Reference and Notes

1. Texas Agric. Exp. Stn., Lubbock, TX 79401. Contribution TA no. 23638, Texas Agric. Exp. Stn., Texas A&M University, College Station, TX 77843. This research was supported in part by grant funds from Lamesa Cotton Growers, Lamesa, TX; Plains Cotton Growers, Inc., Lubbock, TX; and Plains Cotton Improvement Program, Lubbock, TX. Registration by CSSA. Accepted 30 Oct. 1988. *Corresponding author.


REGISTRATION OF EIGHT COTTON GERMPLASM LINES

EIGHT germplasm lines of cotton (Gossypium hirsutum L.), designated CA-3022 through CA-3029 (Reg. nos. GP-374 through GP-381), (PI 525482 through PI 525489), were released by the Texas Agricultural Experiment Station in 1985. These germplasm lines combine increased fiber length and tensile strength.

These eight lines originated from individual plant selections out of El Paso Source Materials (EPSM). Historical records did not permit the determination of accurate pedigrees of these materials. However, the records indicated that these lines were the original germplasm utilized by the late Paul J. Lyerly in the initiation of his fiber quality research program.

CA-3022 exhibited a very low lint percentage of 28%. The four commercial check cultivars, Acala SJ-5, Dunn 219, Paymaster 303, and Tamcot 788, showed lint percentages ranging from 34.2 to 36.9%. CA-3029 had a lint percentage of 35.1%. Lint percentages of the other lines ranged from 31.1 to 33.8%.

Boll size of these lines was comparable to that of the commercial checks with the exception of CA-3022, which produced very small bolls. Storm resistance ratings for seven of the eight lines were similar to that of Acala SJ-5. CA-3026 exhibited a boll conformation similar to that of Paymaster 303.

CA-3022, CA-3026, and CA-3028 are segregating for seed fuzz density. Seed fuzz density is normal for the remaining lines.

Fiber length and tensile strength of these lines exceeds those values for the four commercial check cultivars. Fiber length ranged from 27.2 to 30.0 mm while strength ranged from 296.3 to 323.7 kN/mkg^{-1}. Micronaire readings were all within the premium range.

Breeder seed are maintained by the Texas Agricultural Experiment Station and may be obtained in germplasm quantities from John R. Gannaway, Texas Agricultural Experiment Station, Route 3, Box 219, Lubbock, TX 79401-9757.

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