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***G.ARBOREUM L.* FIBER YIELD INDICATORS OF CULTURED DIPLOID SAMPLES**

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INDICATORS OF FIBER PRODUCTION OF CULTIVATED DIPLOID SAMPLES
G.ARBOREUM L.

Abstract. It is known that the sedge plant is cultivated as a fiber-yielding plant. In order to obtain more raw materials, varieties with high fiber yield should be cultivated. There are also sedge species with wool-like fiber, and it is important to study their fiber properties. This article presents the study of fiber yield indicators of diploid specimens with wool properties in the sedge collection and the selection of noteworthy specimens.

Keywords: *cotton* , *G. arboreum L* , woolly fiber , diploid, fiber output , initial material

А ннотация . Известно, что хлопчатник культивируется как волокнистое растение. Чтобы получить больше сырья, необходимо сажать сорта с высоким выходом волокна . Также сущчествуют виды шерстяных волокон, и важно изучить свойства их волокон. In this state, the results of the studies show the fiber diploidy obraztso and its properties of hair and the collection of human hair and autobranizing vnimaniya obraztsy.

Abstract. It is known that cotton is cultivated as a fiber plant. In order to obtain more raw materials, it is necessary to plant varieties with a high fiber yield. There are also types of wool fibers, and it is important to study the properties of their fibers. In this article, the fiber yield indicators of diploid samples with wool properties in the cotton collection were studied and noteworthy samples were selected.

Keywords: *cotton*, *G.arboreum L*, wool fiber, diploid, fiber yield, initial material.

Аннотация. Известно, что хлопчатник возделывается как прядильное растение. Для получения большего количества сырья необходимо выращивать сорта с высокой урожайностью волокна. Существуют также виды шерстяного волокна, изучение свойств которых важно. В данной статье изучены показатели урожайности волокна диплоидных образцов с шерстяными свойствами в коллекции хлопчатника и отобраны заслуживающие внимания образцы.

Keywords : хлоп чатник, *G. arboreum L* , sherstyanoe fiber, diploid , output fiber, starting material.

Introduction. It is known that out of more than 50 species of cotton found in nature, only 4 species are cultivated (*G. arboreum L.*, *G. herbaceum L.*, *G. hirsutum L.*, *G. barabadense L.*). Among these species, *G. arboreum L.* is considered a diploid species and is cultivated to obtain raw materials for fiber production. In this regard , India state from the first If so , then take the next place. Pakistan state These countries whole to the world this from the type taken fiber export as is coming .

Asian cotton (*Gossypium arboreum* , A2) is a spun wool fiber cultivation is an important model for. However, the genetic map of Asian cotton lags behind that of other perennial crops, including tetraploid cotton, and Yaohua Li, Tong Mo, and others have conducted research to



solve this problem by constructing a SNP genetic map and mapping QTLs for important yield and fiber quality traits. Their work has laid a solid foundation for the fine mapping and cloning of QTLs for yield and fiber quality in Asian cotton [3] .

Hafsa Amat-ur-Rasool, Ayesha Latif et al. determined that an internal plasma membrane protein in *G. arboreum* L. improves cotton fiber length by *Agrobacterium*-mediated shoot tip excision and transformation of the 35SCpPIP2 gene with a PIP2 gene construct. The relative activity of the CpPIP2 gene in transgenic plants was increased by 35-fold compared to non-transgenic controls . Transgenic plants showed a corresponding increase in staple length (up to 150%) compared to non-transgenic controls . [2]

The world collection of cotton contains samples from different climatic conditions of the world, and it is extremely important to study these samples based on valuable economic characteristics and analyze their significance to reveal its valuable properties. In particular, the wool properties of its fiber can solve a number of problems in the pharmaceutical industry.

Purpose of the study **The aim of the study was to study the fiber yield indicators of *G. arboreum* L. specimens** available in the world cotton collection and to select samples with high indicators.

Research materials: *G. arboreum* L., available in the world collection at PSUYAITI. type samples (catalog number: 012088, 012093, 012096, 012138, 012141, 012142, 012144, 012148, 012150, 012156, 012159, 012160, 012161, 012162, 012163, 012165, 012169, 012171, 012173, 012175).

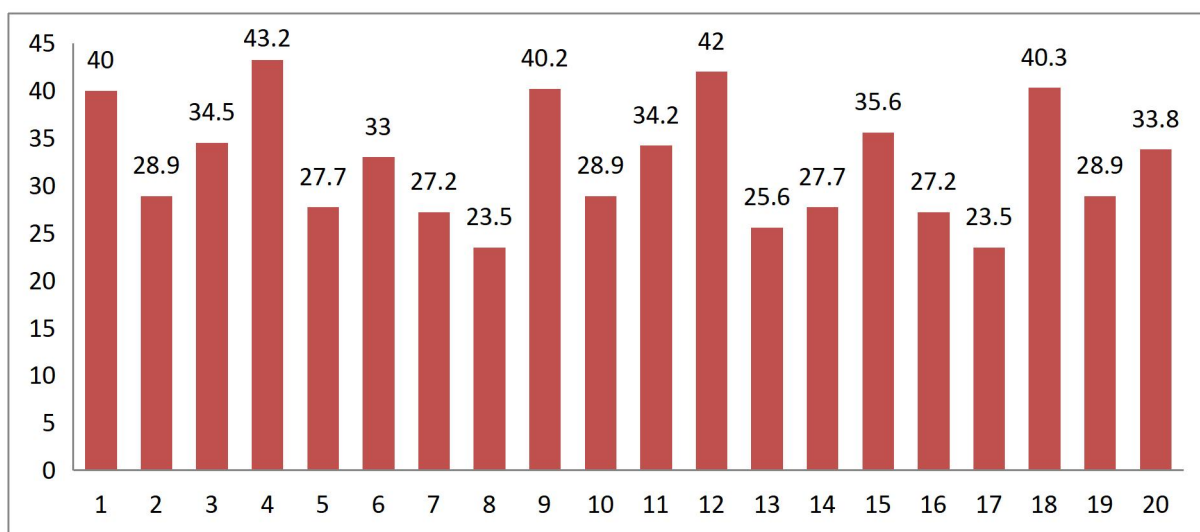
Research methodology. The diploid species of cotton studied in the research were studied in the central field nursery of the Scientific Research Institute of Cotton Selection, Breeding and Agrotechnologies. The samples of *G. arboreum* L. , isolated from the collection, were planted in the field in the third decade of April in 15-cell pots. For each sample , plants 30 bags raw cotton thing picking received .

The numerical results were statistically processed using the B.A. Dospekhov method [1] .

Research results. Research during India and China from the countries cited of samples fiber output studied . Studied in samples fiber output suitable between 23.5 and 43.2 % was record (Figure 1) . In particular , India from samples catalog number is 012088 in the sample fiber output 40.0 % , number 012093 28.9% in the sample , number 012096 that 34.5% of the sample determined .

Similarly, from the Chinese samples, the sample with catalog numbers 012138 had 43.2%, the sample with 012141 had 27.7%, the sample with 012142 had 33.0%, the sample with 012144 had 27.2%, the sample with 012148 had 23.5%, the sample with 012150 had 40.2%, the sample with 012156 had 28.9%, the sample with 012159 had 34.2%, the sample with 012160 had 42.0%, the sample with 012161 had 25.6%, the sample with 012162 had 27.7%, the sample with 012163 had 35.6%, the sample with 012165 had 27.2%, the sample with 012169 had 23.5%, The fiber yield was determined to be 40.3% in sample 012171, 28.9% in sample 012173, and 33.8% in sample 012175.





Note: 1-012088, 2-012093, 3-012096, 4-012138, 5-012141, 6-012142, 7-012144, 8-012148, 9-012150, 10-012156, 11-012159, 12-012160, 13-012161, 14-012162, 15-012163, 16-012165, 17-012169, 18-012171, 19-012173, 20-012175.

Fig. 1. Fiber yield indicators of *G. arboreum* L. specimens in the world cotton collection, %

Among the samples studied, samples with numbers 012088, 012096, 012142, 012150, 012159, 012160, 012163, 012171 were noted to have high fiber yield and were selected for study in the research.

Conclusion. Among the collection samples studied during the research, there are diploid samples with high fiber yield, which are recommended as starting materials for creating new diploid lines and varieties with high fiber yield based on hybridization by isolating them. Also, by continuing research on these samples, it is possible to apply their fiber to the preparation of various materials that are important in human life.

References

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