2. Davis, D.D., N.R. Malm, C.L. Roberts, C.E. Barnes, and R.L. Wood. 1978. Registration of Acala 1517-E1 Cotton. Crop Sci. 18:165.
3. Professor, associate professor, research specialist, and professor, Dep. of Crop and Soil Sciences, New Mexico State Univ., Las Cruces, NM 88003. Journal Article 1251, Agric. Exp. Stn., New Mexico State Univ., Las Cruces, NM 88003. Registration by the Crop Sci. Soc. of Am. Accepted 30 July 1986.

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REGISTRATION OF 'DELCOT 344' COTTON

'DELCOT 344' cotton (*Gossypium hirsutum* L.) (Reg. no. 90) was developed at the Missouri Agricultural Experiment Station, Delta Center, Portageville, MO, and released in 1986. The experimental designation was Mo78-344.

Delcot 344 is composed of a 1:1:1 bulk of three similar BC_3F_3 progeny rows from the cross of 'Coker 310' × multiple disease resistant (MDR) Delcot lines. Coker 310 was chosen as the recurrent parent to enhance adaptation. The Delcot MDR lines were selected from a complex germplasm pool developed from a series of crosses involving 'Delcot 277'; 'MoDel', 'Auburn 56', 'Oklahoma 20' and 101-102B. The Sequential Inoculation Selection (SIS) system (1, 2) was used to select MDR plants in the greenhouse and artificial or natural infestations were used in the field.

Delcot 344 is a full-season cultivar intermediate in maturity between 'Delcot 311' and 'Stoneville 506'. It has produced lint yields competitive with commercial cultivars and is best adapted to the midsouth and northern Mississippi Delta.

Delcot 344 is resistant to races 1, 2, 7, 10, 11, 12, and 18 of bacterial blight [caused by *Xanthomonas campestris* pv *malvacearum* (Smith) Dye]. It is resistant to Fusarium wilt [caused by *Fusarium oxysporum* Schlect f. sp. *vasinfectum* (Atk.) Snyd. and Hans.] and tolerant to root-knot nematodes [caused by *Meloidigyne incognita* (Kofoid and White) Chitwood]. Although symptoms of Verticillium wilt (caused by *Verticillium dahliae* Kleb) are more obvious than those on resistant Delcot 311, Delcot 344 has produced superior lint yields when both are grown on infected soil.

Delcot 344 has outstanding storm resistant open bolls and heavily fruited plants resist lodging. Plant height is similar to Delcot 311 but taller than Stoneville 506. It produces smaller seed than those of Delcot 311 and Stoneville 506 but has intermediate size bolls. Lint fraction equals that for Delcot 311 but is greater than that of Stoneville 506. Fiber is longer than that of Delcot 311 and Stoneville 506 and is very uniform with a micronaire similar to Delcot 311. Fiber and yarn strengths are superior to that of Delcot 311 and Stoneville 506.

Breeder and foundation seed will be maintained and will be available from the Foundation Seed Project, Department of Agronomy, Missouri Agricultural Experiment Station, Columbia, MO 65211.

W. P. SAPPENFIELD (3)

References and Notes

1. Baker, I.A., and W.P. Sappenfield, 1985. Comparative efficiencies of the sequential inoculation selection (SIS) and multi-adversity resistance (MAR) systems of selection for multiple disease resistance in cotton. p. 63–69. *In* J.M. Brown (ed.) Proc. 37th Cotton Improvement Conf., Beltwide Cotton Production Res. Conf., New Orleans, LA. 6–11 Jan. National Cotton Council, Memphis, TN.
2. Sappenfield, W.P., C.H. Baldwin, J.A. Wrather, and Wm. Bugbee. 1980. Breeding multiple disease resistant cottons for the north Mississippi delta. p. 280–283. *In* J.M. Brown (ed.) Proc. Joint Meeting 32nd Cotton Improvement Conf. and 40th Cotton Disease Council, Beltwide Cotton Prod. Res. Conf., St. Louis, MO. 6–10 Jan. National Cotton Council, Memphis, TN.
3. Professor of agronomy, Univ. of Missouri-Columbia, Missouri Agric. Exp. Stn., Delta Ctr., Portageville, MO 63873. Journal Paper no. 10098 of the Missouri Agric. Exp. Stn. Registration by the Crop Sci. Soc. of Am. Accepted 30 July 1986.

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REGISTRATION OF 'GULF STAR' ST. AUGUSTINEGRASS

'GULF STAR' St. Augustinegrass [*Stenotaphrum secundatum* (Walt.) Kuntz] (Reg. no. 103), experimental designation 184 and later PS-247, was developed and released by Pursley Turf, Palmetto, FL. Gulf Star was selected from the first generation progeny of a cross between a 'Texas Common' selection (male parent) and a plant selected from open-pollinated experimental 6-69-272 (female parent). Gulf Star was evaluated along with 400 other genotypes in turf plots maintained at a medium level of culture that included 25 g N m^{-2} per growing season, preemergence weed control, supplemental irrigation to prevent drought stress, but no insecticide or fungicide treatments. Gulf Star was propagated vegetatively by stolons to provide genetically uniform planting stock for studying performance and for making comparisons to commercially available cultivars. The first commercial sod of the cultivar was planted in 1984.

Gulf Star has a medium leaf length and width when compared to other St. Augustinegrass plants such as 'Seville', 'Floratam', and Texas Common. It has a more extensive root system than other St. Augustinegrasses when grown under aquaculture conditions. Gulf Star had almost twice the number of roots (53.3) and total root length (600.1 cm) as other commercially available St. Augustinegrasses; Seville (20.0 and 201.7 cm), 'Raleigh' (23.7 and 210.7 cm), Floratam (27.7 and 385.0 cm), and 'Floratine' (28.9 and 320.3 cm) [LSD (0.05) = 8.6 and 108.3 cm, respectively]. Gulf Star also has a rapid rate of cover under actual sod production establishment conditions.

Gulf Star has shown disease resistance to gray leafspot [caused by *Pircularia grisea* (Cke.) Sacc.] and downy mildew [caused by *Sclerophthora macrospora* (Sacc.) Thirum, Shaw and Nara.] in initial tests and observations. It has also been shown to be resistant to St. Augustine Decline Virus in tests at Texas A&M University (R.W. Toler, 1985, personal communication). Gulf Star has shown excellent turf quality with minimal problems under experimental, home lawn, and actual sod production conditions.

Vegetative propagation of Gulf Star is limited to two generations of increase from breeder sod; one generation of foundation sod and one generation of commercial sod. Foundation sod is maintained by Pursley Turf and small quantities of vegetative material will be made available for evaluation. A plant patent is pending for Gulf Star.

T. P. RIORDAN (1)

References and Notes

1. Associate professor of horticulture, Dep. of Horticulture, Univ. of Nebraska-Lincoln, Lincoln, NE 68583-0724. Registration by the Crop Sci. Soc. of Am. Accepted 30 July 1986.

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