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Effect of "Tumat" Agro-Mineral Fertilizer on the Productivity of "Andijan-37" Cotton Variety

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Abstract: According to the results of the study, Tumat was treated with argonomireral fertilizer before planting and the concentration was 6.1 grains fed to the cotton during the period of growth and development. Due to the fact that these indicators are 2.6-2.8 more than in our control variant, the seeds of Andijan-37 cotton variety were processed before sowing, and during the growing season, ie during the mowing and flowering period, 40.4 ts / ha of leaf-fed crop was obtained.

Keywords: Tumat, Andijan-37 cotton variety, growth and development, yield.

Introduction In cotton-growing countries around the world, including the United States, the effectiveness of mineral fertilizers in cotton varieties and different seedling thickness, various stimulants are fed from the leaves. In China, planting cotton depending on soil and climatic conditions, and in Australia, cultivating different varieties of cotton at a seedling thickness of 120-140 thousand bushes / ha have been found to be effective.

In all regions of the country, especially in the soil-climatic conditions of Fergana region, during the period of growth and development of cotton, various stimulants are widely used in practice. In this regard, it is important to conduct research on new, promising methods of feeding cotton varieties, to determine the optimal standards of mineral fertilizers.

Taking into account the above, in 2019-2021 experiments on the stimulator of Tumat argonomineral fertilizer will be conducted on the farm of Dangara district in the conditions of light gray soils of Fergana region. Andijan-37 variety of cotton is grown. Tomato argonomineral fertilizer stimulator is applied at the rate of 1 l / t before sowing, 1 l / t during the mowing and flowering periods.

Experiment 4 variants are placed in 4 rows, and hairy seeds of Andijan-37 variety are planted by hand. Planting rate is 45 kg / ha, cotton row spacing 60 cm, 4 rows, planting scheme 60x20-2 options width 2.4 m, height 30 m, area 72 m^2, of which the calculated area is 36 m^2.

During the use of chemicals are used "Brief guidelines for state testing of growth regulators" (Moscow, 1984) and "Guidelines for testing insecticides, acaricides, biologically active substances and fungicides" (Tashkent, 1994).

Table 1
Experimental system

T/p	Experiment options	The norm of seed processing	The norm of processing during the shingles	Processing rate during flowering
1	**Control**	**Not processed**		
2	**Sodium gumate 30% powder**	**1 kg / t**	**-**	**-**
3	**Tumat**	**-**	**1 l/ha-**	**-**
4	**Tumat**	**1- kg / t**	**1- l/ha**	**1 l/ha**

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Growth and development of any agricultural crops, including cotton, in irrigated agriculture, the method of planting in the fields, the thickness of seedlings per hectare, the climatic conditions of plants due to natural factors: temperature, light, air, soil factors, humidity, nutrient supply depends in many ways on the conditions.

According to the results of the study, in the first true leaf stage of growth and development of Andijan-37 cotton variety, when the effect of mineral fertilizers norms and irrigation regimes has not yet occurred, the density of soil in the formed buds improves from year to year. and the growth and development of plants under the positive influence of the enrichment of the soil composition with nutrients and other factors.

According to the first observations made at the research site (1.06), in the control variant, which was sown without treatment with stimulants before sowing the seeds of Andijan-37 cotton variety, the plants grew very slowly. Because the soil temperature in these variant plots was lower than in the other variants, the seeds germinated slowly. In addition, a slight decrease in soil temperature under the influence of a given seed water resulted in an increase in soil density as a result of the adverse effects of the resulting soil and air environment.

It should be noted that the soil density and porosity in the buds improved from year to year in all variants of seeds after treatment with stimulants before sowing. 5.6 grains, 5.1 grains in the 3rd variant treated with Tumat argonomireral fertilizer during the growing season, 6.1 grains in the 4th variant treated with Tumat argonomireral fertilizer before sowing and fed during the growth and development of cotton. It was found that these figures were formed 2.6-2.8 more than in our control variant.

Because the increase and decrease in seedling thickness of cotton leads to a change in plant nutrient area, varying levels of light and temperature supply, the leaf level in a plant also changes. This, in turn, affects cotton transpiration, photosynthesis productivity.

The impact of agro-measures in the early stages of growth and development of the Andijan-37 cotton variety lasted until the end of the period of validity, and specific results were obtained in accordance with the carried out agro-technical measures.

When cotton seeds of Andijan-37 variety were sown and cultivated in light gray soils of Fergana region, the average cotton yield was 33.8 t / ha, and before sowing the seeds of Andijan-37 cotton variety were treated with humin (seed processing 1 kg / t). In our variant 2, the cotton yield was 37.9 ts / ha. Also, in the 3rd variant of Andijan-37 cotton variety fed with agromineral fertilizer during growth and development, the yield was 36.2 ts / ha. while 40.4 ts / ha. This is 6.6 ts / ha compared to the control variant, 2.5ts / ha compared to our variant 2 treated with Gumin (Seed processing 1 kg / t) before sowing of Andijan-37 cotton seeds, with tomato agromineral fertilizer during growth and development. was 4.2 ts / ha higher than our 3rd variant.

Effect of Tumat agromineral fertilizer on cotton yield of Andijan-37 cotton variety, ts / ha (2020)

T/p №	Method of tillage	Planting methods	I	II	III	Additional	yield relative to the average control, ts / ha
1	(Control)	60x20x2	34,1	33,2	34,1	33,8	
3	Gumin (Seed processing 1 kg / t)	60x20x2	39,4	37,0	37,3	37,9	4,1
4	Tumat (1 l / ha of treatment during weeding)	60x20x2	37,0	35,9	35,7	36,2	2,4
5	Tumat (Seed treatment 1 l / ha, Processing period 1 l / ha during flowering, 1 l / ha during flowering)	60x20x2	40,7	39,2	41,3	40,4	5,9

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2019 year - Sd=0,19 ts/ha; HCP_{05}=0,4 ts/ha; HCP_{05}=1,07%; Sd=0,14 ts/ha; HCP_{05}(A)=0,29 ts/ha; HCP_{05}=0,77%; Sd=0,11 ts/ha; HCP_{05}(B)=0,23 ts/ha; HCP_{05}=0,61%

In summary, it was observed that Tumat was treated with argonomireral fertilizer before planting, and in our 4th variant, which was fed during the period of growth and development of cotton, it was 6.1 seeds. Due to the formation of 2.6-2.8 more than in our control variant, Andijan-37 cotton seeds were processed before sowing, and in the 4th variant, which was fed from the leaves during the growing season, ie during the mowing and flowering period, it was 40.4 ts / ha. This is 6.6 ts / ha compared to the control variant, 2.5ts / ha compared to our variant 2 treated with Gumin (Seed processing 1 kg / t) before sowing of Andijan-37 cotton seeds, with tomato agromineral fertilizer during growth and development. was found to be 4.2 ts / ha higher than our 3rd variant.

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