PERFORMANCE OF SEA ISLAND X UPLAND PROGENY

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Abstract

Improvement of cotton fiber properties is necessary to stay competitive in today's world market. Upland genotypes, *Gossypium hirsutum*, were mated with Sea Island genotypes, *Gossypium barbadense*, in an effort to integrate new allelic combinations for fiber qualities and agronomic traits. Initial crosses were made in 1999. The F_3 generation was grown at College Station in a spaced nursery in 2002 with individual plant selections based on apparent yield potential and fiber traits. A preliminary performance trial was grown in 2004 with selected lines advanced in 2005. Interspecific lines ranged in lint production from 377 kg/ha^{-1} to 734 kg/ha^{-1}, lint fraction from 31.9 % to 40.1%, micronaire (units) from 3.5 to 4.5, length (mm) from 28.7 to 31.8, strength (kNm/kg) from 273.6 to 333.4, length uniformity ratio from 81.4 to 84.4, and elongation (%) from 2.5 to 5.6. These lines produced excellent fiber properties suggesting introgression from *G. barbadense* and should be good parental material for fiber enhancement.