

# IMPROVE SOIL MELIORATIVE CONDITION OF SOUTHERN REGIONS

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**Annotation.** This article describes the results of a number of scientific and research works aimed at identifying and eliminating processes that negatively affect the fertility and melioration of irrigated soil in the agricultural sector, which is currently developing in our country.

**Key words.** Soil, erosion, salinity, irrigation, flora, microbiological.

**Introduction.** Analytical analysis of a number of properties of irrigated soils in the world, including agrochemical, agrophysical, microbiological, especially meliorational properties, the amount of humus, nutrients, and their interrelationship with microbiological processes, which determine the main fertility indicators of the soil. Scientific-research works are being carried out. In this regard, special attention is being paid to scientific and research activities aimed at determining the salinity of irrigated soils, their type and level, improving the land reclamation and increasing soil fertility. The research was carried out in field, laboratory and chamber conditions according to the standard methods generally accepted in soil science. Agrochemical and agrophysical methods were used in the research. The agrochemical and agrophysical analysis of the soil was determined by the methods developed by A.SH. Galstyan, described in the manual "Metodi agrokhimicheskikh, agrofizicheskikh issledovaniy v polivnikh khlopkovikh rayonakh", the correlation bond between saline soils, soil humus and mobile nutrients and the mathematical-statistical analysis of the obtained data was performed according to the manual of B.A. Dospekhov.

**Materials and methods.** A 1:5000 scale salinity cartogram of the selected Karshi State University was compiled in order to correctly determine the salt washing

measures, taking into account the type and level of salinity of the irrigated pale soils of the Kashkadarya oasis with different levels of salinity;

The amelioration condition, salt content, agrochemical and agrophysical properties of the irrigated oases' light-colored soils are comparatively studied, factors and indicators that have a negative effect on soil fertility and the growth and development of agricultural crops, and their optimization is defined. The best time for salt washing is from autumn to March. If it is too late, the salts will not wash off well, the saline-washed layer of the soil will not exceed 0.5-0.7 meters, and salinization of the land will occur in the summer. It should be noted that the lower the level of the silt water, the more effective the salt washing will be. Preparation of land for salt washing, periods, norms and methods of salt washing are important agrotechnical activities that determine its efficiency. Poor performance of these works in many cases destroys the effectiveness of salt washing.

If the salt wash is given in parts rather than continuously, the speed of washing away the salts increases, so in salt wash, especially when washing in one way with large standards, it is necessary to take a break after each time the water is pressed. , the duration of this break depends on the mechanical composition of the soil and the rate of filtration: In light soils, it should be watered 2-3 days after soaking, in medium soils, after 5-6 days, and in heavy soils, after 7-8 days. Depending on the salinity level of the soil, water-physical properties and the slope of the area, the following methods of salt washing can be used:

- 1) Flood the floors without draining the water and wash according to the eges;
- 2) Washing the floors without moving water from one floor to another.

The size of the floors can be from 0.1 to 0.5 hectares, depending on the water capacity of the soil, the slope and leveling of the earth's surface. Salt washing should start from the central part of the ground between the trenches, approaching the sides, and also start from the top of the salt-washed pit and finish at the bottom. Salted

grains should be washed with great care. It is better to wash with salt water when the water level is very deep. In this case, the soil is better cleaned of salts with less water consumption, and it becomes more desalinated by the time of planting.

In order to improve the properties of irrigated light-colored soils of Kashkadarya oasis with different salinity, the most necessary parameters for optimizing the soil salt content have been determined.

**Results and discussion.** The availability of land in irrigated agriculture limits the possibilities of increasing soil fertility and yield of cotton and other crops. The implementation of large-scale reclamation works is unable to stop the process of soil salinization. Most of the saline areas in Kashkadarya region are located in Karshi, Nishon, Mubarak, Kasbi, Mirishkor, Koson and other districts. Of course, in such lands, it is difficult to get a good harvest from this or that crop, and a lot of effort and money is spent in vain. World agriculture, especially our people, has accumulated a lot of experience in preventing this and obtaining higher yields from saline land. Taking this into account, the regional government developed this program on the basis of the above decrees, 4264 km of collector-drainage network was cleaned, 172 drainage wells, water pipelines and many pumping stations were repaired. Thanks to the measures taken, the reclamation condition of the hectare area has improved. The contribution of the Kashkadarya region Hydrogeological melioration expedition to the irrigation and melioration works is great. Land reclamation has become a very serious problem at the present time, the reason for this is that, firstly, it is necessary to provide food and other agricultural products to the ever-increasing population of Kurram, and secondly, human reclamation due to the development of industry while increasing the capacity, it was felt necessary to develop many new lands, to expand the cultivated areas and to improve the melioration of the irrigated lands. Conclusions. Based on the above thoughts and considerations, the following conclusion can be reached. Saline soils mainly occupy a large area in the areas of the

region that have been irrigated since ancient times and in the light gray soils of the plain region. Depending on the level of salinity of the soil, in order to remove the salinity of the saline soils, if the salt of the soil is stratified and washed on the basis of the salinity map, the crop yield will not only increase, but also 25-30% of water will be saved. The size of the fields in the field should be from 0.1 hectares to 0.5 hectares, depending on the water permeability of the soil, the slope of the land, and how leveled it is.

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