



## WATERING COTTON WITH GROUNDWATER WITH LOW MINERALIZATION IN CONDITIONS OF WEAKLY SALINE SOILS OF THE BUKHARA REGION IN THE SIBIRIGATION METHOD

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### ABSTRACT

*In the conditions of the Bukhara region, when cotton is watered by the subirrigation method, the number of watering is reduced by 1-2 times, river water is saved by 1000-1500 cbm/ha, crop field processing is reduced, fuel lubrication products are economical, and productivity is found to be 3-5 ts/ha higher than cotton grown in farm conditions.*

### Introduction.

One of the factors that negatively affect the increase in cotton yield in the current period is the water deficit that occurs during the growing season, and the other is the lack of consideration of local soil and hydrogeological conditions when watering cotton on most farms, their actual requirements for water during the transition phases of growth and development. Some of the toxic chemicals that are being applied to the soil in the process of intensive irrigation, weeds and insects, are washed into the groundwater, causing them to deteriorate their ecological-reclamation state. The above reasons entail the effective use of water reserves being allocated to irrigated lands, the implementation of a system of agrotechnological measures, scientific justification and practice of irrigation methods and procedures that do not adversely affect the environmental situation.

Currently, the irrigated land of the Republic is 4.3 million hectares, 45 percent is salted to varying degrees in aroma. The most salinity is caused by excessive irrigation of crops in high standards, poor performance of zacburl collectors. In this case, the yield can be lost from 10 to 90 percent (for different crops), depending on the degree of salinity of the soil. I.N.Feliciant, M.A.Pankov examined the timing of raising soil with different mechanical composition through capillaries and concluded: the higher the thickness of the soil floor, the slower the rise of moisture through capillaries compared to the lower thickness, despite the uniform mechanical composition, since the rise is slowed due to the resistance of the air in the soil. A.E.The reserve level of Bukhara-6 cotton varieties of avchokulov and others is deeper than 3.0 m and 2-3 m; Conducting irrigation in irrigated Tair and tairbatq, chalk soils up to 2.0



m in 65-65-60%, 70-70-60% procedures compared to Chdns on soils with a light mechanical composition, each water norm is 800-1000 cbm/ha on average loamy soils by 1000-1200 cbm/ha, on heavy soils by 1200-1300 cbm/ha; on soils with suitable seasonal watering standards 7600; 6200; it is believed that it is necessary to ensure that 2200-3400 cbm/ha.

O.Ramazanov, M.Halmirzaeva, V.Nasonov said that in the Republic it is now possible to eliminate water shortages due to comprehensive water conservation, full control of river flow, technical improvement of irrigation systems, application of modern technologies, planting and introduction of crops that consume less water. S.X.Isaev and B.In the research of the suwonovs in the Shovot District of the Khorezm region, it was determined that watering received soil moisture in the order of 70-80-60% compared to the marginal field wet capacity(ChDNS), when watering was given in a 0-3-0 system, the seasonal norm was optimal at 2122.1 cbm/ha, in which the cotton yield was 42.8 ts/ha, and the comparative water consumption was up to 49.8 cbm/ha. It should be noted that the opinion of the scientists mentioned above is not unanimous, not all have come to a decision. In the field of subirrigation, however, there is extremely little scientific work. This situation necessitated more work to solve the problem. Therefore, we have set ourselves the task of conducting scientific research in the regions of Kashkadarya, Samarkand and Fergana. Our scientific research is carried out in the region of Kashkadarya.The farm "Tora Abdurakhmonov", owned by the Rashidov Farmers ' Union, was carried out in the fields of the Samarkand branch of the Uzpiti and the Fergana branch of the Uzpiti. In order to regulate collector networks, to improve the water supply of agricultural crops from low-mineralized sizot waters in one low-water environment, two fields with soil conditions close to each other were selected and studies were carried out.

**Results of the study:** irrigation of cotton through subirrigation, formation of factors that increase soil fertility in the development and improve the reclamation of land (wet-accumulating irrigation, application of local and mineral fertilizers) when caring for crops in conditions of weakly saline, Meadow alluvial soils, its influence on growth, development and productivity, as well as the water economy, cultivation between crops, the The research has developed agrophysical, agrochemical indicators in the soil along with the dates of application of the subirrigation method of the Bukhara-10 variety of cotton. According to the results of the research conducted in the conditions of weakly saline soils of the Bukhara region, the results of the observation show that during the growth period of the ACORN, an experimental field was irrigated 3 times, in which subirrigation was applied, the level of underground sizot water was located around 1.4 - 1.9 meters. The irrigation water interval was 22-26 days, and the total irrigation water consumption given per hectare in the irrigation system 1-2-1 in terms of growth periods was 4250-4520 cbm/ha. All conditions are the same, but the control option dalasi with a low depth of location of groundwater (around 2.0-2.2 meters) had to water 5 times, depending on the growth, development state of the Acorn. Each watering interval was 19-26 days.

During the period of operation, in the 1-3-1 system, it was necessary to spend 5670-5900 cbm/ha of total irrigation water, or 1420 cbm/ha of water was economy compared to control. In the control option, the height of the cotton is on average 71.8 sm in 1 August. ni, 13.2 pieces in accordance with the harvest Kings, 8.4 pieces in the number of pots, including



the opened pots were around 4.5 pieces, while the subirrigation option was observed to be tall-82.4 sm in accordance with the above, the harvest Kings-14.8 pieces, the number of pots-12.2 including the opened pots-4.2 pieces, or higher than the control. In the control-33.5 ts/ha, in the subirrigation-37.5 ts/ha, that is, in relation to the control, an additional cotton crop was harvested at 5.0 ts/ha, the river water was economical at 1420 cbm/ha, the number of cultivations decreased once. When the mineralization of waters based on a special priboron " Waterproof Family " was determined, it turned out that in early spring and late autumn, the mineralization of sizot waters in 2022 (March-April) amounted to 4.53-4.62 grams of dry residue (ppt) per liter of water, while its smallest unit was 3.64 grams per liter of water in tarikbi. Irrigation of the cotton plant led to a decrease in the mineralization of groundwater. The completion of the period of action, the cessation of irrigation water groundwater, ensuring that the water slowly subsides, that is, it moves away from the top of the Earth, while it corresponds to 3.75 grams on the account of dry balance, the average during the growing season was 4.04 grams on the account of dry balance.

### Conclusion.

Collectors are blocked in the cotton care in mid-April, and in half of August the collectors are opened. From the experiments carried out, it can be concluded that when watered using the Acorn subirrigation method with cummineralized zovur water, it is possible to save river water by 1000-2000 cbm/ha, and get 3-5 ts/more dressing from cotton.

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