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Application of Provided Irrigation Technologies in Irrigated Agriculture

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ABSTRACT

The article presents the results of research on drip irrigation. When using a water-saving irrigation technology, the surface layer of the soil is not compacted or the weight of the volume is reduced in comparison with the traditional method, the water permeability of the soil increases, and mineral fertilizers are not washed out. Studies have shown that 4 - 10.6 c / ha higher than control. It was also noticed that when using black polyethylene film between the rows of cotton, the yield increased by 9.7-20.4 c / ha while saving water resources, mineral fertilizers, and technical resources. irrigation, short-term water supply to the field, the growth and development of cotton have changed for the better, and the yield increased by 3.0 c / ha compared to the traditional irrigation option.

KEY WORDS: drip irrigation technique, technology, drip, mineral fertilizer, yield, mineralization, cotton, productivity, drip, drip, bulk density, polyethylene pipe, soil.

Our government pays special attention to improving the culture of irrigation in our country, accelerating reforms in the water sector, strengthening the material and technical base of the industry, modernization and desertification. A lot of work is being done to introduce advanced methods of irrigation of crops, including drip irrigation, irrigation with black plastic wrap, irrigation with portable flexible tubes, irrigation with the introduction of hydrogel crystals into the soil. In particular, the Cabinet of Ministers "On measures to improve the reclamation of irrigated lands and further rational use of water resources for 2013-2017" and "On measures to effectively organize the introduction and financing of drip irrigation and new water-saving irrigation technologies." Decisions and actions are taken accordingly. The technology of cotton care in the drip irrigation system includes the following key indicators: the use of high-yielding and early ripening varieties suitable for various soil and climatic conditions, a rational system of main, pre-water and inter-row soil cultivation, sowing high-quality seeds, mineral fertilization, full irrigation, the use of automated , water-saving and efficient system, combined system of protection against diseases, pests and weeds, mechanized spinning and defoliation of cotton, mechanical cotton harvesting. The main difference between the drip irrigation system is that during the growing season, a certain amount of mineral fertilizers and herbicides can be applied to the plant along with irrigation water, while cotton is processed between rows before the first irrigation, and then completely without inter-row crops (cultivation) until the end vegetation. In order to

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fully study and implement drip irrigation technology on a scientific basis, the Bukhara branch of tiamme conducted research. The soil of the experiment was medium sandy, the depth of groundwater was 2.2-2.5 meters, the growth of cotton during the period of operation. it was 1.9-2.2 m and less salty. According to the results of the experiment, the drip irrigation system has a number of advantages over drip irrigation, allowing to save 45-50% of irrigation water, fuels and lubricants and 40-50% of mineral fertilizers. It was also found that the number of inter-row treatments was reduced by 6 times, and 85 m^3 / ha of water was used to grow 1 centner / ha of cotton.

With drip irrigation, there is a positive change in the water-physical properties of the soil in relation to the irrigated field, including: a decrease in volumetric weight, an improvement in soil permeability. The yield increased by 7.4-10.6 c / ha with drip irrigation. In addition, due to the constant maintenance of moisture in the drip irrigated area, the process of soil salinization was observed in small quantities, free from diseases and pests, especially wilting disease. In the upper soil layer (0-30 cm), the bulk density of the soil is 1.38-1.41 g / sm^3, while in the subsoil (30-50 cm) this indicator slightly increases to 1.49-1.58 g / cm3. The weight and total porosity in these layers were 3.14–3.21 g / cm3 and 51.3–47.1%, respectively.

The physical properties of the soil water are as follows, the wet capacity of the field (ChDNS) limited to 0-100 CM part of the soil layer is 20,3-21,4%, the natural humidity is 17,2-18,5% in the soil layer, while in the subsurface layer is 18,3-20,8%, the irrigation procedure of the soil was formed due to the amount ofThe data obtained during the growing season show that drip irrigation has a higher efficiency than rut irrigation. In particular, if brutto water is spent on seasonal 5200 m3/h in irrigation through the rut, we can observe that in drip irrigation water is spent on 2 and 3 variants 2280 m3/h, and in the fourth variant (70-80-65) on a total of 2760 m3/h in the norm. Thus, when the irrigation system applied drip irrigation in the order of 70-75-70%, the 53% coagulation system was economized on drip irrigation in the order of 70-80-65%.

The features of agrotechnics of care in the conditions of old irrigated Meadow alluvial soils, the new technology of the crop entering the geese and its complex, drip irrigation systems are described above. The high efficiency obtained in these experiments in the field of water saving has also proved itself positive in terms of the environment. Meadow alluvial soils are widely distributed in the region received irrigation of mineral fertilizers along with irrigation erosion and flowing water. Through this method, the root layer of the crop is constantly supplied with moisture, creating a good opportunity to absorb water and nutrients. The advantage of drip irrigation is manifested primarily in saving water resources. This is achieved due to the peculiarity of the irrigation regime, low evaporation, the fact that the water does not flow in vain. The most important thing is that in drip irrigation, water is supplied to the plant through pits, so that the surface part of the field soil does not solidify, as a result of which the processing between the rows is not subject to extiation.

In the traditional method of irrigation, a part of the water is pumped into the lower layers of the soil in the oars, and a part is wasted as a result of evaporation. The fact that 1,5-2,0 thousand/m3 per hectare of water is wasted due to evaporation and absorption of water was determined in the studies. One of the pressing problems is the development and implementation of modern agrotechnical methods of irrigation of crops, which are processed between the goose and a number of others in order to prevent adverse conditions.The technology of irrigation, which covers polyethylene film between the series of burlap, reduces the demand for irrigation water and energy costs, as well as provides an opportunity to increase the productivity of the soil.

In the fields of the Educational-Scientific Center of TYKXMMI Bukhoro branch and the advanced farming farms of the region, when a large number of cotton wool was watered, the water saving was on average 42 per cent and the cotton crop increased by 9.7-20.4 Centner per hectare or 23-43 per cent. In the technology of non-traditional irrigation, the plant will be able to fully absorb nutrients as a result of a uniform moistening of the soil in the crops, a decrease in the evaporation of soil moisture after watering, non-washing of mineral fertilizers with water under pressure.Destruction of weeds due to the fact that sunlight does not fall under the furrow, due to the fact that the soil was not processed between the rows, the soil was not densified, and as a result of irrigation in the norm, the chemical and water physical properties of the

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fertile layer of the soil changed to the positive side, favorable conditions were created for the rapid development of the root system on account of the qualitative Black polyethylene film jointing irrigation technology between the series of burlap is a technological direction that reduces the demand for irrigation water ,and also reduces the costs of lubricating products and equipment, as well as allows to increase soil fertility.

In irrigation of porous areas with the help of portable flexible polyethylene pipes of agricultural crops, 15-20% water saving compared to conventional irrigation instead of beehives, 1,5-2,5% increase in standard flat distribution of useful crop area and facilitate irrigation works and 2-fold decrease in manual labor were observed.Modern portable flexible pipes are adapted to 4 hectares of land area provided for agriculture, using hoses to suck up to 4 ha of land area at the same time oriladi.Er due to the fact that the area is watered in the short term, the melons are all partially the same. Before and after processing between rows, portable bending pipes are assembled and re-installed.The area is given by water norm and in the short term, due to the growth and development of the crop, the yield increases by 2,5-3,0 Centner compared to the traditional irrigation method.

Conclusion

1.When the water-saving irrigation technology in the conditions of Bukhara region was used in the crop of the former irrigated Meadow in the swamp soils(drip irrigation,black polyethylene film blowing, irrigation by means of portable flexible pipes), the water-saving intensive technology proved to be an effective method.Along with a positive impact on the water physical properties of the soil ,it has caused the plant to grow at a high standard,as well as economic growth of up to 50.0-56.0 percent of the harvest,mineral fertilizer, labor force and especially irrigated water.

2.With the application of water-saving irrigation technologies (drip irrigation,black polyethylene film jointing irrigation, irrigation by means of portable flexible pipes)in the irrigation of the porcine, additional yields were obtained in comparison with the control option from 3.0 to 20.4 Centner per hectare of productivity.

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