THE AGROTECHNICS OF THIN-FIBER COTTON VARIETIES UNDER CONDITIONS OF STRESS FACTORS

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Stress factors have a serious negative impact on living organisms, including plants. As a result, the productivity indicators of plants and the harvest and its quality are decreasing. Intensification of scientific research aimed at reducing the negative effects of such stress factors and development of measures to save the lost crop, assessment and justification of the physiological aspects of the effects of adverse stress factors are considered as the most important tasks [1-4].

Studying the mechanisms of resistance of plants to salt stress and revealing it is one of the urgent theoretical and scientific problems, by deepening the scientific and research work in this field, creating methods of using exogenous and endogenous substances to increase the resistance of cotton to stress factors, wide use of the existing gene pool of crops in genetic-selection research and agriculture great attention is being paid to wide application to farm production. The need for conducting such research is explained by the fact that it requires the activation of various physiological and biochemical mechanisms to overcome the stress caused by salinity in plants [5-8].

Optimum factors aimed at maintaining the crop are required when growing products at the level of demand. To improve the agro-melioration condition of the irrigated lands of our republic, to improve the ecophysiological and agrotechnical measures used to prevent soil salinity, to identify, create and put into practice the varieties of crops adapted to stress factors, the physiological and biochemical characteristics of cotton varieties that express the level of resistance and productivity in stressful conditions, and the adaptation of varieties Certain results were achieved in the evaluation and scientific justification of reactions [9-13].

Abiotic stressors have a strong negative effect on agricultural plants, reducing plant growth and productivity. Water scarcity, soil salinity, and high temperatures are among the main causes of declining crop yields and food supplies around the world. Therefore, the study of the effects of abiotic stressors on plants and the mechanisms of stress resistance is one of the main areas of plant physiology. Mechanisms of resistance to abiotic stress also include practical aspects such as reducing the harmful effects of stress in different ways or using native varieties adapted to combined stress as a source of genetic material [14].

Climate change inevitably leads to the deterioration of the ecological situation, which causes the salinization of fertile soils, resulting in a sharp decrease in the productivity of crops. Saline soils are common in many countries of the world. They cover about a quarter of the earth's surface, including half of all irrigated land, and the saline areas are expanding. In the arid climate, almost all irrigation water evaporates, and soil salinity is gradually increasing [15].

Abiotic stressors are a major impediment to agriculture, dramatically reducing plant growth and productivity worldwide. Future declines in agricultural crop yields will be exacerbated by global warming, increased pollution, and declining fertile land. The main challenge facing agriculture today and in the future is to increase food production for an ever-growing population in many regions of the world in a deteriorating environment. Minimizing exposure to various abiotic stressors is a common challenge [16].

In February-March, thin-fibre cotton, which is used in the conditions of the barren, barren-meadow, barren desert soils of the southern region, is irrigated at the rate of 2.0-3.0 thousand m3/ha in order to accumulate reserves, and the soil is dissolved in the surface layer of 10-12 cm (moisture is 20- 21%, 70-80% compared to the limited field moisture capacity (LFMC) when the seed is planted (1.04-10.04), the humidity of the ploughed and lower layers should be 23-25% compared to the volume of the soil, every time the tractor moves, it is deformed, compacted and shaken, it was determined that the density of the soil increases by 1.43-1.52 g/cm^3, as well as the appearance of a separate dense layer 2.5 cm thick at the bottom of the track left by the seeding apparatus [17,18].

As a result of 6-7 tractor treatments before the first watering, the density of the lower layers increases (1.41-1.54 g/cm^3) and a dense and hard "wall" appears around the seedling, for the deepening and branching of the tap roots and lateral roots. it was determined that an inconvenient barrier would occur. During long years of tilling the soil and growing crops, not only humus is present in the soil layer, but also all the elements known to us are assimilated, and its freely assimilated and general form decreases. The complex combinations of used organic, mineral fertilizers and chemical substances processed by the soil fauna were found to move, absorb and accumulate under the driving layer in the soil analysis. It was found that by softening this layer and bringing it to the surface of the earth, it is possible to enrich and increase the strength of the driving layer. The first step in the proposed agrotechnics was to determine the effect of changing (increasing) the depth of the plough in use. To moisten the 40-50 cm layer to prepare the land for deep ploughing and high-quality ploughing, the cotton field was irrigated 20-30 days ago after 2 harvests were carried out in early October. In this case, weed seeds planted on the ground got wet, some of them germinated, and the rest got wet and the quality of the seeds was damaged. A part of the insects that entered the village in the soil surface layer (0-20 cm), in the cracks of the earth, and under the cuttings and bushes, also died. Harvesting of cotton stalks was carried out easily in wet soil, and the surface layer of the soil was worked and the soil was levelled, which made it possible to preserve more moisture [19,20].

This event has been done before. However, some areas of the field were ploughed dry, and some areas were ploughed with mud, and the soil became cloddy because the irrigation period and rate were not determined correctly.

It is known that soil moisture has a great influence on the quality of ploughing. The moisture content of the soil layers is determined, taking into account that the moisture content of the 0-30 cm layer should be less than 60% (soil moisture content 14.4-15.6%), and the moisture content of the deep layer should be less than 50% (soil moisture content 13-14%) compared to LFMC, ploughing To moisten the arable layer during irrigation, and not to increase the moisture of the deep layer, it was irrigated with a large stream, and the water was finished in 12-13 hours.

The average soil moisture before ploughing was 14.4-15.6% in the 0-20 cm layer, and 15.7-16.0% in the 20-40 cm layer. A soil moisture content of less than 50% of LFMC ensured that it did not compact.

To keep the soil soft so that the roots of sprouts can spread widely and deepen, experiments were conducted on plough irrigation, land preparation and planting technologies. On November 15, at the central experimental farm, ploughing was done with a 4-body plough on the "Arion" tractor at a depth of 45 cm.

Land levelling was completed in February. In the experiment, this event was carried out in November-December immediately after the harvest. The first pass with a long-base leveller was levelled in the direction of the plough, as the diagonal levelling used in practice would push large lumps into the pits and remain unground. In the experiment, some crushing of the cuttings was observed when levelling along the plough. In the second march, the field was levelled diagonally.

The field was spread with 50 per cent of the normal phosphorus fertilizer rate, and the field was opened and prepared for irrigation to lay the plough. Instead of wet accumulation irrigation in March (2.0-3.0 thousand m^3/ha), the plough was irrigated in December at the rate of 800-900 m^3/ha based on the principle of laying the arable layer, moistening the cuttings and not increasing the moisture of the lower layer. In this case, the main goal was to moisten the

driving layer and cuttings, not to increase the humidity of the driving layer, and it was irrigated first with a large flow of 0.40 l/s, and then with a small flow of 0.25 l/s.
During long years of tilling the soil and growing crops, not only humus is present in the soil layer, but also all the elements known to us are assimilated, and its freely assimilated and general form decreases. The complex combinations of used organic, mineral fertilizers and chemical substances processed by the soil fauna were found to move, absorb and accumulate under the driving layer in the soil analysis. It was found that by softening this layer and bringing it to the surface of the earth, it is possible to enrich and increase the strength of the driving layer. The first step in the proposed agrotechnics was to determine the effect of changing (increasing) the depth of the plough in use.
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