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Abstract: *In the process of improving elite seeds, various economic and biological characteristics change even more. This is associated with decomposition, the emergence of mutations, mechanical and biological pollution, and plant diseases. For these reasons, varieties deteriorate during the long-term production of subsequent reproductions. Therefore, the existing methods of pre-elite and elite seed production do not fully meet today's requirements and require changes based on in-depth scientific research.*

Keywords: *cotton, seed production, variety, seed, marketing services, reproduction categories, supply–demand balance*

INTRODUCTION

The Resolution "On Measures for the Fundamental Improvement of the Seed Production System in the Republic of Uzbekistan" defines the goals of radically improving the seed production sector, expanding the production of high-quality and competitive products, and further promoting them in international markets.

In accordance with the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated March 4, 2021 No. 121 "On the Effective Use of Existing Land Plots and Rational Placement of Agricultural Crops for the 2021 Harvest," it is planned to plant cotton on an area of 1032,557 hectares in the regions of the republic. More than 20 main early-ripening varieties and 5 medium-ripening varieties were planted in these areas. According to the resolution, it is planned to place promising varieties on an area of 12,374 hectares and new varieties on an area of 45,517 hectares and propagate them in the prescribed manner.

In the process of improving elite seeds, various economic and biological characteristics change even more. This is associated with decomposition, the emergence of mutations, mechanical and biological pollution, and plant diseases. For these reasons, varieties deteriorate during the long-term production of subsequent reproductions.

Therefore, the existing methods of pre-elite and elite seed production do not fully meet today's requirements and require changes based on in-depth scientific research.

Literature review. The foundations of the cotton variety renewal system were laid in the 1930s and have been preserved to this day. Today, cotton seed production is carried out based on the "Guidelines for the Production of Elite and First-Generation Cotton Seeds" published in 1985. Seed production, adapted by the outdated state to production in the form of state farms and collective farms, does not meet modern requirements, requires large-scale reforms based on deep scientific and practical analysis, and sets the task of phased reform of the industry with the involvement of specialist scientists and taking into account world experience.

Seeds prepared by the authors, compared to the current system (from 8.3% to 53.7%), reduce the number of rejected plants by up to six times and allow for the preservation of the original properties of the variety and fiber for a long time, reduce the costs of producing elite seeds, and dramatically increase yields. Today, all reforms related to the exclusion of cotton from the state order allow for the implementation of these studies, the organization of a technological chain for the production of original and elite seeds of patent-holding varieties, which, in turn, ensures the creation and export of competitive seeds, replenishment of the country's foreign exchange reserves by creating high-quality products.

Experimental method. Academician of VASKhNIL I.S. Varunyan wrote in 1985 that the issue of methods for growing elite cotton seeds has been debated for many years. The debate hasn't subsided until now.

Seed production and the improvement of commercial qualities of new cotton varieties are carried out by specialized seed firms abroad. In practice, there are no unified methods for growing varietal seeds. We present some of the methods proposed by I.S. Varunyan (1971) for selecting the most optimal methods and testing them on varieties currently cultivated in Uzbekistan:

Method 1. Mass selection of a large number of productive plants characteristic of the variety.

Method 2. Clearing the field of atypical plants.

Method 3. Model sample system.

Method 4. Testing of progeny rows.

Method 5. Repeated testing of generations and lines.

Method 6. Pedigree system.

Method 7. Reserve or seed storage system

Obtained results: Having studied this proposed method, based on conducting individual sampling once every several years, we modified it. The individual competition, based on the method, is planned to be held once every 5 years. This allows preserving the initial economically valuable indicators and genetic similarity of the registered varieties. In the first year of working with this variety with the participation of a breeder-author, 10-15

thousand individual selections were selected. After ginning for each sample, fiber quality is determined on the HVI line. Based on the analysis data, the worst are discarded, and the individual samples remaining after rejection are first combined, and then they are divided into 5 equal parts by quartization. Some will be planted in the original nursery this year, the rest in subsequent years.

Conclusion: Thus, 1/5 of the main original seeds allows the variety to retain its original properties during re-cultivation for 5 years. It is shown that the remaining 4 parts of the main original seeds allow maintaining the quality of the variety for another 20 years. The proposed method is presented in part 4.4 of the project, which focuses on the multiplication coefficient of 3000-4000 individual samples.

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