

and Fiber Commission. Fiber properties were determined at the International Center for Textile Research and Development of Texas Tech University, Lubbock, TX.

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References and Notes

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Published in Crop Sci. 30:1372-1373 (1990).

REGISTRATION OF SEVEN UPLAND COTTON GERMPLASM LINES ADAPTED TO THE COASTAL BEND OF TEXAS

SEVEN germplasm lines of cotton, *Gossypium hirsutum* L. (Reg. no. GP-425 to GP-431; PI 540257 to PI 540263), were released by the Texas Agricultural Experiment Station in November 1989. These germplasm lines were developed as part of a cotton improvement program to provide improved germplasm adapted to the Coastal Bend region of Texas.

These lines were derived by hybridization from 1977 through 1980, followed by pedigree selection. Individual plant selections during the F₂ to F₄ generations were based on apparent yield potential in nurseries at the Texas A&M Research and Extension Center, Corpus Christi, TX. Other characters considered during the selection process were plant conformation and high volume instrument (HVI) fiber properties. Fiber properties were determined at the International Center for Textile Research and Development of Texas Tech University, Lubbock, TX. Designations and pedigrees of these germplasm lines are given in Table 1.

These germplasm lines averaged from 18 to 33% more lint than control cultivars from 1986 through 1988 at Corpus Christi, TX. These germplasm lines were compared with Stoneville 213 during 1986 and 1987 and with Deltapine 50 in 1988. Only four lines, TAM 0033, 0066, 1033, and 8177, were significantly lower in percent lint than the highest-yielding control cultivar, Deltapine 50, and none were significantly lower than Stoneville 213.

Table 1. Designations and pedigrees of seven upland cotton germplasm lines.

Designation	Pedigree
TAM 8165	PD 6520 × [[Lankart 57 × (Deltapine 14 × Roger's Acala)] × Lankart 3840] × DSR6-19]
TAM 9163	[[North Carolina Smooth 2 × (AE-179 × Tideland 69)] × (Paymaster 1209 × Lankart 57)] × [[Lankart 57 × (Deltapine 14 × Roger's Acala)] × Lankart 3840] × DSR6-19]
TAM 73840	[[Lankart 57 × (Deltapine 14 × Roger's Acala)] × Lankart 3840] × DSR6-19] × [(Gregg × Fox 4) × (Lankart 57 × Acala 5675)]
TAM 0033	{Tamcot SP21 S × [(CA 491A × Lankart 57) × 6M-10]} × [(Paymaster 1209 × DSR6-19) × [(Deltapine 14 × Roger's Acala) × Lankart 57]]
TAM 8177	PD 6891 × [[Lankart 57 × (Deltapine 14 × Roger's Acala)] × DSR6-19]
TAM 0066	(New Mexico 1073-30 × 407-20) × [(Paymaster 1209 × DSR6-19) × Tamcot CAMD-E]
TAM 1033	[[AE-179 × T 501] × (Deltapine 14 × Roger's Acala)] × (Paymaster 1209 × DSR6-19)] × [[Lankart 57 × (Deltapine 14 × Roger's Acala)] × Lankart 3840] × [(Gregg × Fox 4) × (Lankart 57 × Acala 5675)]

TAM 0033 had significantly longer upper-half mean length (UHM) of fibers than the average of the two control cultivars and no germplasm had significantly shorter fibers. Only germplasm line TAM 1033 had significantly weaker fibers than Stoneville 213. Three of the seven lines, TAM 0033, 0066, and 8177, had significantly finer fibers as indicated by micronaire readings than either Stoneville 213 or Deltapine 50.

Twenty-five seeds of each germplasm line will be available for distribution from the corresponding author until seed supplies are exhausted. Research and development of these germplasm lines were supported in part by the Texas Food and Fiber Commission.

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Published in Crop Sci. 30:1373 (1990).

REGISTRATION OF 10 UPLAND COTTON GERMPLASM LINES HAVING IMPROVED FIBER BUNDLE STRENGTH

TEN germplasm lines of cotton, *Gossypium hirsutum* L. (Reg. no. GP-432 to GP-441; PI 540264 to PI 540273), were released by the Texas Agricultural Experiment Station in November, 1989. These germplasm lines were developed as part of a cotton breeding program to improve the fiber bundle strength of cotton produced in central and southern Texas. These lines were derived by hybridization in 1981 or 1982 followed by pedigree selection. Individual plant selections during the F₂ to F₄ generations were based on apparent yield potential, plant conformation, and high volume instrument (HVI) determined fiber properties. Plant and progeny selections and agronomic evaluations were conducted at the Texas A&M University Research Farm, College Station, TX. Designations and pedigrees of these germplasm lines are given in Table 1.

Least squares analysis of lint yields of irrigated plants indicated that these lines did not vary significantly from Stoneville 213, the high-yielding control cultivar, during 1986, 1987, and 1988 at College Station, TX. All lines had fiber bundle strengths (as measured by HVI) significantly higher than Stoneville 213 and not different from Acala 1517-75, the high-quality control cultivar. Upper-half mean fiber lengths of TAM 1025, 1057, 1080, 2111, and 2126 were not significantly different from Acala 1517-75, while all other lines were significantly shorter. TAM 1074 and 2111 had significantly coarser fibers than Acala 1517-75, while the remaining eight lines were not significantly different in fiber fineness than Acala 1517-75. TAM 2008 had significantly lower fiber-length uniformity than Acala 1517-75 but is acceptable at a value of 82. All lines had acceptable fiber elongation values.

Twenty-five seeds of each of these germplasm lines will be available for distribution from the corresponding author until seed supplies are exhausted. Research and development of these germplasm lines were supported in part by Cotton, Inc., and the Texas Food and Fiber Commission. Fiber properties were determined at the International Center for Textile