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Environmental Condition of Soils, Irrigation Problems

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Annotation: This article outlines the main environmental condition of soils, and the problems encountered in irrigation and ways to eliminate them, and provide appropriate feedback.

Keywords: soil, ecological status, land irrigation, reclamation status, Soil Science, Environment, fertility.

INTRODUCTION

Since the day of independence of our country, special attention has been paid to the issues of effective use of land resources, radical improvement of soil fertility and reclamation, and the real essence of the reforms has been focused on the solution of these issues. Improving the effectiveness of these reforms is primarily associated with the training of knowledgeable and qualified soil scientists.

Literature analysis

Until this period, the founder of the science of Soil Science was V.V.Knowledge was given based on the ideas and teachings advanced by Dokuchaev and his students. In the framework of such disciplines as ancient Agriculture, Natural Science, Geography, information about the soil is presented in the works of such great allomes as Al Beruniy, Abu Ali Ibn Sino, Al Farabi, Mahmud Qoshgari, scientists from Ancient Greece, Egypt, Iran, China, India, Japan and living and living in Central Asia. Information about the soils of Central Asia is recounted in historical books such as Zoroastrian's “Avesto”, Al Hussein Norshohi's “history Norshohi” and “Qobusnoma”. Our great poets and statesmen were honored with A.Navoi and Z.Beaver's works also contain recommendations on the soil. The ultimate goal is to provide knowledge in the field of soil science to the trained personnel and to direct them to production as specialists.

Main part

In the previous few millennia, human activities caused little harm to the environment, but after the technical revolutions, the balance between man and nature was disrupted, since natural resources have since begun to be used intensively. The soils also subsided as a result of agricultural work.

Regular farming, cultivation of crops leads to land degradation. Fertile soil turns into a desert, which leads to the death of human civilization. The decrease in the soil occurs gradually, and the following actions lead to this:

- abundant watering contributes to the salinity of the soil;
- loss of organic matter due to insufficient fertilization of the coil;
- excessive use of pesticides and agrochemicals;
- rational use of arable land;
- random feeding of the clock;

- Wind and water erosion due to deforestation.

The soil is formed for a long time and is renewed very slowly. In places where livestock is fed, plants die by eating, rainwater absorbs the soil. As a result, deep depressions and gullies can form. To slow down and stop this process, people and animals need to be moved to other places and planted a forest.

In addition to the problem of erosion and the reduction of agriculture, there is another problem. This is soil contamination from various sources:

- industrial waste;
- spill of petroleum products;
- mineral fertilizers;
- waste transportation;
- building roads, transport nodes;
- The processes of urbanization of the moment.

This and many other things cause the destruction of the soil. If you do not control anthropogenic activities, then most areas will turn into deserts and semi-deserts. The soil loses fertility, plants die, animals and people die.

Irrigation, irrigation-artificial moistening of the soil with water from sources, a kind of melioratsiyannng. Watering forms the most favorable water regime in the part of the soil where the root of the plant spreads. This creates favorable conditions for plants to absorb nutrients from the soil - mineral and organic fertilizers-and agriculture. Provides high yields from its crops. Irrigation increases land yield by 8-10 times compared to non-irrigated conditions, providing an opportunity for the introduction of intensive farming. This ensures that the capital invested in the construction of water farms and land reclamation is covered quickly (within 3-5 years).

During the period of use in agricultural production on irrigated soils, the above-mentioned, factors such as the erosion of the soil by water in some processes are also added to it, such as its secondary salinity. The process of formation of irrigated soils radically changes the composition of the soil layer, both its natural conditions and the natural soil itself. Due to the leveling of the land, irrigation, water erosion, their layer is exposed; the washed layers are taken and laid in other places.

Go-to, such lands will quickly become civilized if the agrotechnical event is applied correctly. Agroirrigative derivatives begin to accumulate in the upper layer of the Earth. At the same time they go stratified. In the lower part of the irrigated fields, the mechanical composition, sometimes saline soils, comes to the bunyod. Thus, if the natural development of peat soils is very slow over the centuries, this process is achieved quickly enough on irrigated peat soils, especially when they are used more efficiently.

Summarizing the above points, it should be noted that during its evolution, Boz Oasis soils, in our opinion, go through several periods. They are the following:

I-period. the expulsion of dry land and the formation of new irrigated soils on a natural soil substrate;

Period II. changes in the process of salt migration, the development of new microflora and protofauna, the mineralization of plant residues and the change in the character of the process of formation of humus;

Period III. At the expense of agroirrigative derivatives, the arrival of a new structure of the eviction layer in the structure, the loss of a number of signs (loss of newly formed carbonates, softness inherent in layer V) of the soil characteristic of natural loose soils;

Period IV. The further thickening of agroirrigation derivatives (”squeezing out the natural soil grunt") and the formation of a thick soil profile, which occurs on the basis of agroirrigation derivatives, in which a new biota complex has physical and chemical properties.

Since this process is associated with the concrete bioclimate, lithological, haemorphological conditions of certain regions, the pace and duration of periods vary. For example, since the soils of the Boz voha in the Tashkent region were irrigated with muddy waters and used in low-yield agriculture in the previous period, the process of replenishment of agroirrigatory quotes was slow, and they did not go through full periods of development until the present.

On the contrary, The Boz-voha soils of the Samarkand region for 2-2.5 thousand years can be shown in the classic example of full-fledged and full-profile Oasis soils.

Considering the evolution of irrigated soils, it is necessary to dwell on another manifestation of human activity in this process-ground processing. The main plant grown on the lands of the Republic, that is, the process of growing cotton, requires productive processing of the soil. A lot of special work has been done on this. It is necessary to note that their impact on the evolutionary development of irrigated soils is enormous. Autumn plow, preparing the spring land for planting (gizeling, boronating, mollating), planting, cultivation several times, leaves traces on the lands of agricultural machines during the harvesting process, deeply softens and compresses.

In the process of ground processing, on the one hand, it softens, and air exchange improves. But on the second hand, the rubber-wheeled tractors greatly increase the density of the soil at the time of ground processing. At the bottom of the plowing layer during the planting period, the density of the soil reaches 1.4 g(cm cubic). Some scholars favor the idea that the deeper the Earth is overturned and driven away.

An example of this is mainly the improvement of the physical properties of the soil, including a decrease in its density, an increase in water permeability. In this case, the violation of the natural structure of the soil, high humidity and technical pressure lead to the opposite results are not taken into account. To increase the fertility of a highly removed, low-fertility soil layer, it is required to apply mineral fertilizers of Great Moderation. These processes, as mentioned above, change the evolution of the soil in a negative way.

The study of the periods of development of irrigated soils is not only a theoretical issue, but also plays a great role in agricultural production. Because, in every developmental invasion, the soil has effective fertility. The theory of the evolution of irrigated soils allows the production of measures for the correct use of the potential fertility of soils. In addition, the process of soil development can be turned over to yourself, which is necessary for a person, does not injure the environment.

In conclusion, the development and evolution of soil and soil cover in general does not go randomly on the surface of the Earth, but in accordance with the General History of landscapes. Changes in the landscape in nature are associated with climatic, tectonic morphostructural processes. Also, the anthropogenic factor is important as a determinant of soil evolution and development.

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