

## ABSTRACT

DETERMINATION OF YIELD AND FIBER QUALITY PARAMETERS OF  
COTTON (*Gossypium* spp.) HYBRID POPULATIONS AT F<sub>3</sub> AND F<sub>4</sub>  
GENERATIONS

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The study was conducted at Adnan Menderes University Agriculture Faculty Experiment fields in 2011. Aşkabat 100, Aydın 110, Sealand 542 (*G. barbadense*), GW Teks, TAM 94 L-25 (*G. hirsutum*) were used as a female parent and Carmen, Şahin 2000, SG 125 (*G. hirsutum*) were used as a male parents. The selected cotton genotypes were crossed by line tester method in 2006. Parents and 15 hybrids were planted on one row with 10 m long in 2011 for F<sub>3</sub> and F<sub>4</sub> generations respectively. The experimental design was randomized block design with three replications. Hybrid combinations were compared in terms of yield, yield components and fiber quality parameter at F<sub>3</sub> and F<sub>4</sub> generations. The performance of all combinations for yield and fiber quality parameters at F<sub>3</sub> and F<sub>4</sub> generations showed that Aşkabat 100 x Şahin 2000 and TAM94L 25 x Şahin 2000 hybrid populations would be used for individual plant selection in order to improve cotton lines having improved fiber length with acceptable yield potentials. The results also indicated that single plant selection especially for intraspecific hybrid population should be started at F<sub>3</sub> or further generation.

Key words: Cotton, interspecific and intraspecific hybrid populations, yield, fiber quality parameters.