

REGISTRATION OF CROP CULTIVARS

REGISTRATION OF 'ALENE' KENTUCKY BLUEGRASS

'ALENE' Kentucky bluegrass (*Poa pratensis* L.), Reg. no. 28, was developed by the University of Idaho Agricultural Experiment Station. The cultivar was derived from three generations of maternal line selection from germplasm introduced from southwestern Europe and was tested experimentally as ID. Sel. 39. During each generation, more than 50 plants were examined for outstanding plant type, leaf color, seed productivity, and other desirable seed and turf characteristics were selected.

Alene is a vigorous, rhizomatous, perennial turf-type with rapid 10-day seedling emergence and tillering equal to 'Argyle' and 'Baron'. It has excellent resistance to stem rust (caused by *Puccinia graminis* Pers., subsp. *graminicola* Urban), moderate resistance to leaf rust (caused by *Puccinia recondita* Rob. ex. Deson.), pink snow mold [caused by *Gelachia nivalis* (Ces. ex Sacc.) W. Gams and E. Muller], gray snow mold [caused by *Typhula incarnata* (Lasch ex Fries)], and leafspot [caused by *Drechslera poae* (Baudys.) Shoem]. Alene has high quality turf with medium texture and density, a medium green color, and turf quality characteristics that equal or exceed 'Kenblue', 'South Dakota', and Argyle. The cultivar also has good survival after submitted to low temperatures.

Spaced plants of Alene are relatively tall, averaging 94.7 cm, erect, possess strong plant vigor, dark green basal and culm leaves, and exhibit tolerance to lodging. Seed maturity is early to medium and therefore similar to Kenblue and Argyle, but 10 days earlier than Baron. Alene reaches 50% anthesis at the 149th Julian day, which is earlier than Baron and South Dakota, equal to Argyle, but 4 days later than Kenblue. The plants have distinctive large (11.9-cm length) pyramidal, slightly nodding panicles with intermediate open branches. Alene has an average of 259 spikelets per panicle with medium seed size and weight. This exceeds other cultivars tested. The cultivar is 90 to 95% apomictic.

In a 5-yr seed study (1, 2) on nonirrigated Palouse-Latahco silt loam soils of northern Idaho, Alene was second to Argyle in seed yield, of 620 vs. 736 kg/ha, respectively. This was 27, 16, and 13% greater seed yield than South Dakota, Baron, and Kenblue, respectively.

Alene produces excellent seed yields on the Palouse-Latahco silt loam nonirrigated soils in the wheat (*Triticum aestivum* L.)-pea (*Pisum sativum* L.) area of northern Idaho and eastern Washington. The cultivar produces an excellent sod and turf for the cool-season area of the USA and Canada either as a monoculture or as a blend with other bluegrasses.

Breeders seed, as produced by the Idaho Agricultural Experiment Station, was made available to contract seed producers in June 1986. Seed classes will be limited to breeders, foundation, and certified. A plant variety protection (PVP) application has been submitted that will specify Alene to be produced and sold as a class of certified seed.

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References and Notes

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REGISTRATION OF 'ACALA 1517-SR2' COTTON

'ACALA 1517-SR2' cotton (*Gossypium hirsutum* L.) (Reg. no. 89) was released by the New Mexico Agricultural Experiment Station in 1986. Plant-to-row selection primarily for greater storm-resistance for several generations resulted in strain E1137. This strain was released as Acala 1517-SR2.

Acala 1517-SR2 originated as a single F₂ plant selection from a cross between 'Acala 1517-E1' and an unknown storm-resistant source and has the same pedigree as 'Acala 1517-SR1' (1). Parents of Acala 1517-E1 were Acala 3080 and Pee Dee 2165 (2).

Plants of Acala 1517-SR2 are about the same height as those of Acala 1517-SR1, averaging 76 cm. Plants of Acala 1517-SR2 are narrower than the picker-type Acala 1517 cultivars because of shorter sympodial branches. Acala 1517-SR2 is earlier than Acala 1517-SR1, as measured by early bloom and open boll counts. Acala 1517-SR2 averaged 8% higher lint yields than Acala 1517-SR1 in the Mesilla and Pecos valleys of New Mexico in 4 yr of testing.

Acala 1517-SR2 has resistance similar to that of Acala 1517-SR1 for verticillium wilt (caused by *Verticillium dahliae* Kleb.), races 1, 2, and 10 of bacterial blight (caused by *Xanthomonas campestris* pv. *malvacearum* (Smith) Dye), and fusarium wilt [caused by *Fusarium oxysporum* f. sp. *vasinfectum* (Atk.) Snyder and Hans.]. This resistance is generally sufficient for satisfactory cotton production in the southwestern USA.

Bolls of Acala 1517-SR2 are ovate, averaging 5.57 g seed cotton compared to Acala 1517-SR1 with 5.90 g. Seed have a fuzzy seed index of 12.0 g compared with 12.7 g for Acala 1517-SR1. Lint percentages of Acala 1517-SR2 and Acala 1517-SR1 are about equal, averaging 37.7% for hand-picked samples.

Acala 1517-SR2 is more storm-resistant than Acala 1517-SR1. Storm-resistance ratings have averaged 5.8 for Acala 1517-SR2, compared with 4.3 for Acala 1517-SR1.

Fiber length and uniformity of Acala 1517-SR2 are similar to those of Acala 1517-SR1, averaging 29 mm for 2.5% span length and 50% for fiber uniformity ratio, respectively. Micronaire averaged 0.2 units higher than for Acala 1517-SR1. Fiber strength, as measured on the 3.18-mm gauge stelo-meter, averaged 245 kN m kg⁻¹, compared with 239 kN m kg⁻¹ for Acala 1517-SR1.

Breeder seed will be maintained by the New Mexico Agricultural Experiment Station, Las Cruces, NM 88003.

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References and Notes

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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 BC₃F₃ 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* Schlecht f. sp. *vasinfectum* (Atk.) Snyder and Hans.] and tolerant to root-knot nematodes [caused by *Meloidogyne 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.

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References and Notes

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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', 'Floratum', 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), Floratum (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 *Piricularia 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.

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References and Notes

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