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FINE FIBER COTTON COLLECTION SAMPLE VIEW HEAD STAND HEIGHT INDICATORS

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Abstract: The article states that the height of the main stem depends on the growing environment of the plant as well as on its genetic potential, and that even plants in the same population have different heights of the main stem, even when the water and fertilizer (environment) provided to the plant are the same. It is stated that the ability of the plant to absorb the water and nutrients provided, i.e. root pressure and the suction power of the root hairs, are also one of the main reasons.

In the state priveden chto, the height of the main stem depends on the environment of the growth of the plant, and also on the genetic potential. Nesmotrya na to, chto voda, udobrenia (middle), podavaemye rasteniyu, odinakovy, daje vysota hlavnoo steblya v predelakh odnoy populyatsii razlichayutsya. Upominaetsya, chto vysota steblya has different indicators, prichem odnoy iz osnovnykh prichin takje yavlyaetsya razlichie v obnosti rasteniya gloshchat vodu i pitatelnye veshchestva, t.e. kornevoy davlenie, vsasyvayushchaya ability kornevyx voloskov.

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In recent years, scientists conducting scientific research in cotton-growing countries of the world have been conducting in-depth research on the creation of cotton varieties that fully meet the requirements of the rapidly developing industry. The study of the inheritance and variability of valuable economic traits in cotton forms using the method of long-term and interspecific hybridization, and the creation of cotton varieties that have higher indicators of any characteristics compared to the varieties that exist to this day through selection are an urgent need today.

The ongoing experiments with fine-fiber varieties will, to a certain extent, contribute to the implementation of the tasks set out in Resolution No. 47 of the Cabinet of Ministers of the Republic of Uzbekistan dated January 30, 2020 “On the effective organization of the cultivation of fine-fiber varieties, the introduction of a mechanism for the propagation and promotion of new varieties” [1] and other regulatory legal acts related to this resolution.

Varieties created by various methods in cotton selection are plants that are similar not only in terms of economically valuable traits, but also in terms of biological indicators. During the growing season, a plant, depending on its growing conditions and genetic capabilities, has a certain biological yield, accumulates green mass, grows and leaves. The economic yield of a cotton variety in a given area is related to its main stem height. There is not always a positive relationship between the main stem height and the raw materials (fiber and seeds) that a cotton variety produces. Therefore, it is important to achieve a positive relationship between the low height, which is convenient for certain agrotechnical operations, and the economic yield of the

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variety. The height of the main stem of a plant is a quantitative trait that arises as a result of the polymer efficiency of genes, and ensuring that this trait has an acceptable phenotype is one of the important aspects of the selection process.

In the experiments of researchers M. Khalikova and J. Umarova, it was observed that the inheritance of the height of the main stem in hybrids varied depending on which specimen participated as a parent in hybrid combinations [3].

According to the research of N.M. Khojamberganov, it was observed that there is a strong connection between the plant height trait, the number of branches, the number of cobs and the yield traits in plants. It was emphasized that this pattern allows for selection work with forms with weak connections among the hybrids being studied to introduce low and medium-sized cotton varieties into production, and to create low and medium-sized productive lines [4].

The purpose of the study: To study the height of the main stem in collection samples and synthesize new genetic resources by isolating biotypes with optimal indicators.

Research objectives :

- Measurement of the height of the main stem in the collection samples , cm;

-mathematical and statistical analysis;

-selecting owners for the appropriate indicator.

Research materials: specimens of the species G. barbadense L. , available in the world collection at PSUEATITI .

Research methodology

The collection samples studied in the research were studied in the collection nursery of the laboratory "Cotton, Alfalfa Collection and Introduction". The isolated samples of the species G. barbadense L. were planted in the field in the second decade of April in 15-cell pots. For each sample, calculations were made on 10-20 plants according to the size of the seeds, that is, the plant height was measured when the first cotyledons of the samples opened.

The numerical results were statistically processed using the B.A. Dospekhov method[2].

Research results

During the research, the height of the main stem in the samples studied had different indicators compared to the standard variety (Figure 1). While the height of the main stem in the standard variety was 96.3, it was found that this indicator was in the range of 84.8-101.8 in the collection samples. In particular, the lower indicator compared to the standard variety was determined in the Ash 36 sample (84.8 cm), and the higher indicator was determined in the Termiz-31 variety (101.8 cm).

The main stem height was recorded as 88.3 cm in the Pima S4 sample, 96.7 cm in the Karnak 1038 sample, 92.3 cm in the CNW 487-65 sample, 97.0 cm in the Surkhan-9 variety, 94.6 cm in the Termiz-202 variety, 87.0 cm in the Iolatan-14 variety, 92.7 cm in the Surkhan-14 variety, and 89.3 cm in the ML-120 sample.

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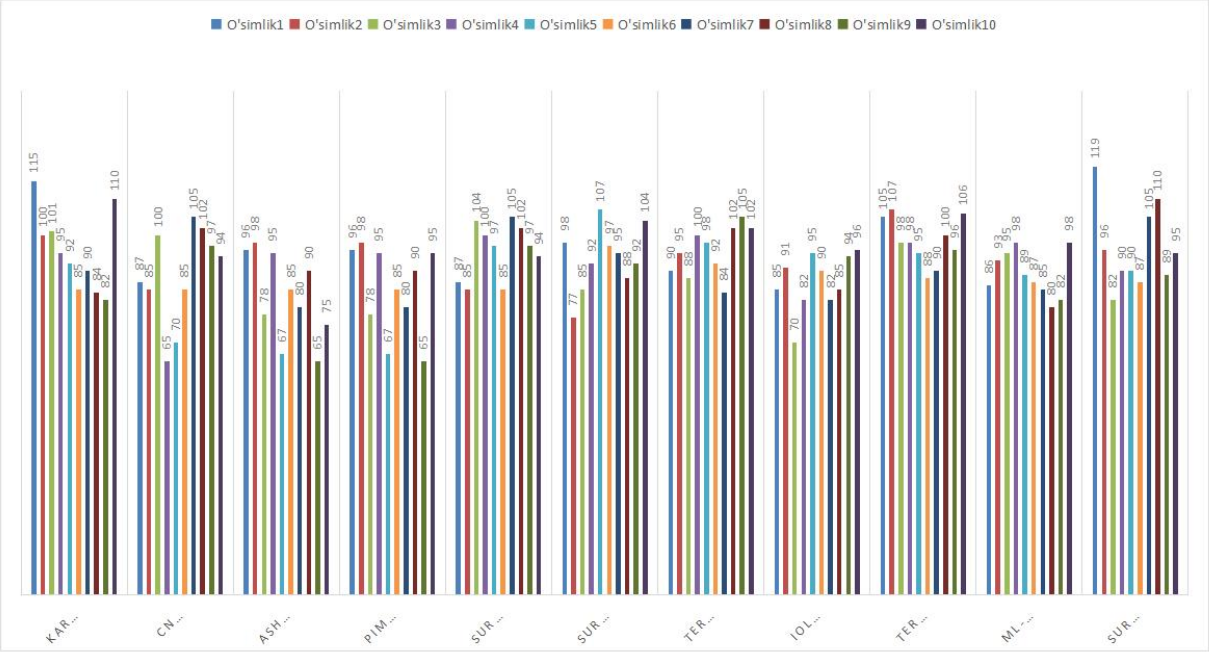
Conclusion

In conclusion, the height of the main stem depends on the growing environment of the plant as well as its genetic potential. As can be seen from the results of the research, even though the water and fertilizer (environment) provided to the plant were the same, the height of the main stem of plants in the same population had different indicators. In this, the ability of the plant to absorb water and nutrients, that is, root pressure, and the suction power of root hairs were also one of the main reasons.

Figure 1

Stem height in collection specimens, cm



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