SCIENTIFIC BASIS OF THE USE OF WATER AND RESOURCE SAVING TECHNOLOGIES IN GUSA UNDER CLIMATE CHANGE

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The farm water use plan is drawn up twice a year for vegetation (1.04-1.10) and non-vegetation (1.10-1.04 for autumn-winter and early spring irrigation) periods. In the water use plan for the growing season, the irrigation of all agricultural crops, orchards, vineyards and other trees, cotton and other cultivated crops should be carried out in connection with inter-row cultivation. is held in. In order to draw up a water use plan for a water-using farm, the following primary data are required: - the borders of the field brigades of farm lands, farm distribution channels, numbers of demarcated irrigated plots, collector-zovor, a plan showing drainage networks, places where water is taken from inter-farm networks, hydrotechnical structures, hydrometry stations, roads and tree plantations; a farm's acreage plan approved by higher organizations for a specific year. In this plan, it should be indicated from which irrigation networks (farm and inter-farm) water will be taken from cultivated areas and which hydromodule region it belongs to; — the table of the irrigation mode of agricultural crops according to the required hydromodule regions. in order to solve economic issues, it is understood as daily management of technical systems, their purposeful use, their maintenance and improvement, as well as maintaining the amelioration condition of irrigation areas at the required level. 135 To achieve this goal, hydromelioration facilities should be equipped with certain equipment according to the following normative indicators: 1. In order to create a connection between water nodes and water use sites, dispatching communication is organized, 1-2 telephone points and 5-6 gm telephone communication wire should be laid for every 1000 irrigation area. 2. For proper organization of water distribution and irrigation process, 6-8 water meter posts per 1000 irrigated area, in the inter-farm network, and 10-15 in the intra-farm network organization is appropriate. In addition, water measuring facilities will be built in the ditch-collector networks to control the inflow and outflow of water in the irrigation area.

3. Main and auxiliary control wells with a depth of no more than 10 m will be installed to control the level of seepage water in the irrigation area. In this case, the distance between the rows (rows) is 5-6 km, and the distance between the wells is 1-1.5 km. In addition to wells of this mode, 1 observation well per 100-150 ha is also designed to control the level of underground water seeping from irrigation networks and changes in the level of seepage water in the irrigation field as a result of irrigation. The total amount of water consumed by cotton during the entire growing season (for transpiration and evaporation from the soil) also varies under different conditions. It depends on the climatic characteristics of the area, the characteristics of the soil, the level of fertility, the depth of occurrence of underground water and the level of salinity and a number of other conditions. Climatic parameters of cotton-growing regions may differ due to temperature extremes, dryness, rainfall, and wind intensity. Depending on these conditions, the amount of atmospheric precipitation falling on the soil, water consumption for evaporation from the soil and transpiration of plants, and therefore, the number of watering and irrigation changes. irrigation norms. According

to climatic conditions, the irrigated areas of Central Asia are divided into three climatic zones: northern, central and southern.

The level of salinity of the soil also affects the irrigation of cotton to a certain extent. Soils that begin to suffer from accumulated salts when the plants are young require early irrigation and use more water than soils that do not have the same depth of groundwater. However, at the same time, it is necessary to strengthen the drainage effect of irrigated areas.

In determining the mode and volume of cotton irrigation, as well as the level of field planning, the level of agrotechnics used, the amount of soil moisture before planting, vegetative irrigation methods, as well as the mode of irrigation sources and the water content of irrigated land level of security. The better the surface of the fields is leveled and the higher the level of agrotechnics, the less water is used for evaporation from the soil, the higher the cotton yield with less water. The more water there is in the soil before planting (from precipitation, storage, washing or irrigation before planting), the later vegetative irrigation can be started, irrigation for cotton the lower the norms. The regime and volume of cotton irrigation should also match the biological characteristics of cotton varieties and farming conditions.

The use of drip irrigation method was greatly expanded in the early 90s of the last century, and by 1993, their area reached 1134 hectares. Including, in 1991-1992, based on Israeli technology, 6.6 million rubles were grown on 1,000 ha of cotton at the "Savay" farm in Kurgantepa district of Andijan region. Drip irrigation system worth USD has been implemented and 500 hectares of it has been put into operation. Based on research, it has been determined that these drip irrigation systems use up to several times less water than regular irrigation. In particular, the water used for irrigation in gardens and vineyards was used up to 60% less than usual, and for cotton cultivation up to 40% less. Run the drip irrigation system. Drip irrigation systems must be flushed before use. For this purpose, before water is supplied to the system for the first time, the plugs at the end of the pipes and hoses are removed and the pipes and hoses are opened. The distribution node of the first sector is opened, after the distribution pipe is washed under pressure, it is closed by plugging the end of the pipe. In this case, the water flows towards the drip hoses and begins to flow out of them. After the water flows from the hoses for 3-5 minutes, their ends are closed one by one in the working state. After that, all the places where the water flows are sealed. After the sector is completely washed and checked that water does not flow from it, the pressure in the drip irrigation system is measured. To do this, remove the plug from the end of each 166-dropper hose and replace it with a manometer (scale interval should be 0.05 kg/cm2). The reading of the manometer is recorded in the notebook. In this case, the pressure difference in the hoses of the sector should not exceed 5%. If necessary, the pressure in each hose of the drip irrigation system is adjusted by changing the diameter of the throttles. Usually, pressure adjustment starts from the farthest hose. Other sectors of the system are subject to similar checks and adjustments. At the end of the season, the drip hoses are separated from the chokes and replaced with caps. This action prevents contamination of the system pipes. It is recommended to treat the hoses with a 1-3% solution of hydrochloric acid before collecting them from the field and putting them in the

warehouse. In the winter season, all the faucets of the system should be left open between seasons. Before the next season (in the spring), it is recommended to wash them again.

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