

**GENOTYPE X ENVIRONMENT INTERACTION AND STABILITY
ANALYSIS OF SOME FIBER PROPERTIES IN COTTON
(*Gossypium hirsutum* L.)**

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ABSTRACT

The performances of fourteen cotton (*Gossypium hirsutum* L.) cultivars in respect to some fiber properties were evaluated under the conditions of thirteen environments (Izmir, Manisa, Denizli, Aydın in 1997 and 1998; Hatay in 1997, 1998 and 1999; Şanlıurfa and Adana in 1998) in Turkey. The variance components for genotypes, environments and genotype x environment interaction were found to be significant for all the fiber properties investigated, although variance for interaction effect was smaller as compared to genotype's and environment's. The data were analyzed for stability parameters, to identify the genotypes showing stable performance in respect fiber properties in a wide range of environmental conditions. None of the cultivars tested could combine both high adaptability and stability in respect to three fiber properties under evaluation. The genotypes Sure Grow 125, Deltapine 5409 and Sayar 314 could incorporate both high adaptability and stability in respect to fiber length and fineness, while the genotypes Sure Grow 404 and Sure Grow 1001 showed high adaptability to all environments in respect to fiber strength.

Key words: Cotton, fiber properties, genotype x environment interaction, stability