

1043 Inheritance of fiber output and fiber length in geographical remote hybrids F₁-F₂ of *G.barbadense* L

Mr. Avtonomov Viktor Alexandrovich , Uzbek Research Institute of Cotton Breeding and Seed Production, Tashkent viloyati, Uzbekistan

Mr. Bakhtiyor Abdurashidovich Khalmanov , Uzbek Research Institute of Cotton Breeding and Seed Production, Tashkent viloyati, Uzbekistan

His research was conducted at the Central Experimental Farm of the Uzbek Research Institute of Cotton Breeding and Seed Production within Project -17.44 of the Uzbek Center of Science and Technology in 2002-2004. The field design was a randomized complete block with three replications. The objective of this research was to determine variability in for fiber length and its inheritance under Uzbekistan production conditions. Parental varieties of both Uzbek and Egyptian selections and their F₁ and F₂ progeny were studied. Results and analyses allowed for the following conclusions:

1. The fiber length and fiber output are polygenic structure and can be defined by the behavior of the F₁ and F₂ generations;
2. Variability is defined by the selection of parental pairs and the degree of their genetic contrast;
3. Heritability of fiber length and fiber output allows the breeder to define breeding intensity and to predict genetic effects or reaction of populations for selection;
4. Selection in the F₂ generation allows the breeder to develop genotypes with longer fiber length and higher output of fiber.