

ADVANTAGES OF THE NEWLY CREATED SP-1607 VARIETY IN THE SOUTH OVER MEDIUM FIBER VARIETIES

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Abstract: The article highlights the advantages of SP-1607, a newly developed variety in the South, over medium fiber varieties, and the importance and advantages of single selection in the formation of groups of biotypes showing high performance over several generations of medium fiber cotton.

Key words: Cotton varieties, farm characteristics, SP-1607, cotton weight per bag, fiber yield, fiber length, genotype, phenotype, formation, stabilization.

INTRODUCTION

All hybrid plants and progeny of cotton are brought to the level of rows and then cultivars by a method of repeated selection carried out over several years. In them, valuable economic signs and characteristics are first formed and then stabilized. Every variety that is perfect from the point of view of selection will have the ability to maintain its genetic characteristics for a long time. In their research, researchers pay special attention to the formation of economic indicators. An increase of one of the indicators of the valuable economic signs, according to the phenomenon of interdependence in the pattern of signs, taking into account the decrease of the indicators of one or several other signs, breeders tend to increase some of them without decreasing other indicators. In these researches, it is important that the selection work is carried out regularly and thoroughly over the years.

In our study, the effect of chemical ameliorant on soil meliorative condition in the barren soils of Surkhandarya region and the effect of seasonal mineral fertilizers applied on such soils on the growth and development of fine fiber cotton were determined. The field experiment was conducted on the basis of UzPITI's "Methodological guidelines for conducting field experiments" (2007). In this case, the experiment consists of 4 variants and is being conducted in 3 returns. The total number of plots in the field experiment (4x3) is 12. One plot is 4.8 meters wide, 50 meters long, and has 8 rows. The total area of one experimental plot (4.8x50) is 240 m², of which the calculation area is 120 m². One replication area is 960 m², the total area of the field experiment is 2880 m². In the experiment, a new thin fiber cotton variety "SP-1607" was planted.

The positive effect of the chemical meliorants used in the research on the agrochemical and agrophysical properties of the soil and the effect of the applied mineral fertilizers in each growth phase of cotton was shown. The height of the main stem of the plant, the number of leaves in it,

the development of the root part were studied during phenological observations and biometric measurements of the cotton plant planted in the optimal period (05 April). 1. Based on the agrochemical and agrophysical condition of the soil, the height of the plant stem was 7.4 cm, the number of true leaves was 3.7, the total mass of the root was 0.11 g, and the green mass of the upper part was 1.13 g. , N250P175K125 kg/ha 8.5 cm in accordance with the above; 4.0 units; 0.13 g; 1.23 g, 30 t/ha fertilizer + 9.8 cm in N200P140K100 option; 4.8 pieces; 0.17 g; 1.25 g, 4 t/ha phosphogypsum + N200P140K100 variant and 11.2 cm; 5.2 pieces; 0.20 g;

It was 1.26 gr. On June 1, in the control variant, the height of the cotton head stem was 14.2 cm, the number of true leaves was 11.4, the total mass of the root was 0.25 g, and the green mass of the top was 1.35 g, while in the variant N250 P175 K125 17.5 cm in the same way as above; 12.6 units; 0.34 g; 1.43 gr, 30t/ha fertilizer + N200P140K100, respectively 20.3 cm; 14.8 pieces; 0.43 g; 1.52 g, 4 t/ha phosphogypsum + N200P140K100 variant, 21.5 cm; 15.1 pieces; 0.48 g; It was 1.56 g (Table 1). Therefore, 4 t/ha of phosphogypsum used as a chemical ameliorant has a positive effect on the melioration of the soil, and mineral fertilizers N200P140K100 kg/ha used for the normal growth and development of the cotton plant in such places are highly effective, although not all of them have been used at the beginning of the season. , as a result of biometric measurements carried out on May 1, it is known that compared to the control version, the height of the main stem of cotton increased by 3.8 cm, the number of leaves increased by 1.5, root mass by 0.09 g, and the green mass of the upper part by 0.13 g. it happened. In the following month, 75% of seasonal mineral fertilizers were used, and in our biometric measurements conducted (June 1), due to the application of 4 t/ha of phosphogypsum + N200P140K100 kg/ha, their effectiveness was further improved, and the height of the main stem of cotton was 7.3 cm compared to the control option. ha, the number of leaves is 3.9 pieces, the root mass is 0.23 gr. ha and above-ground green mass is 0.21 gr. was found to have increased to In order to improve soil properties in the conditions of barren soils of Surkhandarya region, the use of chemical ameliorants had a unique positive effect on the increase in the effectiveness of mineral fertilizers applied to fine fiber cotton and its growth.

Phases of growth and development of cotton.

Cotton goes through certain phases from the emergence of the seed to the emergence of a new seed. The most studied of these are the vernalization and light stages. It requires 70% humidity relative to the seed and 20-25 C heat for germination to pass the spring stage. It lasts 6-7 days. the light stage requires a short day from full bloom to shunting, i.e. 2-3 weeks. The rest of the stages are still unknown.

Cotton goes through 5 main development phases during its growing season.

1. germination-seed phase-5-7 days.
2. Chinbarg generation phase-8-12 days.
3. The phase of budding-harvesting branches is 25-30 days.
4. Flowering phase-25-30 days.
5. The maturation (opening) phase of the cyst is 50-60 days.

Effect of main factors on cotton.

The optimal temperature for heat cotton is 25-30 C. 14-15 C for seed germination, if it is less than 25 C, cotton grows slowly, if it is less than 17 C, it stops growing. Even if it exceeds 42 C, the growth of cotton stops.

It requires a certain temperature sum for each phase. This is called the useful temperature:

1. From planting to germination-84
2. From planting to pruning-500 (difference 416-1-2)
3. From planting to flowering-950 (difference 450-2-3)
4. Till planting-1630 (difference 675-3-4)

The sum of the temperatures is called constant-A.

Light. Cotton is a short day plant.

Water. cotton is grown in our country only in irrigated areas. In the world, it is cultivated only in the Turpan region of China, in dry places.

Eat The demand for NRK is strong. Cotton requires the following amounts of elements to produce 30 centners (kg).

1. Carbon-4250
2. Oxygen-4050
3. Hydrogen-615
4. Nitrogen-150
5. Potassium-150
6. Phosphorus-45
7. Sulfur-39 and other elements.

To determine the productivity, the number of seedlings in each field (in thousands of plants): the number of yielding pods in each plant and the mass of seed cotton coming out of each pod (in grams) are determined. The smallest of the considered cysts should be 20-25 days old. This can be roughly compared to a normally developed cyst. Morphologically, the cyst is usually almost full size by 30 days of age. To determine these, one sample is taken from each hectare of land, walking diagonally in the field. The length of each sample is calculated as one thousandth of the total length of all rows in each hectare. If it is planted at 90 cm, it is 11.1 meters, if it is planted at 60 cm, it is 16.6 meters.

To find out the thickness of the seedling and the number of pods, the number of all plants in the sample and the number of pods in the 10 plants at the end of this sample are written in a notebook. If the area is 10 hectares, 10 samples will be taken. If the average of the obtained samples is subtracted and 3 zeros are placed behind that number, the number of balls on the ground will be 1. According to the number of pods, it is determined how many pods there are on average in 1 plant. The mass of cotton coming out of one boll is calculated as 3.0-3.5-4.0 g in medium fiber cotton. In thin fibers, 2.0-2.5 g is obtained.

For example: there are 103.2 thousand bales of plants on 1 ha: there are 9.3 bolls in one boll of cotton: if we take the mass of cotton from one boll to be 4.0 g $\{103.2 \times (9.3 \times 4.0)\}$ $q103.2 \times 37$, 2q is taken from 38.4 ts hectares.

Cotton picking is one of the most complex and labor-intensive jobs in cotton farming. According to the accounting books, 50-55% of the total annual expenditure on cotton cultivation is spent on cotton.

In the following years, the main grown cotton is harvested in machines. To transfer the quality of the machine harvest, it is necessary to prepare the fields correctly: when planting, the seeders are planted in the same row, in a straight line, the distance between the rows of the seeders (stêê) should be taken from the middle of the straight line and the furrow. Field fertilization should be completed by July 1-5. It should be cleared of weeds, the ditches should be well leveled.

The cotton picker, the cotton picker, the spilled cotton picker, the cotton picker, the cotton cart and other vehicles must be used for cotton picking.

2. Cotton standards, benchmarks of the Republic of Uzbekistan, picking cotton by hand.

The quality of cotton delivered to the state is evaluated according to the state standard (Uz RST).

When accepting cotton, its appearance, the degree of filthiness, the growth of the fiber, and the maturity of the fiber are taken into account, and it is accepted into 5 varieties.

Fine seed cotton fields, medium fiber cotton elite and 1 reproduction are not picked by seed machine. They are only hand-picked. For defoliation of cotton in seedbeds, only preparations that have a gentle effect on the plant (dropp-like) should be used. Seed cotton is picked with two-tier cotton picking machines when 70-75% of the leaves are opened and at least 80% of the leaves are shed. In this case, the mechanical damage of the seed should not exceed 1%.

The technical requirements of this state standard (UzRST 615-94) are as follows

1.1. Physico-mechanical indicators of cotton fiber: staple weight length, linear and specific tensile strength (type I and P) are divided into nine types 1a, 1b, 1, 2, 3, 4, 5, 6 and 7 according to standards. In this case, the type of cotton fiber in cotton is determined by the worst indicator of staple weight length or linear density. Is cotton long fiber with type 1a, 1b, 1,2 and 3 fibers? Cotton with fibers of type 4, 5, 6 and 7 belongs to medium fiber cotton varieties.

1,2 Each type of cotton is divided into five grades according to color, appearance, ripening factor: I, P, Sh, IV, V.

1.3. The cotton variety is divided into 3 classes depending on the amount of impurities and moisture content: a) 1, picked by hand: b) 2. picked by machine: c) 3. picked from the ground

1.4. In order to determine the condition (clean, calculated) weight of the delivered cotton, the percentage of impurity by weight of the calculation norm is -2.0% and the weight ratio of moisture is -9.0%.

Although the main cotton picking is mechanized, small fields and fields of seed cotton (I and P picking) are picked by hand.

It is recommended to pick the grown crop by hand up to 4 times. The first harvest is started when 20-25% (2-3) bolls of cotton are opened, and the second harvest is started when 35-40% of the remaining crop is opened. The third harvest is 10-15 days after the second. The fourth skin is acne skin.

The higher the agrotechnics of cotton cultivation, the more organized the preparation and picking are, 85-90% of the harvested crop can be transferred to the I variety.

In the seed fields, suitability for seeding is first determined, and then when 3-4 pods open on the bush, it is harvested. Skin should be completed by October 10-15.

3. Defoliation, desiccation, preparing the field for machine harvesting and harvesting by machine. Defoliation and desiccation are of great importance in timely harvesting of the cultivated crop. Defoliation and desiccation of cotton allows cotton to be opened quickly, to be picked faster and cleaner, and to carry out autumn and winter work on time.

If defoliation is carried out on time, 80-90% of the cotton leaves are shed in 8-10 days, and the opening of the bolls is accelerated by 10-15 days.

Defoliation after the opening of 2-3 bolls in the central cotton-growing districts, 3-4 bolls in the southern districts, and 5-6 bolls in thin-fiber cottons gave a good result.

Later, it was found that 35-40% of the yield in medium fibers and 50% in fine fibers have a positive effect on both yield and fiber quality. Cottons should not be thirsty during defoliation. The norm of spraying the drug should be clearly determined taking into account the height of the cotton, the number of branches, its development, the thickness of the seedling, the period of operation, the arrival of autumn, in short, all the conditions are taken into account. Drop spraying begins at the end of August and ends on September 5-10. The rate of sowing is 0.4-0.7 kg/ha, depending on the height of cotton. Spraying with drop butylcaptax gives good results (butylcaptax 4 kg/ha, dropp 0.2-0.3 kg/ha): magnesium chlorate 8-12 kg/ha; calcium chlorate-chloride 20-25 kg, ha; a mixture of magnesium chlorate with butylcaptax (5 kg each) 10 kg.

For fine fiber cotton varieties: dropp 0.3-0.5 kg/ha; 15-17 ha/kg from magnesium chlorate; chlorate-chloride of calcium is used at 25-30 ha/kg.

For efficient shedding of cotton leaves, the air temperature is considered to be 18-21 degrees. If the temperature exceeds 22 degrees, the rate of use is reduced by 10-15%, or on the contrary, if the temperature drops slightly (14-15 degrees), it is increased by 15-20%. 400 l of solution per hectare is used in tractor sprayers. OVX-14 duster sprayers are used for spraying defoliant and desiccants. The OVX-14 device covers 20 rows (12 meters) when working with 60 row spacings, and 12 rows (10.8 meters) when working with 90 cm row spacings. In order not to get lost from the tractors, a sign is placed on the two ends of the rows in which the tractor enters the row.

Since defoliant and desiccants are toxic substances, all working people: technicians, suppliers, tractor drivers are medically examined and must take all precautions during work, wear F-46 respirator, rubber gloves, protective glasses, overalls. 0.5 l of milk is provided free of charge before work. No one enters the treated fields for up to 3 days.

A few days before the beginning of defoliation, a tractor return space of 8-10 meters wide is allocated at the two ends of the fields where cotton is picked by machine, and the cotton is desiccated. This is 8-10% of the field. Cotton is picked 3-4 days before the harvest, the stalks are gathered and taken to the threshing floor or the edge of the field. All axle shafts are leveled.

Harvesting by machine

75-85% of cotton can be picked by machines if the cotton plants are grown in the field so that it is easy to pick by machine, the field is well prepared, defoliation is done well, the cotton picking machines are well maintained, and the adjustment is good. A lot of cotton is picked by machine in Tashkent, Syrdarya and Jizzakh regions. The gap between the spindle drums should be 30-32 mm, in some cases 34-36 mm, and 28-30, 32-34 mm. In the course of work, the number of cut-out pods should not exceed 2-3 per 10 meters of the row.

It is desirable that the width of the groove of the pair of drums obtained in the second harvest should be 28-30 mm, and that of the rear ones should be 24-26 mm.

Cotton is harvested mainly 2 times in a spindle machine: the first when 55-60% of the crop is opened; the second after 10-15 days. Fine fibers are picked three times; typing on typewriters; 2-time picking of woven cotton using podborshik SKO-2,4 and SKO-3,6 picking machines pick up the cotton that has remained unripe in cotton bushes.

The SKO-2.4 seeding machine can work in 3 different technological schemes:

1. Washes the harvested crops, cleans the cotton bolls, branches and other special debris and transfers them to the bunker;
2. Washes the harvested pods and pods and transfers them to the bunker;
3. The harvested crop (raw sorghum, raw sorghum and cotton) is transferred to the bunker without cleaning.

When autumn comes hot and dry, it works according to 1 technological scheme. If the moisture content of the pods and pods is around 25.0%, the pod picking machine should work in the second technological scheme.

The important thing about this scheme is that it works on the basis of the lint dryer, and the lint falls only on the output drum of the cleaner. Bitten blisters and sores dry quickly and clean well.

The cleaning device cannot clean the pulp and the pulp when it is moderately wet (more than 30%). Therefore, the collected mixture falls directly into the hopper.

In places where the roads are smooth, flat and wide, one tractor can pull up to 4-5 trolleys with their load to the cotton processing point.

Loading, unloading, transportation of cotton in cotton farms is fully mechanized.

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