

MELIORATIVE CONDITION OF THE SOILS OF ANDIJAN REGION

Hurmatoy Abdumutalipova

Andijan Institute of Agriculture and Agrotechnologies

Abstract: In the article, it is emphasized that the soil, seepage water, salinity level of the lands of Andijan region should be studied in the field of soil fertility and maintenance of agricultural crops.

Key words: seepage water, salinity level, soil fertility, agricultural work, arable layer, phosphorus, nitrogen, potassium, sodium, gypsum, hill, irrigation, relative height.

Since the soil is of great importance in human life, it always remains an object of compromise between people of a social relationship, i.e. property, economic, political, educational-cultural, ecological-sociological character. According to Article 55 of the Constitution of the Republic of Uzbekistan, natural objects, including land, are public property and are protected by the state. Effective use of land and soil protection and improvement of land reclamation, rational use of natural resources have a special place in the general state problem. The study of soil covers of Andijan region creates an opportunity to reveal a number of characteristics of soils in the case of the influence of irrigation farming. Irrigated agriculture of the region started mainly in the next century, but the soil cover has almost changed under the influence of development and irrigation.

Soils in agricultural areas have become cultural soils as a result of irrigation and cultivation. Gray soils containing mineral salts are distinguished by their fertility when irrigated. Plain and dark gray soils are scattered in the foothills of the southern part of the country. Brown soils are found in places above 2000 m above sea level. Kyzylkumoldi and Shorhok swamps include areas 300-400 m above sea level. The large shallow bays are magnificent and little explored. The soils of Central Ferghana have not been studied well enough. Here mainly light-

colored and sandy soils are distributed. These soils were formed from loess and loess-like rocks in a very dry, harsh continental climate. The amount of waste in their surface parts is 0.98 percent. The soils of the region are partly used in irrigated agriculture, mainly in desert pasture cattle breeding. Permanently saline soils are formed in conditions of sharp continental climate, low rainfall, and gypsum and carbonate layers at different depths. These are located on light gray soils with a humus content of up to 1.5% and a gypsum layer of 60-80 cm. A large part of these soils is used in newly acquired irrigated farming lands, and the rest is used for desert-pasture cattle breeding.

The upper terraces of the Syrdarya River and the soils of the high pre-mountain plain were formed in the upper reaches of the Syrdarya River, at altitudes of 800-1200 m. Soils are formed from loess rocks with proluvial and alluvial cross-sections. Most of these soils are typical and dark gray soils, the humus content of which is 2-4 percent. In addition, alluvial - grassland soils are also widespread. Almost all of the soils distributed in these heights are dry soils, which are important for dry farming and animal husbandry. In Andijan region, in the region of typical and light gray soils, more light gray soils are distributed. They are mostly found in places where gray-meadow and meadow-gray and sandy soils are scattered. For the formation of irrigated meadow soils, the level of underground water should be 1-2.5 m, and it should be periodic or seasonal.

It is caused by the slow movement of underground water in the submountain plains and its accumulation from intensively irrigated fields and irrigation systems, constantly moistening the lower layers of the soil. As a result, underground water rises and turns into automorphic (arid) gray soils, intermediate gray-meadow soils and hydromorphic (moist) grassland soils. takes its signs, and the world of plants typical of these soils also appears above. Irrigated meadow-grey soils were formed as a result of land drying. According to the origin, these soils are intermediate soils between meadow and gray soils, and the processes of hydromorphism are clearly visible in their morphological (external) signs. Further

development of the soil takes place in conditions of weak subsoil moisture. Groundwater lies at a depth of 4-5 m. The lower parts of the soil are under constant capillary moisture. Irrigated grassland soils are transient, semi-arid (poluautomorphic) soils. In the present conditions, the reclamation condition of irrigated meadow-grey soils has deteriorated and requires the necessary agro-improvement and agrotechnical measures. According to the origin of irrigated gray-meadow soils, transient 19 is changing from gray soil to grassy soil. The soils of Andijan region are of different degrees of salinity, and it is one of the partially saline regions of the republic.

Irrigated meadow-gray soils and gray-meadow soils are heavy and medium sandy by their mechanical composition, and in some cases light sandy layers are found. In the arable layer of soils, humus is 0.5-1.1%, nitrogen is 0.04-0.09%, total phosphorus is 0.13-0.27%, and potassium is 0.88-1.70%. These soils are mostly non-saline, but the lower layers are weakly saline. Irrigated grassland soils are the most widespread soils in the region compared to other irrigated soils. In the arable layer of irrigated meadow soils, humus varies in the range of 0.9-1.95. Nitrogen is 0.05-0.12%. Irrigated meadow alluvial and soz-alluvial soils are distributed in the plains of Karadarya, Shahrikhansoy, Akbora, Arvansoy and Central Fergana, and seepage waters are located at a depth of 1-2 m. According to the mechanical composition, the soils are mainly medium and light sandy. In the upper layer of these soils, humus varies between 0.7-1.4%, nitrogen 0.05-0.12%, total phosphorus 0.09-0.11%. The soils are mostly non-saline, but weakly and moderately saline in places.

Andijan hills (Beshboz hills) are hills in the south-east of the Fergana valley. Between Shahrikhansoy in the west and Andijonsoy in the east. The absolute height is 700-1000 m and higher. The relative height is 200 — 400 m. The hills of Andijan are composed of upper Neogene and Quaternary rocks: conglomerate, clay, sandstone, marly loam, gravel, etc. In some places, the bedrock of the hills is covered with thick loess deposits. In terms of structure, the hills

consist of short anticlinal folds. In the central part there are high raised older surfaces, at the edges there are younger surfaces, which are separated from each other by steep erosional slopes. Andijan hills were divided into dry streams and ravines. Sometimes there is no soil layer on the slopes, and in some places the bedrock surface is exposed. Typical gray soils are scattered. Mainly ephemerals are grown, in some areas dry farming is practiced.

In order to successfully solve the problems of melioration, it is necessary to conduct regular inspections and regular observations of irrigated croplands in every farm, district, and region; In conclusion, it can be said that the interdependence of natural components should be taken into account when land development and irrigated agriculture are carried out in Andijan region. A negative impact on one of the natural components (as we saw in the example of the soil component) leads to changes in other components as well. In every agrotechnical measure carried out in Batik, it is necessary to approach from the point of view of comprehensive research, taking into account the mutual relations of components.

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