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**THE SCIENCE OF AGROMETEROLOGY
AND THE CONTRIBUTION OF UZBEKISTAN SCIENTISTS TO ITS
DEVELOPMENT**

Abstract: The article discusses the science of agrometeorology and the scientific and technical basis of teaching this science. Interesting information about the scientific heritage contributed by great thinkers and scientists of our country to the development of this science is provided.

Key words: agrometeorology, hydrometeorology, black frost, plant development, water, air, soil, climate.

Introduction: In the years after the independence of the Republic of Uzbekistan, the entire system of higher and secondary special education was completely rebuilt, serious reforms were carried out in the structure of educational directions and specialties. Serious attention was paid to the teaching of agrometeorology in the field of agriculture, agrometeorology and hydrometeorology in higher educational institutions. The demand for providing the agro-industrial complex of our country with multi-faceted, planned, fast agro-meteorological and hydro-meteorological information from different districts, using new methods and tools in the observation practice of agrometeorology has continuously increased.

The main part: The First President of the Republic of Uzbekistan I. Karimov stated that "...in Uzbekistan, the peculiarities of the natural climatic conditions have a decisive influence on the selection of ways and approaches to the implementation of reforms." In fact, the influence of weather, climate, soil

climate and agrometeorological and agroclimatic conditions on agricultural crops cannot be denied. To be able to use them in practice, to be aware of the scientific results of the science of agricultural meteorology is the demand of the present time. The total of these works is to reduce the negative effects of weather, agro-climatic conditions and dangerous hydrometeorological events in agricultural production, to ensure stable production of crops in agriculture. '1 may be directed to find ways of obtaining crops. At the Hydrometeorological Research Institute (GMITI) within the Hydrometeorological Service Center (Uzgidromet) under the Cabinet of Ministers of the Republic of Uzbekistan, scientific researches and research analyzes in agrometeorology are carried out on the basis of a wide program, improving the methods of providing agrometeorological services to agriculture and new ones are being developed [1-2].

Until the 20th century, the development of agrometeorology as an independent science is very much slowly developed. Based on various historical and scientific documents, as a result of the analysis of the ancient scientists of Central Asia, the proof of the compatibility of agricultural production with the weather and climate, the sanctity of air, water, and soil created an opportunity for the budding of the science of agrometeorology in ancient times. For example, in the book "Avesta" published 2700 years ago, agrometeorological elements: air, water, soil are considered an integral part of nature and divine. Anyone who pollutes water, air, or soil is punished according to the law adopted at that time. The book "Avesta" is currently considered an important book of our nation with a rich historical and religious spirituality. Even now, this book encourages the young generation to love and protect their native land, and urges the people to pay special attention to nature at the present time when the island problem has arisen. It is known from ancient history that people's activities in everyday life were very dependent on numbers and measurements. Many people

have realized that the results of measurements and measurements should be put into a specific format, because the human mind cannot store a lot of measurements and numbers in the brain [2-3].

Currently, mathematical and electronic calculators are widely used to solve agrometeorological problems. It is necessary to prepare a special program-calculation algorithm for Personal Electronic Computing Machines (PCCs) in finding solutions to various calculations using mathematics. "Algorithm" is a Latin word derived from the name of the great mathematician and geographer Musa al-Khorazmi. Al-Khwarizmi was the first to correctly use the climate theory of the time to divide the dry part of the Earth into cultivated areas, and his work is still considered one of the first scientific works [5-6].

Ahmad al-Farghani was born in the village of Quva in the Fergana valley, lived approximately from 797 to 865. According to the decision of Caliph al Mutawakkil, he came to the city of Fustot (Egypt) in 861. The purpose of his visit was to repair the nilomer, a device for measuring the water of the Nile River, and to create a new nilomer, he was engaged in measuring the water of the Nile River. He determined the water level of the Nile River and predicted the amount of crops that could be harvested and, accordingly, how much tax to collect from the population. made recommendations regarding.

Mirzo Ulugbek (Muhammad Taragai, 1394-1449), a great Uzbek astronomer and mathematician, invited famous scientists to Samarkand and built an astronomical observatory with them. This was of incomparable importance both during Ulugbek's time and long after. Ulugbek and his students performed very important scientific works related to astronomy. In particular, they indicated the geographical latitude and longitude of different places, the exact times of sunrise and sunset. This makes it possible to calculate the duration of sunlight, which is an important factor of agrometeorology.

Zahiruddin Muhammad Babur (1483-1550) is the founder of the Babur dynasty, which ruled India for three centuries. His book "Boburnoma" describes the climatic conditions and agriculture of Central Asia. In this book, in many titles, the surrounding nature is divided into rivers, mountains, plants and pastures. It is written about the productivity of plants and their adaptability to different climatic conditions. The productivity of Central Asia's agricultural crops, its climate, and its nature were also recorded in the books of Central Asian scientists Beruni, al-Umari, Mahmud Kashgari, and Muhammad Ibn Najib Bacon in the 11th-12th centuries. Especially the manuscript "Ziratnoma" - "The Science of Farming" written 500-550 years ago is of particular historical importance. information such as harvest period is collected [2-4]. It is also written about the measures to save plants from black frosts. It is written that protecting plants from frost and covering them in winter, for example, figs can be frostbitten in winter at a temperature of -6°C , but unfortunately, it is not written about how the temperature is measured and how an important agrometeorological indicator is set. .

Uzbek scientists, professors L.N. Babushkin, F.A. Mominov, I.G. Gringof and Doctor of Geography A.Q.Abdullayev and others contributed to the development of modern agricultural meteorology in the articles and scientific works written one after the other. For the Central Asian region, L.N. Babushkin's scientific works "Agro-climatic zoning of the cotton-growing zones of Central Asia" (1960), "Agro-climatic classification of Central Asia" (1964) carried out by Babushkin in the field of agro-climatology show the effectiveness of agro-climatic resources in the placement of cotton and other agricultural crops by region. practical recommendations for the purpose of use are highlighted. The territory of Central Asia is located in the region of artificial irrigation, and since the 1950s, agrometeorological assessment and forecasting

of the moisture supply conditions of cotton has been developed in order to develop irrigated lands [2-3].

In the 1960s, scientific-research works on the assessment of the condition of desert-pasture plants were started in large areas. If we look at the years of independence of the Republic of Uzbekistan, during this period, we can witness the development of agrometeorological and agroclimatic scientific-research works on the creation of new methods of improving agrometeorological service to agriculture.

Conclusion: As a result of the development of agrometeorological science, agrometeorological observations are currently being conducted in the crop fields around more than 100 agro- and hydrometeorological stations and posts in Uzbekistan. Monitoring of the growth, development, density, productivity elements of cotton, grain plants along the highway in the fields of all regions was organized using a special methodological program on the dates set by Uzgidromet. Therefore, we are confident that the development of this science and the results of scientific research in these areas will make a significant contribution to the economy of our country.

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