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CROP IRRIGATION TECHNIQUES AND COTTON CULTIVATION

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According to information, 65-70% of irrigated lands in our republic are prone to natural salinity. Because the location of mineralized seepage waters in such lands close to the surface of the earth leads to their constant evaporation and preservation of salts on the surface of the earth. For this reason, annual salt washing of saline lands is an important agromelioration event. The main purpose of salt washing is to wash excess salts from the soil, which are harmful to the growth and development of agricultural crops, and to reduce the mineralization of seepage water. , 56 thousand 560 hectares are medium, 172 thousand 443 hectares are weakly saline areas.Detailed information was given at the demonstration seminar dedicated to the preparation of fields for sowing seeds for the harvest of 2023 for salt washing and the qualitative implementation of the specified agromelioration measures at the farm "Sugdiyona" in the Vobkent district of the Bukhara region.Today, 150-180 m3/second of water is taken within the border of the region and directed to irrigation works.

Delivery of water to water consumers on time and within the limits by the Bukhara regional department and district departments of "Amu-Bukhara" irrigation systems in the region, district irrigation departments, and reasonable use of this water by water consumers all necessary measures are being taken to ensure its use.

Crops are irrigated by different irrigation methods with water flowing through irrigation networks. Irrigation methods refer to methods of delivering and distributing water to the irrigated field using various devices, equipment, and supplies. Requirements for irrigation methods: - Uniform distribution of water over the entire irrigated field and adequate moistening of the active layer where plant roots are spread. The supplied water should not compact the soil, not create lumps, not have a negative effect on the growth, development and productivity of plants and the quality of the product. - It is necessary not to allow water to soak into the bottom layers of the soil, to evaporate and to run off. - Always be ready to carry out irrigation in the necessary period. - Suitability of irrigation to mechanization and automation. - It should require less labor and money.

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Irrigation systems are a complex water management complex, consisting of the following main components: main water intake facility (dam, sluice, pump stations and b.); water transmission and distribution channels (main channel and its branches, inter-farm distributors); farm distribution tarm whites (farm distributor, water distributor for the crop rotation plot); map irrigation networks (temporary and irrigated, irrigation egates, lanes and checks); sewage networks (channels that discharge excess irrigation and rainwater); collector-sewer network (primary and group sewers, vertical sewers, farm and inter-farm collectors, main collectors used to remove excess water); hydrotechnical facilities (water measuring and distribution facilities, aqueduct, duiker, 241 water level monitoring wells, etc.); service roads and their structures, farm and field roads, bridges; means of communication (telephone, radio stations used for the purpose of quick management of water use); production, service, residential buildings, warehouses, garages, workshops and auxiliary buildings; protection zones of canals, surrounding trees, power lines, etc

Currently, four methods of irrigation are widely used: 1. Irrigation over the ground. 2. Irrigation with rain. 79 3. Irrigation from under the soil. 4. Drip irrigation. In surface irrigation, water is delivered to the plants through egates and boards (marzas). In sprinkler irrigation, water is sprinkled over the plant with the help of special machines, devices and equipment. Many agricultural crops, including pasture grass, are irrigated. The lower part of the egates can be open or closed. Open egates are used in lands with a low slope (0.003-0.008) and heavy soil mechanical composition. In this case, the water will flow along the surface and slowly seep into the ground. Closed-end agates are used on relatively large slopes and in areas with heavy soil mechanical composition. In this case, the water that is given does not flow, it collects on the edge and slowly soaks into the ground.

The distance between the egates also depends on the mechanical composition of the soil and its water permeability. The mechanical composition of the soil is light and medium, and the distance between the ridges is short, and the mechanical composition of the soil is heavy and the water permeability is low. The distance between the egates should not exceed 60-70 cm. The depth of the egates is 14-20 cm. The length of the egates depends on the rate of irrigation and the duration of irrigation, as well as the water permeability of the soil. An important factor in the normal growth and development of cotton is timely and sufficient supply of water. His role is large and varied. The maximum water consumption in cotton is observed during the period of flowering and fruit formation. Water shortage during this period leads to a sharp decrease in the elements of the fruit formed. In

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this case, it is necessary to achieve superiority of development processes over vegetative growth in order to preserve as much as possible the fruit organs of the lower and middle tiers of cotton by means of irrigation. To a lesser extent, cotton is affected by water shortage during the period of mass ripening of the crop.

Uniform evaporation of water creates a more favorable microclimate in the surface air layer. The total water consumption of the cotton field for crop production consists of the consumption of water by plants and its evaporation from the soil. If the total water consumption in the field is taken as 100%, the percentage of consumption by plants (transpiration) is 60-80%, and evaporation from the soil is 20-40%. The more the soil is cultivated and the better the agricultural technology, the less water is lost to evaporation. beneficial use of its plants.

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