REGISTRATION OF 'REBEL JR.' TALL FESCUE

'Rebel Jr.' tall fescue (Festuca arundinacea Schreb.) (Reg. no. CV-45, PI 548336) was developed by the cooperative efforts of Lofts Seed, Inc., of Bound Brook, NJ, Pure-Seed Testing, Inc., of Hubbard, OR, and the New Jersey Agricultural Experiment Station. It was released in September 1989 by Lofts Seed. The experimental designation of Rebel Jr. was NJED-74.

Rebel Jr. is an advanced-generation synthetically selected from the progenies of 91 clones. The parental germplasm of Rebel Jr. traces back to plants selected from 'Rebel' tall fescue (1) and to plants collected from old turfs in Alabama, Georgia, Idaho, Kansas, Kentucky, Maryland, Mississippi, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, and Virginia during the period 1962 to 1977. Millions of kilograms of tall fescue seed had been used for turf purposes throughout this region during previous decades. As a result of natural selection, a few outstanding turf-type plants persisted, spread, and colonized. These selected plants were subsequently evaluated in space-planted nurseries for attractive appearance, seed yield potential, and disease resistance. Plants showing the best performance were allowed to interpollinate or were top-crossed with plants selected from or related to Rebel. Single-plant progenies were then evaluated in closely mowed turf trials. Tillers selected from these turfs were used to initiate new cycles of recurrent selection. The parental clones of Rebel Jr. were selected from the above germplasm sources over three to nine cycles of selection. This selection program also included three cycles of phenotypic assortative mating directed toward the development of lower-growing plants.

Breeder seed of Rebel Jr. was produced in an isolated space-planted nursery located near Hubbard, OR. The first-certified seed was produced in western Oregon in 1989.

Rebel Jr. tall fescue is a persistent, lower-growing, turf-type cultivar capable of producing an attractive dark green turf with medium texture, medium-high density and reduced vertical growth rate. It has shown good winterhardiness, good cold-temperature color retention, and good heat and drought tolerance. Rebel Jr. has moderately good resistance to the brown patch disease caused by Rhizoctonia solani Kühn and good resistance to the net blotch disease caused by Drechslera dictyoides (Drech.) Shoemaker. Rebel Jr. has good seedling vigor. It has good wear tolerance as a well-established turf. Like many other improved turf-type tall fescues, Rebel Jr. generally has better insect resistance and a lower N requirement than Kentucky bluegrass (Poa pratensis L.) or perennial ryegrass (Lolium perenne L.). It also produces less thatch than vigorous cultivars of Kentucky bluegrass. Rebel Jr. is recommended for the production of a medium-to-low maintenance turf under varying light intensities ranging from full sun to moderate shade in regions where tall fescue is well-adapted for turf use.

Seed increase of Rebel Jr. is limited to two generations from breeder seed, one each of foundation and certified. Breeder seed will be produced and maintained by Pure-Seed Testing in cooperation with Lofts Seed and the New Jersey Agricultural Experiment Station.

Application (no. 9000240) has been made for U.S. Plant Variety Protection.

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References and Notes


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REGISTRATION OF 'ACALA 1517-91' COTTON

'Acala 1517-91' cotton (Gossypium hirsutum L.) (Reg. no. CV-99, PI 557534) was released by the New Mexico Agricultural Experiment Station in 1990. It originated from a single plant selection from a cross between experimental strains Acala 8130 and Acala 8874. Acala 8130 is a selection out of 'Acala 1517-70' (1). Acala 8874 was derived from a cross of 'Acala 1517V' (2) and Acala 2178. New Mexico experimental strain 2178 has the pedigreed Acala 2503/Coquette/Acala 840. Plant-to-row selection for several generations resulted in strain 3579, which was the experimental designation assigned to Acala 1517-91. This strain was evaluated in multi-location trials in New Mexico in 1986 through 1987, and it was entered in the Western Regional Cotton Variety Test in 1988 and 1989.

Plant height of Acala 1517-91 averaged 94 cm, which is similar to that of 'Acala 1517-75' (3). Plant shape is similar to that of Acala 1517-70. Acala 1517-91 maturity is similar to that of Acala 1517-75 as measured by percentage of total crop harvested at first picking (78%) in trials from 1987 to 1989. Lint yields for Acala 1517-91 averaged 13% higher than yields of 'Acala 1517-88' (4) in the Mesilla Valley, and were approximately equal to that cultivar in the Pecos Valley of New Mexico during 3 yr of tests.

Tolerance to verticillium wilt (Verticillium dahliae Kleb.) was evaluated in yield trials at Las Cruces, NM, from 1986 to 1989. The average wilt ratings, recorded on a scale of 1 to 5 (1 = most tolerant and 5 = most susceptible), were 1.8 for Acala 1517-91, 2.9 for Acala 1517-88, and 2.3 for Acala 1517-75.

Bolls of Acala 1517-91 are ovate and averaged 2.51 g of lint per boll, compared with 2.31 g for Acala 1517-75. Seed are medium in size, with a fuzzy seed index of 11.6 g, compared with 11.7 g for Acala 1517-75. Acala 1517-91 averaged 13% higher than yields of 'Acala 1517-75' (5) in New Mexico trials from 1987 to 1989.

Fiber quality of Acala 1517-91 is similar to that of Acala 1517-75. Fiber length (2.5% span) averaged 3.0 mm, which was not significantly different from that of Acala 1517-75 or Acala 1517-88. Fiber uniformity index of Acala 1517-91 averaged 51.5% and was equal to that of Acala 1517-75. Fiber strength, as measured on the 3.8-mm gauge stellometer, averaged 224 kN m kg−1 for Acala 1517-91, and was not significantly different from the fiber strength of Acala 1517-88. Micronaire reading of Acala 1517-91 was similar to that of Acala 1517-88 and significantly higher (0.3 units) than that of Acala 1517-75.

Breeder seed will be maintained by the New Mexico Agricultural Experiment Station.

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