

Based on Acceptable Parameters of Irrigation Technique Elements in Irrigation of Bukhara-6 Variety of Cotton in Conditions of Water Shortage

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Annotation. Groundwater is located deep (3 meters), gray and clay soils with medium mechanical composition, gravelly and sandy soils (II hydromodule region) are scattered, with low moisture retention capacity. za is watered 9 times in the 3-5-1 system. In this case, the day between irrigations is 15-12-15 days. Gray and clay soils (III hydromodule region) are irrigated 7 times in the 2-4-1 system, and the interval between irrigations is 16-14-25 days. In the conditions of sand and loamy soils (IV hydromodule region), cotton is watered 9 times in the 3-5-1 system, with 12-13-25 days between waterings, heavy gray, gray, mechanical in the conditions of different or dense layered soils (VI hydromodule region), it is irrigated 6 times in the 1-41 system, 16-15-25 days between irrigations, 2-5 in sandy and loamy soils where seepage water is located at 1-2 meters - Watered 8 times in 1 system, 15-12-20 days between waterings, seepage water 1-2 meters, light, gray homogenous medium and heavy soils 1-3-0 and 1- Watered 4-5 times in 3-1 systems, 17-15-25 days between waterings, in heavy, gray and clay soils with high water permeability, seepage water is located at 1-2 meters 1-3- It is watered 5 times in 1 system, and the intervals between waterings are 19-16-25 days.

Key words: cotton, soil, technology, underground, gray, hydromodule, economical, mechanical.

Irrigation of cotton Watering periods and norms are determined taking into account the period of growth and development of cotton, the mechanical composition of the soil and hydromodule regions. Today, water conservation in agriculture and introduction of cost-effective technologies for irrigation of cultivated land is an urgent issue.

Today, water conservation in agriculture and introduction of cost-effective technologies for irrigation of cultivated land is an urgent issue. As a result of scientists' research, various discoveries are being made in this regard. The goal is to save water and use it efficiently. Groundwater is located deep (3 meters), gray and clay soils with medium mechanical composition, gravelly and sandy soils (II hydromodule region) are scattered, with low moisture retention capacity. za is watered 9 times in the 3-5-1 system. In this case, the day between irrigations is 15-12-15 days. Gray and clay soils (III hydromodule region) are irrigated 7 times in the 2-4-1 system, and the interval between irrigations is 16-14-25 days. In the conditions of sand and loamy soils (IV hydromodule region), cotton is watered 9 times in the 3-5-1 system, with 12-13-25 days between waterings, heavy gray, gray, mechanical in the conditions of different or dense layered soils (VI hydromodule region), it is irrigated 6 times in the 1-41 system, 16-15-25 days between irrigations, 2-5 in sandy and loamy soils where seepage water is located at 1-2 meters - Watered 8 times in 1 system, 15-12-20 days between waterings, seepage water 1-2 meters, light, gray homogenous medium and heavy soils 1-3-0 and 1- Watered 4-5 times in 3-1 systems, 17-15-25 days between waterings, in heavy, gray and clay soils with high water permeability, seepage water is located at 1-2 meters 1-3- It is watered 5 times in 1 system, and the intervals between waterings are 19-16-25 days. In this case, until cotton blooms, the rate of irrigation should be 600-700 m³ per hectare on light soils, and 700-800 m³ on medium and heavy soils. During the flowering period of cotton, the rate of irrigation should be 900-950 m³ in light soils, 1050-1300 m³ in medium and heavy soils. In order to effectively use water for cotton irrigation, it is necessary to take into account the mechanical composition of the soil, the depth of underground water and, of course, the biological characteristics of cotton varieties. Although there are relatively few areas with saline, near groundwater, there are areas where the groundwater level is 1.5-2.0 m deep. In such areas, regardless of the type of cotton, it is necessary to control that the number of irrigations is no more than 2-3 times (in the 1-2-0 irrigation system), to pay attention to the areas planted with cotton. . In such areas, it is advisable to set the rate of irrigation to 800-900 m³/ when the first flower sign appears on the cotton. In other conditions,

depending on the weather, cotton can be watered 4-5 times during the operation period, in the 1-2(3)-1 system, at the rate of 900-1000 m³/ha. When carrying out irrigation works on soils affected by or prone to water erosion in mountainous regions, it is necessary to follow the irrigation technique with extreme caution. For efficient use of irrigation water, irrigation should be carried out by the juice method. When the juice method is used, the manure not only nourishes the cotton, but also acts as a mulch, reduces water evaporation, improves absorption into the soil, and preserves moisture. For this purpose, a trench for juice is dug at the water inlet of each circuit, and 5-7 days before watering, manure is mixed with water in a ratio of 1:1 to prepare jija. In this case, you can use feces, clean cattle manure, rotted manure or compost. High rates and prolonged watering of cotton during the early stages of development do not give good results. During this period, there is too much moisture in the growth layer of the cotton root in the soil, its height becomes longer, joint intervals are 6-8 instead of 4-5 cm. cm, the branches of the crop can be located high and have a negative effect on the crop. The period of flowering and harvest of cotton is a water-demanding period, and waterlogging during this period delays growth and development, the leaves wither and turn dark, and the flower appears quickly at the growing point of the main stem. it is observed that the flower emerges and the elements of the crop fall out. During this period, excessive watering is not possible. Because the cotton grows in height, leaves from the water and becomes balled, the formation of crop nodes is reduced and the cotton yield is lost by 3-5 s/h.



Picture 1.

When cotton reaches the ripening period, the growth processes slow down, during this period it is not recommended to carry out high irrigation rates, because the soil cools, the humidity of the air between the rows increases, and the secondary growth of cotton bushes, it is observed that the stalks lie down, the opening of the pods is delayed, and the quality of the fiber is negatively affected. Zubayda Isakova, a researcher at the Research Institute of Agricultural Mechanization within the system of the Scientific and Production Center of Agriculture and Food Supply, also created a scientific innovation in this regard. In particular, he successfully defended his scientific work on the topic "Justification of the parameters of the working body that creates an artificial pipe between rows of cotton". The Higher Attestation Commission awarded him the scientific degree of Doctor of Philosophy in technical sciences. His scientific discovery is a useful method for saving water in our country. As a result of the scientist's research, a method of irrigation was created by creating an artificial pipe between cotton rows. It is known that one of the main agrotechnical measures in cotton cultivation is watering it at the right time, - says Zubayda Isakova, Doctor of Philosophy in Technical Sciences. - In recent years, there is a shortage of water for irrigating cotton in

some regions of our republic. This, in turn, causes the cotton harvest to decrease. Currently, cotton is irrigated in the main fields in the traditional way, i.e. through egat. In this irrigation method, part of the water evaporates and is wasted in the lower layers of the soil. When cotton is irrigated through the fields, even if the water spreads to the fields at the same rate, not all areas of the field are flooded at the same time. Due to insufficient water saturation, the hem part of the leaves matures earlier than the head part. In addition, after each watering, cultivators are worked between the rows, that is, the soil is loosened to keep it moist, and the egates are opened before watering. So, in the agrotechnology of cotton cultivation, water is used a lot, and additional energy is also used for inter-row processing after each watering. Based on the scientist's scientific conclusions, the scientific-research institute of cotton selection, seeding and growing agrotechnologies has developed the technology of irrigation through artificial pipes formed in the soil for irrigating cotton. Recommendations for the wide implementation of this method of irrigation are given to determine its agronomic efficiency. In experiments carried out on irrigated typical gray soil lands, cotton fields with 60 centimeters between rows were irrigated through artificial pipes, and water was saved compared to normal. Also, the consumption of fuel and lubricants, the germination of weeds between the rows, and soil washing have decreased due to the reduction in the number of cotton inter-row treatments. More moisture was preserved, and additional productivity was obtained.

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