

## OF SOILS WITH DIFFERENT DEGREES OF SALINITY GROWTH AND DEVELOPMENT DYNAMICS OF COTTON EFFECT

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**ABSTRACT:** In this article, it is salted to different degrees soil growth and development of cotton influence on the dynamics was determined. In a field experiment irrigated meadow alluvial soils were selected. As a result, the most positive results among the options the first option was observed in low salinity soil.

**KEY WORDS:** Bukhara-8 cotton variety, comb, height, crop branch, flower, pods the number

### **Research Materials and Methodology.**

It is known to everyone that the soils of Bukhara region have varying degrees of salinity. a farmer and advanced in the cultivation of agricultural products, especially in cotton care harvest is achieved due to the hard work of farms. But the climate changing conditions and increasing salinity is higher than the cotton plant from year to year and is limiting the possibility of obtaining a quality harvest. Soil salinity has a negative effect on the growth and development of plants. In this Physiological processes are disturbed and stress conditions are observed in plants. Physiological properties of cotton are such that it is absorbed from the air through the leaves and from the soil through the roots is fed. Due to these characteristics, cotton stems and roots have a certain time during the growing season grows inside. Growth of the stem and root in the period of shoot development at the expense of formed apical meristems and is permanent in apical meristem tissues new cells are formed and they grow due to stretching. Elongating cell the walls are rebuilt at the expense of polysaccharides constantly coming from the cytoplasm stands up.

There are a number of receptor systems in the stem and root tips, which are in plants accepting the changes in the external environment and making adequate adjustments to them creates.

In general, cotton has two central branches, which in turn are the stem and causes the root to adapt to the new environment. Phytohormones are produced in these centers will be released.

During its physiological growth and development, the cotton plant has 4 stages: embryonic, passes through the stages of washing, maturation and aging.

We know that the Bukhara-8 cotton variety, according to its morpho-biological and physiological characteristics,

Among the strong "polvan" cotton varieties, its root system is strong, thick and earthy. It is located deep under the ground and the leaf plates are thick, and the growth organs are average due to its hairiness, to dehydration, salinity and other extreme conditions it is distinguished by its relative durability.

Bukhara-8 variety of cotton is phenological in soils with varying degrees of salinity in 2022, Bukhara District "Aslan To'yli Bobo" an experiment was conducted on farm fields.

The experiment was carried out on meadow-alluvial soils, each option was in triplicate, control option (low salinity) and moderate to strong salinity in the test options land was chosen. Using a special pH meter designed to determine soil salinity was determined.

All analysis and phenological observations conducted in field conditions in the study were carried out by UzPITI and It was conducted on the basis of the "Methods of Conducting Field Experiments" developed at VNIIXSZR. Mathematical processing of the obtained data was determined by the method of B. Dospikhov.

The obtained results and their analysis showed that the seeds of the experimental system Planted at the beginning of May in different degrees of salinity, growth and development in order to determine the dynamics, the first of each month (June, July, August, September). up to decade, plant height, crop branch, stalk, flower, number of pods and opening was determined by the standard method and analysis work was carried out.

Cotton height, crop branch, accumulation of crop elements, mature in one bush the number of pods, of which the plant is opened in the first ten days of each month from the beginning of vegetation to the last ripening period in plants with hanging labels (har 25 plants from three replicates of one variant) in three different saline soils went

The main stem of a cotton plant grown in soils with varying degrees of salinity when analyzing the effect of soil salinity on the height and number of crop branches, in May, June, July, August, September according to study periods in the control option when the height of the main stem of cotton is determined in the sequence of months it was as follows, 17.6; 46.8; 69.5; 76.9; It was 87.0 cm. May of the growing season In the first month, the number of pine leaves was 7.5 pieces, and from the next month, the crop branches were formed. June, in July, August, September, the number of harvest branches is 8.0; 11.5; 12.0; 14.0 pcs organized (Table 1).

Studies conducted on medium salinity soils show that height of the main stem of cotton in different periods of biometric measurements i.e. 12.6 in May, June, July, August, September, respectively; 38.7; 59.3; 67.3; 74.5 cm formed, with increasing

salinity, the height of the cotton plant was observed to decrease. For example, low salinity in moderately and strongly saline soils ranged from 5.0 cm to 30.0 cm, respectively, compared to the control variant (Table 1).

Also, the main stem of cotton grown in highly saline soils The height of the survey was carried out in May, June, July, August, September, respectively 9.6; 23.4; 39.0; 52.3; It was 63.5 cm. During the studied months, the number of crop branches is suitable according to 4.0; 5.0; 7.0; 9.0; It was 10.0 units (Table 1).

In July 2022, the plant height and the number of harvest branches in all options was determined. Plant height: from 69.5 cm to 39.0 cm; harvest branch up to 11.5-7 pcs results within the interval were obtained.

When the growth and development dynamics of cotton are studied in the situation of August 5, 2022, the plant height, the following difference in the number of crop branches, that is, the height of the plant is up to 52.3-76.9 cm; harvest it was observed that there is a difference in the interval between 9-12.0 pieces of horn (Table 1).

Growth and development of cotton as of September 10, 2020 dynamics was determined in the section of all options. In this case, the height of the plant is 63.5-87.0 up to cm; the harvest branch was in the range of 10.0-14.0 units (Table 1).

According to the results of the conducted research, it grows in soils with different levels of salinity The length of the Bukhara-8 cotton variety in May, correspondingly, the first option is less salty 17.6 cm in the control variant, 12.6 cm in the second variant with moderate salting, third variant was 9.6 cm in highly saline soil (Table 1).

Table 1

Phenological indicators of cotton grown in soils with different levels of salinity, 2022 year

№	Options	May		June		July		August		September	
		Height cm	Chinbarg grain	Height cm	Harvest horn	Height cm	Harvest horn	Height cm	Harvest horn	Height cm	Harvest horn
1	Control	17,6	7,5	46,8	8,0	69,5	11,5	76,9	12,0	87,0	14,0
2	Average salted	12,6	5,5	38,7	6	59,3	9	67,3	11,0	74,5	12,0
3	Strong salted	9,6	4,0	23,4	5	39,0	7	52,3	9	63,5	10,0

The number of chinbars is 7.5 respectively; 5.5; It was 4.0. June of the growing season 46.8 cm in the first option and the second option in the control option with low salinity, respectively 38.7 cm in the moderately saline option, 23.4 cm in the third option with strong saline soil formed Shona averaged 4.1 in each option; 3.2; 2 pcs. 1.5 in the flower options section; 1.0; 0.8 pcs. The cup is 0.4; 0.2; It was 0.1 units (Table 2).

Similar observation work was carried out in July, in which each 69.5 respectively in the variant; 59.3; 37 cm. Crop branches are 11.5 respectively; 9; 7 pcs. Shona average 6.2 in each option; 5.1; 3.8 pcs. 4.2 in the flower options section; 3.1; 2.8 pcs. Goblet and 6.9; 4.8; It was 3.9 units (Table 2).

This observation led to the following results in August: the first option is small 76.9 cm in the saline control option, and the second option in moderately saline soil 67.3 cm, the third option was 52.3 cm in strongly saline soil. Crop branches 12.0 respectively; 11.0; 9 pcs. The Shona average is 7.3 in each option; 5.4; 4.2 pcs. Flower 5.1 in options section; 3.8; 2.1 pcs. The cup is 9; 7; It was 5.0 units (Table 2).

The following results were obtained at the end of the growing season of our plant, i.e. in September 87.0 in the first version of the low-salt control version, and 87.0 in the second version

The height of the cotton grown in moderately saline soil is 74.5, the third option is strong the height of cotton grown in saline soil was 63.5 cm. Crop branches are suitable 14.0 respectively; 12.0; It was 10 units (Table 2).

The number of bolls of cotton, which is of practical importance for our economy, and when exposed cotton was summarized, the first option was bolls in the non-salted control option

the number is 12, the second moderately salted option is 9, the third option is strongly salted and it is 6.7 units, the differences between the three options are 0, respectively; -3; -5.3 pcs organized. The number of blisters opened during this period is the first option, the non-salted control the number of cells in the variant is 5.1, the second moderately salted variant is 3.2, the third variant is strong and in the salted version it is 2.3 units (Table 2).

So, saline soils have a negative effect on the phenological indicators of cotton, causes a sharp decrease in productivity. Therefore, the cotton plant It was found that the Bukhara-8 cotton variety has a positive result in terms of salinity resistance. Many metabolic reactions, growth and development processes in plants the salinity of the earth has a great effect. Such a pattern is in our studies also found its reflection. Experience in areas with different levels of soil salinity the most optimal result is in the control option, i.e., cotton in low salinity soil based on morpho-biological indicators, mass of opened bolls and raw cotton mass showed the highest indicators.

Water supply of the plant during the formation of the reproductive organs of cotton level, is directly dependent on the index of the leaf surface and the relative density of the leaf surface two physiological indicators are inversely proportional to each other according to the laws of biophysics, that is, as the leaf level increases, the relative density of the leaf surface decreases.

**Table 2****Phenology of cotton grown in soils with different levels of salinity indicators, 2022**

№	Options	June			July			August			September		
		Shonasi, niece	Flower, niece	A grain	Shonasi, niece	Flower, niece	A grain of salt	Shonasi, niece	Flower, niece	A grain of salt	A grain of salt	The opening	
1	Control	4,1	1,5	0,4	6,2	4,2	6,9	7,3	5,1 9	9	12	5,1	
2	Average salted	3,2	1,0	0,2	5,1	3,1	4,8	5,3	3,8	7	9	3,2	
3	Strong salted	2,0	0,8	0,1	3,8	2,8	3,9	4,2	2,1	5,0	6,7	2,3	

### CONCLUSION

So, the salinity level of the soil has a negative effect on the phenological indicators of cotton, causes a sharp decrease in productivity. Therefore, the cotton plant Bukhara-8 cotton variety has a positive result in terms of salinity resistance the correct implementation of agrotechnical measures when planting this variety in the fields is a positive result will give.

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