Phenotypic Variability of the Cotton Sorts under the Influence of Environmental Factors

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Abstract: *In this article, the effect of various environmental factors on the phenotypic changes of a promising cotton sort is studied. It is recommended to plant cotton sorts in light gray soil conditions of Fergana region.*

Keywords: *Cotton feeding area, phenotypic changes, average yield, soil fertility, fiber yield, total fiber yield, planting pattern.*

INTRODUCTION

The wide application of innovative technologies in our country, the introduction of fast-ripening, high-yielding cotton sorts resistant to various diseases and pests is a guarantee of a high and high-quality harvest.

In recent years, extreme variability of the weather requires timely agrotechnical measures for the cotton plant, as well as efficient use of water resources, mineral and local fertilizers.

Regionalization of cotton sorts in accordance with the correct purpose in the regions of our republic with different soil and climate conditions plays an important role in the wider development of cotton production. It is also important to study various phenotypic changes caused by environmental factors, taking into account the bioecological characteristics of regionalized cotton sorts.

Literature analysis and method

Today, our republic is creating, planting, and putting into practice cotton sorts suitable for climate and soil conditions. , drought, harmsel, especially in the direction of resistance to low relative humidity of the air, our mature specialists, breeding scientists are achieving a great success by conducting research.

M.Nazarov, D.M.Akhmedova (1) explains that the formation of cotton crop elements is related to the feeding area, metabolism and photosynthesis productivity.

According to D.M.Ahmedova, G.Maksudova (2), the cotton yield of cotton planted in the 60x15-1 scheme depends on the row spacing and placement method, and its change depends on the care conditions. Also, when there is enough light and soil moisture, when favorable conditions are created, it increases the efficiency of organic and mineral fertilizers given to cotton as additional food.

D.M.Ahmedova, T.Umarov (3) stated that when the growth and development of the plant was observed leaving 160,130,100 seedlings per hectare, the plant developed freely in the 60x15x1 scheme, compact cotton bushes water is saved, the level of evaporation of moisture on the soil surface is reduced.

The goal was to study the bioecological characteristics and phenotypic changes of the cotton plant under the influence of environmental factors. S-6524 (model), S-8295 cotton sorts were selected for

the experiment. Through phenological observations, complete seedling germination, full flowering, the beginning of the ripening period, resistance to diseases, resistance to dormancy of sorts, and resistance to spilling of cotton in the boll by sorts were studied. The experiments were carried out in 4 repetitions. In each repetition, the length of the division is 25 m, the number of rows is 4, the distance between the rows is 60 cm, the width of the division is 2.4, the crop scheme is 60x15-1.

DISCUSSION

In 2017, seeds of experimental cotton sorts were sown on April 15. During the experiment, agricultural work was carried out in the same period. The complete germination of the seedlings of the experimental sorts was April 28 in the S-6524 sort, and April 28 in the S-8295 sort (Table 1). Cultivation between rows was carried out on a TTZ-60-11 tractor with a KRX-4 unit. Cultivation 1 was done on May 8, Cultivation 2 on May 15, Cultivation 3 on June 2, Cultivation 4 on June 20, Cultivation 5 on July 2, Cultivation 6 on August 15. Watering of seedlings: 800 m3 on June 1, 800 m3 on June 25, 1000 m3 on July 12, 1000 m3 on August 23, the experimental area was watered 5 times.

Fertilizing with planting on April 15 N-100, P2O5 -50 kg during the growing season N-150, P2O5 - 50 kg on June 1, N-100, P2O5 - 50 kg on June 20, July 20 on the day N-100, P2O5 -50, K2O -30 kg were placed in the row spacing at a depth of 12-16 cm. Full flowering of cotton was observed in S-6524 sort on June 25, and in S-8295 sort on June 20.

RESULTS

The start of the ripition period of the experimental sorts was observed on August 22 in S-6524 and 28, Vigi, S-8295. The period of ripening s-6524 sorts for the average of the Navi, while the S-8295 sort ripened, and S-6524 sort was 122 days, S-8295 sort was 116 days .

Phenological indicators of cotton in experience in 2017-2018 1-table

№	Sort	2017- year					2018– Year				
		Planting	Growing Fully time	Flowering	The beginning of the cooking period	The period until ripen from the germination davr(kun)	Planting time	Growing Fully time	Full flowering in the mass	The beginning of the ripen period	Till ripen (day)
1	S-6524 (control)	15.04	28.04	25.06	28.08	122	24.04	3.05	21.06	24.08	114
2	S-8295	15.04	28.05	20.06	22.08	116	24.04	2.05	14.06	18.08	109

In 2017, the yield of prices seasoned in 2017 (Table 2) from S-6524 sorts yielded 42.1, S / 8295 sorts of 44.3 s /. One neighbor weighing - 4.8 grams in S-6524 sorts, amounted to 5.2 grams.

The fiber production of cotton sorts is: 35.2% in the sort, amounted to 36.0% in S-8295. The total yield of the fiber from the experience this year was: S-6524 sort, 14.4 C / s-8295 sort (s-8295 sort was 15.6 s / h.

The cotton sorts tested in the experience was unbroken with a wild disease. 9.5% in S-6524, recorded 7.5% in S-8295.

In 2018, the experiments were continued and the seeds of experience in the experience were sown on 24 aparts. The complete convenience of seedlings was observed in Navigation in S-6529 in S-8295 in S-8295 in S -6524 Navigation on June 21 in S-8295.

The start of the ripening period of sorts was recorded in S-6524 Navigation on August 24 in S-8295 in August 18. When the ripening period of sorts was observed, the difference between the sorts were identified. The reason for this is the difference between the sorts of seedlings in the division and repaying.

After the sorts ripened, the period of s-6524 sorts of S-6,5524 was 114 days, S-8295 sort (Table 1).

The yield in the experience in 2018 was: S-6524 40.1 S / ha yielded 44.2 s / from S-8295 (Table 2).

The 5524 sort of sorts pervade amounted to 5.2 g., S-8295 sort was 5.8 g. 35.4% in the sort of the fiber sort of sorts accounted for 35.4%, and 3595 average. The total yield of the fiber was obtained from S-6524 15.7 S / 4, to 16.9 C / 4295 sort.

In the 2018 experience in 2018, the pİt of sorts was as follows. In S-6524, 18.5%, S-8295 sort was observed infected by 14.5%.

During 2017-2018, experience was scored 5 points to the resulting sorts of all the sorts of silence in the amount of all sorts of cotton in the bowls.

The experiences of our operation in 2017 is that this year is a decline in the second 10 days of the weather in spring and the first 10 days of the May to +50 degrees The cotton growth, development and an effect was affected by the cotton harvest.

If in 2017, 42.1 s / 6524 sorts were harvested, in 2018, yielded 40.1 s /. The S-8295 sort was yielded in 2017, and in 2018, it was harvested 44.2 s /.

In 2017, the climate situation was a favorable convenient, and they did not cause difficulty care. In the experience of the 2018 experience in 2017, high results were achieved in the cotton expenditures in 2017, the total fiber emergence, and the period of fiber until cooking, especially since the germination of the fiber. But the plug of all sorts of experience significantly increased in 2018.

Changes in the main indicators of cotton sorts by options 2- jadval

T/r	Sort	Experimental years	Average productivity s/ga	Fiber output %	The general harvest of the fiber s/ga	1 unripe cotton bell weighing g.	Until ripen from germination, the day	Diseased with Vilt %
1	S-6524 Control	2017	42,1	35,2	14,4	4,8	122	9,5
		2018	40,1	35,4	15,7	5,2	114	18,5
		average	41,1	35,3	15,1	5,0	118	14,0
2	S-8295	2017	44,3	36,0	15,6	5,2	116	7,5
		2018	44,2	35,9	16,9	5,8	109	14,5
		average	44.2	35,9	16,2	5,5	112	11,0

Conclusion

Experiences suggest that during the growth and development of cotton plant, the emergence of phenotypical changes depends on the effect of environmental factors. The minimum or maximum influence of the cotton plant of the environmental factors causes various modifications.

The increase in heat to each level into each level in a way that is particularly affected by physiology-biochemistry and the development of the plant. This, in turn, is associated with hereditary features incorporate in the process of long evolution.

Experience shows that if the growth of young grasses of young age (25 ° C or more), the seeds grew up quickly when the seed grew rapidly, it is loud, The joints are long, weak and generated.

In the early days of cotton growth, the average daily growth of the head of the lead role is 0.21 cm in the temperature of 17.8 °; If 20.5 ° C, 0.84 cm and 24.1 ° C. If the cotton corridor growth during the palls, heat is 25.3 ° C. 'Land -1.36 cm; The 22.7 ° C. During this period, it was seen that it had a strong influence on the growth process than the increase in heat.

A positive change has been identified in the growth and development of cotton when micro-stores are normally formed. It is found that the cotton yield can increase to 1.5-5 quintals per hectare. Especially under the influence of micronutrients, the resistance of plants increases.

There will also be insufficient and excess the micronutrients, which violates the metabolic process, resulting in a decrease in the cotton harvest.

The experiences of our operation in 2018 is that the second unfortunate of the weather in the spring and the first 10 days of the May to +50 degrees The cotton growth, development and an effect was affected by the cotton harvest.

In 2017, the climate situation was a favorable convenient, and they did not cause difficulty care. In the experience of the 2018 experience in 2017, high results were achieved in the cotton expenditures in 2017, the total fiber emergence, and the period of fiber until cooking, especially since the germination of the fiber.

If in 2017, 42.1 s / 6524 sorts were harvested, in 2018, yielded 40.1 s /. The S-8295 sort was yielded 44.3 s / in 2018, and in 2018 yielded 44,100.

According to the results of the results, in large-humidity of the climate of the region, planting and testing the sorts of S-8295 and S-6524 sorts are invited to be zoning in the future.

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