовки дела, когда судья разъясняет на собеседовании права и последствия заключения сторонами мирового соглашения или заявления отказа от иска.

Все более актуальным становится развитие института примирительных процедур в гражданском процессе. Рассмотрим статистику, представленную судебным департаментом за первое полугодие 2024 года.

Так по России в суды общей юрисдикции и мировые суды по первой инстанции поступило 8 168 664 гражданских дел. Окончено 8 078 428 дел. Число гражданских дел, по которым прекращено производство связи с заключением мирового соглашения 41389 дел. Из них стороны заключили мировое соглашение, и оно утверждено судом в результате проведения процедуры медиации 587 дел [4].

Для сравнения, за 6 месяцев 2023 года в суды поступило 6690991, было окончено 6604905 дел. Из представленных данных видна динамика роста поступления гражданских дел, нагрузка на суды увеличилась примерно на один миллион дел в сравнении с аналогичным периодом 2022 года. Решение данной проблемы зачастую происходит экстенсивным путем: увеличением количества судей либо большей нагрузкой на каждого судью, что может препятствовать полному эффективному рассмотрению дел в гражданском производстве и вынесению обоснованных решений [4].

В российском гражданском процессе действует принцип диспозитивности, согласно которому стороны вправе действовать по своему усмотрению для защиты нарушенного права. В рамках этого принципа действия суда должны быть направлены как на разрешение спора по существу (это его основная задача), так и на примирение сторон.

Из примирительных процедур в ГПК РФ закреплено право сторон заключить мировое соглашение, а также в статье 4 ФЗ «Об альтернативной процедуре урегулирования споров с участием посредника (процедуре медиации)» определена процедура проведения медиации при рассмотрении спора судом.

Однако согласно последним изменениям в ГПК, в 2019 году появилась новая глава 14.1 под названием «Примирительные процедуры. Мировое соглашение» [1].

В новой главе закрепляются положения о примирении сторон спора, а также более подробно описана процедура заключения мирового соглашения.

Согласно ст. 153.1 главы 14.1 судья принимает меры для примирения сторон и содействует урегулированию спора. Подобная задача ставится перед судьей еще на стадии подготовки дела к судебному разбирательству.

Однако ни в ст. 153.1, ни в ст. 148 не указаны действия, которые должен предпринимать судья для примирения сторон, то есть, по существу, механизм не раскрыт, что не способствует развитию процедур примирения. Так же в исследуемой главе отсутствует перечень процедур, которые могут быть применены при урегулировании спора (ст. 153.1 называет только медиацию и заключение мирового соглашения).

В п. 5 ст. 148 ГПК РФ примирение сторон выделено в качестве одной из пяти задач подготовки дела к судебному разбирательству. Однако в ст. 2 ГПК РФ задача примирения сторон для всего гражданского судопроизводства уже не ставится.

Аналогичным образом регулируется этот вопрос и АПК РФ, где, также как и в ГПК РФ, задачей подготовки дела к судебному разбирательству

указано примирение сторон (ч.1 ст. 133 АПК РФ), но в качестве задачи судопроизводства в арбитражных судах (ст. 2 АПК РФ) примирение сторон не указано.

Однако, как отмечено в п. 2 постановления № 50 Пленума Высшего Арбитражного Суда РФ от 18 июля 2014 г. «О примирении сторон в арбитражном процессе», арбитражным судам следует иметь в виду, что с учетом положений части 2 статьи 138 и части 1 статьи 139 АПК РФ стороны могут использовать любые примирительные процедуры, в том числе процедуру медиации, на любой стадии арбитражного процесса и при исполнении судебного акта, при этом предполагаются добросовестность участников гражданских правоотношений и разумность их действий.

Очевидно, что как в ГПК РФ, так и в АПК РФ должно быть в качестве задачи гражданского судопроизводства, а не только стадии подготовки дела к судебному разбирательству, установлено примирение сторон, прописаны более конкретные действия суда по их примирению [2, с. 27].

Для полноты освещения темы обратимся к процедурам примирения в гражданском процессе зарубежных стран.

Во многих странах примирительные процедуры закреплены в процессуальном законодательстве, и могут быть стадией судебного разбирательства. В судебной системе США к примирительным процедурам пришли не так давно (в 1960–70х) вследствие кризиса судебной системы. На современном этапе ее развития существуют различные примирительные процедуры, такие как переговоры, посредничество, мини-суды (mini-trials), независимое экспертное заключение, рекомендательное арбитражное и судебное решения при сокращенной процедуре разбирательства, а также различные гибридные формы, такие, как посредничество-арбитраж [3].

В Японии примирительные процедуры регулируются специальным законодательством, а также существует специализированный орган, посредством которого осуществляется примирительная процедура — Комитет по гражданскому примирению, который заслушивает заявления обеих сторон, рекомендует пойти на взаимные уступки, либо убеждает принять условия компромиссного соглашения. Опыт рассмотренных государств может послужить базой для формирования примирительных процедур в России.

Таким образом, для решения проблем, связанных с загруженностью судебной системы, необходимо развивать примирительные процедуры в гражданском процессе, через следующие правовые механизмы: обязанность судьи (помощника судьи или представителей аппарата суда) разъяснить преимущества примирения сторон, ввести обязательные досудебные процедуры, нацеленные на примирение сторон по определенным категориям дел, как это сделано в договорах перевозки.

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