Registration of 'Coronado' Tall Fescue

'Coronado' tall fescue (Festuca arundinacea Schreb.) (Reg. no. CV-64, PI 587184) was released by Pure Seed Testing, Inc., Hubbard, OR, in September 1993. Germplasm obtained from the New Jersey Agricultural Experiment Station (NJAES) was used in the development of Coronado. Coronado was tested as PST-RDG. The first certified seed was produced in 1995.

Coronado tall fescue is an advanced-generation synthetic cultivar selected from the maternal progeny of 12 plants during May 1990. 136 plants were selected from three breeding composites at the Rutgers University Plant Science Research Farm at Adelphia, NJ. These were designated D (44 plants), D (69 plants), and G (23 plants). Selection criteria were attractive appearance, moderately low growth profile, free from disease, and dark green color. The R, D, and G breeding composites trace their lineage to plants selected from or related to 'Rebel' (1) and to plants selected by NJAES turfgrass breeders from old turfs in Alabama, Georgia, Idaho, Kansas, Kentucky, Maryland, Missouri, Mississippi, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, and Virginia from 1962 to 1982. These 136 plants were transferred to an isolated crossing block, designated RDG, at North Brunswick, NJ, immediately prior to anthesis and allowed to interpollinate during the late spring of 1990. Seed was harvested from 12 plants exhibiting excellent floret fertility. These 12 plants, the maternal parents of Coronado, trace their origins to four sources. Three trace their maternal origin to a plant, infected with the fungal endophyte Neotyphodium coenophialum (Morgan-Jones & Gams) Glenn, Bacon, Price & Halpin (syn. Aeremonium coenophialum), that was collected from an old turf in Athens, GA, in 1977. Five trace their maternal origin to an endophyte-free plant collected in eastern New Jersey in 1975. One endophyte-free parent traces its maternal origin to 'Apache' (2). The other three parents, which were endophyte-infected, trace their maternal lineage to a breeding composite containing plants from a number of different collections and from Rebel.

Seed from the 12 maternal parents harvested in the RDG crossing block was used to establish an isolated 7040-plant nursery near Hubbard in September 1990. Off-type plants were removed from this nursery, prior to anthesis, to increase uniformity. Selection criteria were high number of reproductive tillers, freedom from disease, dark green color, and low growth profile. The remaining plants were allowed to interpollinate. During the summer of 1991, 1181 endophyte-infected plants were harvested as the breeder seed of Coronado.

Coronado tall fescue was developed specifically for turf uses, including lawns and sports fields. Coronado has performed well in shade and under low-maintenance conditions, which should make it well adapted for home lawns, parks, cemeteries, and golf course roughs. Coronado is a very dark green cultivar that forms a low-growing turf with high density and uniformity. It has shown excellent turf performance in trials across the USA.

Coronado has exhibited a high level of tolerance to gray leaf spot, caused by Pyricularia grisea (Cooke) Sacc. (3). It also has shown good tolerance to net blotch [caused by Drechslera dictyoides (Drechs.) Shoemaker], dollar spot [caused by Sclerotinia homoeocarpa (F.T. Bennett), and pink snow mold and fusarium patch [caused by Microdochium nivale (Fr.) Samuels & I.C. Hall]. Coronado should perform well, in areas where tall fescue is adapted, as a monostand, in blends with other turf-type tall fescue cultivars, or in mixtures containing up to 5% Kentucky bluegrass (Poa pratensis L.).

Seed increase of Coronado is limited to two generations from breeder seed: one each of foundation and certified. Breeder seed of Coronado is maintained by Pure Seed Testing, Inc., in Oregon. U.S. plant variety protection (PVP certificate no. 9500078) is pending. Small quantities of seed for research purposes will be available from the corresponding author.

REFERENCES AND NOTES

4. C.A. Rose-Frickeer, Pure Seed Testing, Inc., P.O. Box 449, Hubbard, OR, 97032; M.L. Fraser, Pure Seed Testing, Inc., P.O. Box 176, Rousesville, NC 27571; W.A. Meyer and C.R. Funk, Plant Science Dep., New Jersey Agric. Exp. Sm., Cook College, Rutgers Univ., P.O. Box 231, New Brunswick, NJ 08903. Registration by CSA. Accepted 31 Aug. 1998. *Corresponding author (mfraser@comcast.net)

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Registration of 'Tomahawk' Tall Fescue

'Tomahawk' tall fescue (Festuca arundinacea Schreb.) (Reg. no. CV-65, PI 550709) was released by Pure Seed Testing, Inc., Hubbard, OR, in September 1989. Germplasm from the New Jersey Agricultural Experiment Station (NJAES) was used in the development of Tomahawk. Tomahawk was tested as PST-5DX. The first certified seed was produced in 1990.

The parents of Tomahawk were selected from two tall fescue populations, NJFD and NJED. NJFD is a 36-clone synthetic population. The parental germplasm traces its lineage to plants selected from or related to 'Rebel' (1) and to plants collected from old turfs in Alabama, Georgia, New Jersey, and North Carolina from 1962 to 1978. Plants collected from old turfs in stress environments were evaluated in closely mowed turf trials and spaced-plant nurseries at NJAES for attractiveness, stress tolerance, seed yield potential, and disease resistance. The most promising plants were subsequently allowed to interpollinate or were topcrossed 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 phenotypic and genotypic recurrent selection.

The 36 parental clones of NJFD were selected after three to nine cycles of selection, including three cycles of phenotypic assortative mating directed toward plants with fine leaves, low growth profile, and dark green color. After the interpollination of these 36 plants in an isolated nursery at North Brunswick, NJ, seed was bulked and sent to Pure Seed Testing, Inc., to screen for tolerance to stem rust (caused by Puccinia graminis Pers. fers.) and for other desirable seed production characteristics.

NJED is an advanced-generation synthetic population selected from the progenies of 91 clones. The parental germplasm of NJED traces its lineage to plants selected from Rebel and plants collected from old turfs in Alabama, Georgia, Idaho, Kansas, Kentucky, Maryland, Mississippi, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, and Virginia from 1962 to 1977. Millions of kilograms of tall fescue seed had been used for turf purposes throughout these states during previous decades. As a result of natural selection, a few outstanding turf-type plants persisted, spread, and colonized. More than 5000 hours spent examining these old turfs resulted in the identification and collection of a few dozen elite plants. The parental clones of NJED were selected from the above germplasm sources after three to nine cycles of selection in mowed clonal evaluation trials, spaced-plant nurseries, and closely mowed turf trials. This selection program also included