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EFFECT OF IRRIGATION REGULATION, FERTILIZER RATE AND PLANT THICKNESS ON DEVELOPMENT PERIODS OF COTTON VARIETIES

B.O'.Begimkulov
PhD, ITI of fine Fiber Cotton, Termiz,
J.Q. Shadmanov
Ph.D., PhD, PSUEA ITI, Tashkent
Kh.D. Charieva
Ph.D. ITI of fine fiber Cotton, Termiz
N.N. Ochildiev,
Ph.D., k.i.h., ITI of fine fiber cotton,
Kh.T. Bekmurodov
Ph.D., k.i.h., ITI of fine Fiber Cotton, Termiz

Abstract: In this article, the effect of seedling thickness, water-fertilizer (NPK) norms on the development of cotton in accordance with the irrigation regimes, the dependence of cotton growth and development, and the effect of fertilizer norms on plant growth in the maintenance of cotton varieties of PSUEAITI, conducted at the Sirdarya experimental farm, were studied;
Key words: PSUEAITI's Syrdarya region pilot farm, cotton varieties, fertilizer standards, irrigation procedures, cotton growth and development, and the level of assurance of the experimental area.

INTRODUCTION

Today, cotton is grown in more than 90 countries of Asia, America, Africa, Australia and Europe, and a total of 32.0 million. covers an area of one hectare. "In terms of the amount of cotton fiber cultivation, 5987.0 thousand tons were harvested in China, of which 5978.2 thousand, 6205.0 thousand tons in India, 6201.4 thousand, 1785.0 thousand tons in Pakistan, 1782.8 thousand tons of medium fiber cotton were harvested. constitutes". It is considered one of the important tasks in obtaining a high yield from cotton due to the improvement of the elements of new modern innovative resource-saving agrotechnologies in cotton care in the countries of the world.

In the cotton-growing countries of the world, special attention is being paid to the development of advanced methods of growing technologies of high and quality crops from cotton varieties in the face of global climate change. From this point of view, it is urgent to carry out research in the cultivation of fast-growing and fruitful new varieties of cotton in different soil and climatic conditions, taking into account the special biological characteristics of the crops in the application of one-time irrigation, seasonal irrigation and annual mineral fertilizers.

Special attention is being paid to the development of new technologies that can ensure the production of abundant and high-quality cotton that meets the requirements of world standards due to the rational and efficient use of land, water and natural resources in the cotton industry of our republic. Clause 3.3 of the Action Strategy for the Development of the Republic of Uzbekistan for 2017-2021 states that special attention should be paid to "introduction of modern agro-technologies of new cotton varieties in the field of agricultural production". Therefore, based on the biological characteristics of the cotton varieties grown in

the cotton fields of our republic, it is determined to conduct scientific research on the development of optimal seedling thickness, fertilizer (NPK) norms and irrigation procedures, as well as to pay special attention to the implementation of the developed innovative developments.

The level of study of the problem. S.Ryzhov, M.Mednis, Q.Mirzajonov, A.Avliyokulov, M.Khamidov, Sh.Nurmatov, N.Orazmatov, on irrigation, feeding, seedling thickness of cotton with agrotechnics of newly zoned and promising cotton varieties in different soil and climate conditions of our country. Scientific and practical experiments were conducted by B. Mambetnazarov, B. Niyazaliev, M. Avliyokulov, G. Qurbanova, N. Avliyokulov, B. Hofizov, N. Durdiev, M. Tojiev, N. Rajabov, O. Boynazarov and other scientists. but the scientific research works on improvement of agro-measures for the maintenance of newly regionalized and promising cotton varieties in moderately saline soils of Syrdarya region have not been studied enough.

The purpose of the study Based on the biological characteristics of cotton varieties, it is necessary to develop the thickness of seedlings, irrigation method and fertilization norms for obtaining a high and high-quality harvest in the conditions of moderately saline grazing light gray soils of the Syrdarya region.

Research subject the care of newly zoned and promising cotton varieties, seedling thickness, water-fertilizer (NPK) standards, agrophysical and agrochemical properties of the soil, growth, development, yield, dry mass accumulation, leaf area changes, and net photosynthetic productivity of cotton varieties are the subject of research.

Research methods. During field experiments, biological measurements and soil samples were conducted based on the manuals "Metodika Gosudarstvennogo sortoispytaniya selkhozkultur", "Metodika polevykh opytov s xlopchatnikom v usloviyax oroshenie". Agrophysical and agrochemical analyzes of soil samples were determined according to "Metody agrokhimicheskih analizov pochvy rasteniy Sredney Azii", net photosynthesis productivity was determined according to the method of N.N. Tretyakov, "Methods of conducting field experiments", economic efficiency was determined according to the method of R.A. Baronov. Mathematical-statistical analysis of the data was carried out using the Microsoft Excel program based on the method of B.A. Dospehov.

Research results: It is clear from the results of the conducted scientific experiments that for the early germination of seedlings, it is necessary to pay attention to the preparation of land for planting, including washing the soil salt, leveling the land, cleaning it from weeds that germinate in early spring, as well as the timing of seed planting. One of the most urgent issues is the collection of seed into soil moisture, which also plays a key role in saving irrigation water. The reason is that if the seed is irrigated after planting, the first is the excessive use of irrigation water, as well as the increase of weeds under the influence of this water. As a result, due to absorption of the nutrients given to the cotton sprouts, it causes the sprouts to become stunted.

In our experiments conducted in 2016, cotton sprouts fully germinated in 10-12 days. Information about the speed of transition in the development periods of cotton seedlings, first of all, it should be said that one of the issues facing experts, all landowners, and farmers today is to grow and harvest the cotton crop in early periods without leaving it for rainy days. It is necessary to study the biological characteristics of the new cotton varieties created by our breeding scientists. According to the results of the obtained data, the period until 50% flowering of An-Boyovut-2 cotton seedlings planted as a control was 46 days, the period of flowering and harvesting was 59 days, and the period before boll opening was 100 days. When the mineral fertilizer rate of N180P126K90 kg/ha was applied to Sultan cotton variety at 70-70-65% soil moisture, the period until 50% flowering of seedlings was 43 days, the period from flowering to harvest was 57 days, and the period before cotton opening was 99 days. When the rate of mineral fertilizers was increased to 110 kg/N220R154K in the same irrigation regime, these indicators were 45, 58 and 100 days according to phases.

When the soil moisture before irrigation of this variety was 75-75-65% and when mineral fertilizers were applied at the rate of N180P126K90 kg/kg, the period until 50% flowering of the seedlings was 45 days, the period from flowering to harvest was 58 days, and the period before bud opening was 100 days. When the rate of mineral fertilizers was increased to 110 kg/N220R154K in the same irrigation regime, these indicators were 47, 60 and 102 days according to phases.

When the rate of mineral fertilizers N180P126K90 kg/kg of cotton variety S-6524 was applied at 70-70-65% soil moisture, the period until 50% flowering of seedlings was 45 days, the period of flowering and

harvesting was 59 days, and the period before bud opening was 101 days. When the rate of mineral fertilizers was increased to 110 kg/N220R154K in the same irrigation regime, these indicators were 49, 61 and 103 days according to phases.

Before irrigation of this variety, soil moisture in the order of 75-75-65% and the rate of mineral fertilizers N-180, P-126 and K-90 kg/ha are used, the period of 50% of the seedlings until flowering is 46 days, the period of flowering and harvesting is 61 days, until the bud opening. the period was 103 days. In the same irrigation regime, when the rate of mineral fertilizers was increased to 110 kg/N220R154K, these indicators were 49, 63 and 105 days according to phases.

CONCLUSIONS

When irrigation is carried out at 70-70-65% soil moisture, mineral fertilizers N-180, P-126 and K-90 kg/kg are used, the period until 50% flowering of Sultan cotton seedlings is 43 days, the period from flowering to harvest is 57 days, until the opening of cotton. period was 99 days, when the rate of mineral fertilizers was increased to 110 kg/N220R154K, these indicators were 45, 58 and 100 days in phases.

When soil moisture before irrigation is 75-75-65% and mineral fertilizers are applied at the rate of N-180, P-126 and K-90 kg/kg, the period until 50% flowering of seedlings is 45 days, the period of flowering and harvesting is 58 days, the period until bud opening is 100 days, when the rate of mineral fertilizers was increased to 110 kg/N220R154K, these indicators were 47, 60 and 102 days in phases.

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