

EFFECT OF SOWING METHODS ON THE GROWTH OF "ANDIZHAN-37" COTTON SEEDS

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ABSTRACT:

According to the results of the study, the methods of sowing had a different effect on the germination of seeds of cotton variety "Andijan-37" and the method of sowing seeds on autumn buds had a positive effect. Because the germination rate was significantly higher when the seeds were planted in the furrows than when planted on flat ground, the cultivator was less likely to damage the seedlings when cultivating between rows, and the air and water physical properties of the fallow soil improved in the fall. a sharp decrease in mortality was observed.

Keywords: Andijan-37 cotton variety, germination, feeding methods, single row and double row, growth, cotton harvest.

INTRODUCTION:

Today, the creation of new, promising varieties of cotton in cotton-growing countries around the world, the development of resource-efficient agro-technologies for their cultivation is one of the important tasks. Cotton is the leading agricultural sector in many countries, with cotton grown in 84 countries around the world.

Although new varieties of cotton created in the cotton industry of the country and various agro-technologies developed in a

timely manner provide agro-technologies for the production of fairy-tale and high-quality cotton, in recent years there has been a growing demand for world standards and competition between cotton-growing countries. . The growth and development of cotton, the harvesting processes are important for plant nutrition, water, soil air area, light and heat supply, ultimately the planting method for photosynthesis productivity, and the number of plants per unit area. A. Nichiporovich [1] wrote that "the productivity of photosynthesis in plants is directly related to the leaf surface, so the main task is to create an optimal surface of the leaves through the thickness of the seedlings, while creating favorable conditions for photosynthesis." According to M.P.Mednis [2], the highest photosynthesis productivity of the cotton plant occurred at a leaf level of 20,000 m² per hectare, with a high cotton yield. Foreign scientists F.G.Gregory [3], M.D.Thomas [4] found that the process of photosynthesis in plants depends on temperature, sunlight.

In this alternate sowing of cotton with a ratio of 1: 0.6 to the grain, there was a need to sow winter wheat between the rows of cotton in the main areas.

It can be considered that the method of sowing the seeds with mulch on film and on flat ground, which has been practiced in Andijan

region since 1995, has solved the problem of early cotton growing, although not completely. O.Mahmudov, G.Nematov, S.Bakhramov [5] M.Sultonov, I.Kobulov, [6] Sh.Ibroximov and others, [7].

It is known that all new varieties of cotton require specific agronomic measures in different soil-climatic conditions. In particular, the Andijan-37 cotton variety, although created in the climatic conditions of the Fergana Valley, requires the development of specific agro-technical measures. Therefore, in the conditions of light gray soils of Andijan region, an important task is to develop the requirements for seed germination and seedling thickness, as well as the norms of mineral fertilizers, depending on the methods of sowing the variety Andijan-37.

It is known from scientific sources that in order for seeds to germinate, the soil must have sufficient moisture and temperature. According to scientific sources, it was found that when the pile is removed, an additional temperature of 1.5 - 2 °C is formed relative to the flat ground.

Therefore, regardless of the method of sowing, the seeds provided with moisture and temperature in the bud will germinate quickly

and healthy. Especially in the natural moisture of the soil there is an opportunity to produce seeds and complete seedlings.

According to the experimental system, the theoretical seedling thickness should have been 120, 150 thousand bushes / ha in both planting methods of the options sown on seeds in autumn, and 100 thousand bushes / ha in the control option planted on flat ground.

According to the data obtained during the experiment in 2008-2010, it was found that the degree of germination of seeds is directly related to the method of sowing seeds.

The data obtained showed that on the 5th day after sowing, the seeds did not germinate in the normal way, when sown on flat ground, and the seeds sown on autumn seedlings began to germinate. According to the results of observations 10 days after sowing, in 2008, 38.4% and 34.7% (4-5 var.) Of seeds in single-row variants were planted in autumn seedlings, and 46% of seeds in double-row control variants (10-11 var.). , 3 and 48.5 percent, respectively. In the control variant planted on flat ground, only 15.6% of the seeds germinated due to unfavorable conditions caused by the lack of soil moisture and temperature.

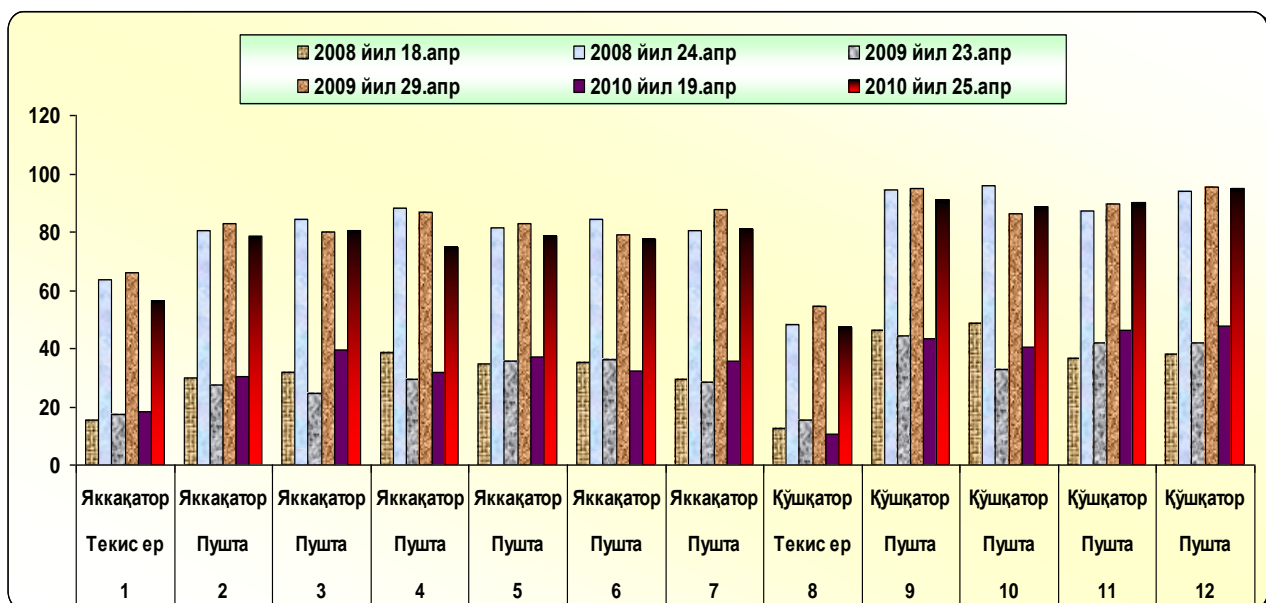


Figure 1. Influence of sowing methods on seed germination

Similar data were obtained in the remaining years of the experiment. Based on these data, it can be noted that the germination of seeds was significantly accelerated by the simple method, the method of sowing seeds in the autumn buds compared to the method of sowing seeds on flat ground. Or, on average, in three years, the seeds germinated in 17–18 days in the single row variants, 15–16 days in the double row variants, and 8–10 days in the flat variants, ie in 23–26 days.

In all variants planted in the bush, complete and flat seedlings were taken into account the natural moisture of the soil. Seeds in control options planted in a flat field with insufficient soil moisture and temperature were found to germinate 7–10 days later than in varieties planted in the pile. [10]

Thus, the seeds sown in the autumn buds germinated faster and healthier than the options sown in the normal way at the optimum humidity and soil temperature, and formed the appropriate seedling thickness in the norm.

Thus, it can be concluded that the

germination of the newly created Andijan-37 cotton variety results in better retention of moisture accumulated as a result of winter precipitation when planted in autumn, and improved soil efficiency due to increased soil surface. significantly improved due to being higher. Also, when the seeds are fully germinated, there is no need to water the seeds to form flat grass.

Seedling thickness is one of the important factors in the growth and harvest of cotton. The structure of the plant bush, growth and yield branches, the weight of yield elements are directly related to the seedling thickness per hectare of cotton. Seedling thickness also has a direct impact on the level of plant moisture, light, temperature, nutrient utilization and other natural factors, as well as the microclimate of the field.

In cotton growing, it is also important to know how to sow the seeds in order to get a high, early and quality harvest from cotton. Because cotton is a short-day plant, the earlier the seeds germinate, the higher the growth, development, and yield of cotton in the future.

Table 1 Influence of sowing methods on seed germination rate, (in days)

	Soil cultivation methods	Planting methods	Seedling thickness, thousand / bush	Social Architects of Mineral Fertilizers, kg / ha	2008, planted 8.04		2009, planted 12.04		2010, planted 11.04	
					100%	day	100%	day	day	100%
1	It's flat	Single lane	100-110	N ₂₀₀ P ₁₄₀ K ₁₀₀	1.05	23	7.05	25	23	7.05
2	furrow	Single lane	80-90	N ₁₅₀ P ₁₀₅ K ₇₅	27.04	19	2.05	20	19	2.05
3	furrow	Single lane	110-120	N ₁₅₀ P ₁₀₅ K ₇₅	26.04	18	3.05	21	18	3.05
4	furrow	Single lane	140-150	N ₁₅₀ P ₁₀₅ K ₇₅	25.04	17	1.05	19	17	1.05
5	furrow	Single lane	80-90	N ₂₀₀ P ₁₄₀ K ₁₀₀	27.04	19	2.05	20	19	2.05
6	furrow	Single lane	110-120	N ₂₀₀ P ₁₄₀ K ₁₀₀	26.04	18	3.05	21	18	3.05
7	furrow	Single lane	140-150	N ₂₀₀ P ₁₄₀ K ₁₀₀	27.04	19	1.05	19	19	1.05
8	It's flat	Double line	100-110	N ₂₀₀ P ₁₄₀ K ₁₀₀	3.05	25	10.05	28	25	10.05
9	furrow	Double line	110-120	N ₁₅₀ -P ₁₀₅ -K ₇₅	24.04	16	29.04	17	16	29.04
10	furrow	Double line	140-150	N ₁₅₀ -P ₁₀₅ -K ₇₅	24.04	16	1.05	19	16	1.05
11	furrow	Double line	110-120	N ₂₀₀ P ₁₄₀ K ₁₀₀	25.04	17	30.04	18	17	30.04
12	furrow	Double line	140-150	N ₂₀₀ P ₁₄₀ K ₁₀₀	24.04	16	29.04	17	16	29.04

In the study, it was once again proved that sowing the seeds in clumps ensures its early germination. It should be noted that the diversity of sowing methods not only affected the germination rate of seeds, but also directly affected the seedling thickness of cotton. According to the data obtained, the number of seedlings in the variants planted on flat ground in a simple way was 87.8% on average in 3 years compared to the number of seedlings specified in the plan. It was found that the number of seedlings was 95-96%, respectively, in the single and double plantings. In this case, due to the favorable soil conditions created in the buds, a sufficient standard seedling thickness was achieved in these options.

Hence, the method of sowing the seeds in the buds taken in the fall has shown its positive effect on the formation of full seedlings of cotton. This is because the formation of favorable humidity and temperature as a result of improving the volume volume and porosity of the soil in the 0-30 cm layer of soil obtained from the pile was important for the germination of seeds. In the flat-planted variants, on the other hand, a relative decrease in the number of seedlings was observed due to the water-physical properties of the soil, i.e., soil compaction and lack of moisture.

In short, sowing methods had different effects on the germination of cotton seeds "Andijan-37" and the thickness of seedlings. The method of sowing seeds in autumn has shown a positive effect. This is because, firstly, when the seeds were planted in the furrows, their germination rate was significantly higher than when planted on flat ground, secondly, the cultivator reduced the probability of seedling damage when cultivating between rows, and thirdly, the seedlings were vigorous due to improved air and water physical properties. grew and as a result their mortality decreased sharply.

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