
MEASURES TO PREVENT THE LOSS AND RE-EMERGENCE OF SALT STAINS ON IRRIGATED AREAS IN BUKHARA REGION.

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Abstract

In this article, recommendations are given on the existing irrigated areas in the Republic of Uzbekistan, their distribution by the level of salinity, as well as practical measures to prevent secondary salinity in the irrigated areas of Bukhara region. In the final part of the article, recommendations were given to land users on the effective use of irrigated areas in farming, methods for increasing the yield of agricultural crops.

Key words

Irrigated area, salinity level, salt stains, collector-drainage water, salt content in the soil, salinity, irrigation norm, mineral content of groundwater.

Introduction.

The role of the agrarian sector in the development of the economy of the Republic is very important. On the territory of our republic, more than 4.3 million hectares will be cultivated. 1928,5 thousand hectares of these areas are saline fields of different degrees. From this, the crop areas per hectare fall into the very strongly saline category of land. The land reclamation situation of irrigated peasant lands is

important in many respects in increasing the yield obtained from agricultural crops.

From the many years of experience of the Republican Research Institute of cotton growing, it is known that in weak saline lands compared to non-saline lands, the crop is reduced by 15-20 percent, in moderately saline lands by 30-35 and in strong saline by 70-80 percent, and in some cases there is no possibility of harvesting seedlings at all.

It is for these reasons that every year in cotton-growing areas, cotton is grown from an average of 15-20 cents per hectare, or at least two tons per hectare of cotton per hectare, less than the degree of opportunity. Similarly, there will be no opportunity to achieve the expected result even in the areas where crops are sown and other agricultural crops.

2. The purpose of the research:

The total area of Bukhara region is 4 million 193705 hectares, of which 20909 hectares (0,5%) are Gardens, 2674186 hectares (63,77%) are Summers, 205616 hectares (4,9%) are forested and 1002295 hectares (23,9%) are other land areas, the remaining 6,9 percent are land areas abandoned (Zale).

The irrigated land area of the region is 274599 hectares, its soils consist mainly of Meadow-alluvial, Horn-bushy and desert sand soils.

The climatic conditions of the region are Continental, characterized by a sharp change in air temperature throughout the year, summer is dry hot, winter is short, severe cold days are almost rare, rainy-hair is not very reversible. About 60 percent of the precipitation during the year is precipitation from January of the year to the end of April. The wind, which is considered the main source of climate in the region, is blowing all year round, the wind direction is mainly to the south and South East. In some cases, the wind speed is 18-20 meters per second. In the conditions of the Bukhara region, the above-mentioned features of the climate, namely the fact that the air is coming dry and it is very hot in the summer months, there is very little precipitation-shaving, slightly accelerates the evaporation of groundwater, which has a lot of mineral salts in its composition, which are located close to the surface of the Earth,

The geographical melioration conditions of irrigated land areas of the region have their own characteristics and are considered somewhat complex, like the southern regions of the Republic.

In the Bukhara region, the geological melioration conditions, mainly groundwater, depend on the hydro and hydro chemical regime, and the irrigated

land areas are considered complex because they are located at the bottom of the Zarafshan River.

Especially in the middle and lower parts of the region, the melioration situation is considered extreme because of the slow movement of the rule waters under the ground and the fact that it is located close to the surface of the Earth. High air temperature and a lot of hot days lead to the fact that the rule waters located close to the surface of the Earth spend a lot of time evacuating. This in turn causes a sharp increase in the amount of salt in the aerated part. As a result, salinity in irrigated areas is restored. According to observations of the micrometeorological service, 10 percent of the water spent on evaporation in the territory of the region is part of the atmospheric precipitation, no. Therefore, one of the main factors in the cultivation of agricultural crops from the abundance is the increase in the fertility of irrigated lands, an indicator of the Prevention of deterioration of the land reclamation situation.

Due to the ameliorative state of the irrigated areas, the main ameliorative measures are used first of all in the case of natural bad soils, where the surface slope is small, the natural drainage property is low, and the movement of groundwater is slow. On the territory of Bukhara region, the surface of the Earth is geographically covered with the deposits of the "Quaternary" period "Paleozoic", an expression from the sea and arid sediments of the "Mesozoic" period.

Our native land and water resources are the greatest wealth of our people. The cultivation of high yields from agricultural crops plays an important role in the growth of the standard of living of the population.

The results of the conducted analyzes suggest that the salinity of the crop areas before planting cotton and other agricultural crops, washing the soil brine and carrying out a number of ameliorative measures.

To bring the melioration of such lands to the norm, to reduce the degree of salinity of the soil, a salt washing action is required, this action is continued until the chlorine ion in the layer of 0-100 centimeters of the soil forms 0,01 foizni.

Regional farmers, land users should not forget that the salinity of the soil is a decrease in productivity.

The increase in the salinity of soils in the irrigated cultivated areas, the process of re-salting occurs as a result of the following factors:

- the use of collector-drainage waters with high mineral content in irrigation of crop areas;

- artificial collector in crop areas with low natural drainage characteristics-lack or lack of drainage networks;

- as a result of the fact that the repair and restoration work of irrigation networks is not carried out on time, the waste of water is increased, the groundwater level rises and the salt content in the soil increases;

- the lack of timely cleaning of existing collector-drainage networks, the removal of wastewater from the crop areas and arid water from irrigation networks, the installation of various artificial barriers adversely affect the outflow of drainage waters, and as a result, the amount of salt in the soil sharply increases;

- soil plowing, deep loosening of soils in areas where there are solid layers, failure to carry out the chopping work in a timely manner, cultural fertilizers do not enter, do not irrigate crops with juice, worsen the structure of the soil, decrease the ability to drain and, as a result, sharply increase the process of accumulation of salts in the active layer of;

- another reason for the re-salinity of the soil in irrigated crop areas is the unevenness of the lands, in the same uneven terrain there are very strong saline areas, as well as salty spots.

3. Conclusion:

In order to reduce the salt in the saline soil and improve the melioration condition of the soils, it is necessary to take the following measures, first of all, by preventing the factors that cause it:

-timely and qualitative repair of irrigation networks and hydrotechnical facilities in them, especially manual cleaning of beehives and LOTO networks every year in spring and autumn;

-equipping the ears of water intake with the means of adjusting the water supply and maintaining the calculation, preventing and rational use of water wastage;

-perform work on plowing and deep softening, washing of brine and moist water strictly in accordance with the rules of agrotechnics and within acceptable timeframes;

-to carry out the irrigation of agricultural crops in strict compliance with irrigation regimes and quality with juice;

- the delay in the work of washing the brine from the specified period-planting leads to the fact that the Earth is not reached until the season, that is, the humidity is higher than the established norm and prevents the processing of the soil;

- we can reduce the mineralization of groundwater as a result of the use of water efficiently, that is, irrigation of crops in the vegetation period in the established norm, the implementation of salt washing in the established order, as well as the stagnation of collars. Thanks to this, a decrease in the seasonal accumulation of salts is achieved;

- 1 hectare of crop land in a year on average 12,0-13,0 t of harmful salts as a result of irrigation;

- it should be borne in mind that-as a result of evaporation from the surface of the earth after watering, the soil moisture decreases and the concentration of salts in it increases. As a result, the plant root endings can not absorb the moisture contained in the soil. And this leads to the loss of acidity, therefore, one should try to avoid the loss of salinity by washing and watering;

- in order to prevent salinity of soils, it is necessary to irrigate agricultural crops as much as possible only with river water by the method of juice.

Using the above recommendations in practice, ensuring that the existing drainage networks are in a constant working condition with the qualitative implementation of salt washing measures - guaranteed from agricultural crops, which allows to obtain a high yield.

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