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Formation and stabilization of some economic traits of new cotton variety UzFA -710 belonging to G.hirsutum L.

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The article presents analytical data on the processes of formation and strengthening of such average indicators of valuable economic traits as the weight of cotton in one boll, fiber yield and fiber length in plants of several generations of the population of the cotton variety UzFA-710.

Key words: Economic traits, cotton weight per boll, fiber yield, fiber length, genotype, phenotype, formation, stabilization.

Introduction: Well-organized seed management helps to increase the yield of the crop to some extent. Therefore, crop productivity depends on the level of agrotechnics used, as well as on the correct selection of varieties and the quality of seeds used for planting.

Like selection, the theoretical basis of seed breeding is genetics. Breeding conducts all its practical activities following the theory of heredity and variation. Based on this, the rules and methods aimed at fully realizing the productivity potential of the variety and preserving its economic and biological properties are developed and used widely. Every seed breeder must know the biological and variability characteristics of the cultivated varieties in order to carry out the seed breeding work correctly.

All varieties of plants are created by the method of selection and their valuable economic traits and properties are enhanced. Each variety, which is perfect from the point of view of selection, has the ability to preserve its genetic characteristics for a long time (M. Yigitaliev, S. Muhammadkhanov. 1981).

Several researchers in the analyzed literature also pay special attention to the formation of indicators of economic traits in their research (Ibragimov P.Sh., Allashev B.D., Amanturdiev Sh.B., 2010, Matniyazova H.H., Sherimbetov A.G., 2015, B. Kh. Amanov, F. R. Abdiev, 2016).

The object of research: The six-year (2010-2015) analytical data on cotton weight per boll, fiber yield and fiber length indicators of the new UzFA-710 variety of cotton and its population are the objects of our research.

The methods of research: The methods of population analysis and selection of genetics were used in conducting these studies. Mathematical statistical processing of the data was carried out according to the method of B.A. Dospekhov (M. 1985).

The purpose of research: The main purpose of our research is to determine and analyze the impact of genetic selection research on the indicators of the considered traitsof the new UzFA-710 variety of cotton.

The results of research: In the following table, the reflected data for the years 2010-2015 on the indicators of some economic traits in the population of the considered variety were analyzed:

Table-1

№	Years	Economic trait								
		Cotton weight per boll, g			Fiber yield, %			Fiber length, mm		
		X ± m	**σ**	**v**	**X ± m**	**σ**	**v**	**X ± m**	**σ**	**v**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
2	2010	5.54±0.1	0.68	12.19	43.4±0,27	1.78	4.11	33.02±0.20	1.30	3.93
3	2011	4.98±0.09	0.63	12.59	40.6±0,34	2.27	5.59	34.58±0.23	1.51	4.37
4	2012	5.34±0.09	0.62	11.65	42.5±0,35	2.34	5.50	33.09±0.16	1.09	3.21
5	2013	5.94±0.12	0.79	13.22	41.0±0,29	1.79	4.75	33.33±0.10	0.66	1.98
6	2014	6.01±0.1	0.63	10.57	41.8±0,36	2.41	5.77	34.67±0.11	0.75	2.15
7	2015	5.43±0.12	0.8	14.72	41.7±0,46	3.03	7.27	35.04±0.10	0.67	1.90
	average six-years	**5.54±0.10**	**0.69**	**12.49**	**41.8±0,34**	**2.27**	**5.49**	**33.95±0.15**	**0.99**	**2.92**

According to the data in the above table, during the six years of observation, the average indicators of cotton weight per boll fluctuated around 5.5 g, and the lowest appearance of this fluctuation occurred in 2011. In this year, while the fiber yield decreased, fiber length increased.This process can be called the phenomenon of interdependence in the formation of traits. The highest data on cotton weight was observed in 2014, which differed by 0.5 g from the six-year general average. This situation means that there is stability in this trait in the genotype of the variety.

The highest indicator of fiber yield was observed in 2010, which means that if the selection work on this trait of this variety is continued, it can yield up to 43% fiber. It can be said that the stability of the genotype has been achieved in this respect as it was shown in 41% of the indicators in the last three years of observation.

The lowest indicator of fiber length was observed in 2010, which can be attributed to the fact that the fiber yield reached the highest point in this year. The next downward movement of the fluctuation was repeated in 2012, and in this year there was also an increase in fiber yield. It is known that in both years (2010 and 2012) the phenomenon of intercorrelation played an important role in the formation of trait in the fluctuation of indicators in this way.

During the next three years, the cotton weight per boll and fiber yieldwere reflected in almost the same form over the years, and it can be said that the increase in fiber length is the result of selection work. During the next three years, the cotton weight and fiber output per skein are reflected in almost the same form over the years, and it can be said that the increase in length is the result of selection work.

Based on the above analysis, we can come to the conclusion that the genotype of the population of this variety contains biotypes with a fiber length of 34.5 mm and higher, and as a

result of the selection work, the effect of their relative increase in the genotype in recent years can be observed from the results obtained in 2014-2015. possible

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Study of the manifestation of performances of economic traits in plants of several generations of cotton forms

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Abstract: The article presents the results of the study of the phenotypic manifestation of the traits for cotton weight in one boll, fiber yield and fiber length performances of upland cotton varieties grown for the selection of initial sources in the scientific researches carried out in order to develop new hybrids of cotton. Comparative analysis of the phenotypic manifestation of the above-mentioned performances of economic traits in plants of three generations of the studied cotton forms in the years 2016-2018.

Key words: Cotton hybrids, initial materials, cotton weight in one boll, fiber yield and length, performances, genotype, phenotype, comparative analysis.

In the genetic-selection research conducted in order to isolate new cotton hybrids, it is important to carefully study the initial sources and to choose parental forms based on knowing in which aspects they differ from each other in terms of important economic traits performances. In this regard, the analysis of the phenotypic manifestation of the performances of economic traits of the initial materials in plants of several generations provides an opportunity to fully assess the indicators of the valuable economic traits of these materials. In the literature on this regard, special attention is paid to the extent to which the performances of the traits for cotton weight in one boll [1,4], fiber yield [2,5] and length [3] of cotton hybrids are reflected in the population phenotype.

The purpose of the research: Comparative analysis in order to select parental forms for new researches based on the study of the manifestation of some economic traits of the analyzed cotton varieties in the phenotype of three generations of plants.

The object of the research: Data showing the manifested performances of upland cotton varieties UzFA-703, UzFA-707, UzFA-710, UzFA-713 and Kelajak in the phenotypes of three generation plants.