Registration of ‘Apache II’ Tall Fescue

‘Apache II’ tall fescue (Festuca arundinacea Schreb.) (Reg. no. CV-68, PI 578291) was released by Pure Seed Testing, Inc., Hubbard, OR, in September 1993. Apache II is a synthetic cultivar selected from the maternal progenies of seven plants topcrossed for three generations by the maternal progenies of 10 low-growing plants. The first certified seed was produced in 1994. Apache II was tested under the designation PST-9D.

During 1988, 10 low-growing tall fescue plants were selected from three populations, designated SMW, 5AG, and SBLD, near Hubbard. Eight of these plants trace their origin to ‘Apache’ (1). One of these plants originated from a low-growing selection from ‘Kentucky 31’ that had survived in a Chewing’s fescue (Festuca rubra L. var. commutata Gaud.) turf, maintained at moderate fertility, after 4 years of competition. The other selected plant traces its origin to ‘Safari’ (2).

These 10 plants were increased vegetatively to 32 clones each and planted into an isolated nursery near Hubbard during the fall of 1988. Seed was harvested from these clones in the summer of 1989 and used to establish progeny turf trials in Oregon and New Jersey and an isolated 1856-spaced-plant nursery, designated 59D-90, near Hubbard. Plants were removed from this nursery, prior to anthesis, to increase population uniformity. Remaining plants, exhibiting tolerance to stem rust (caused by Puccinia graminis Pers.: Pers.), dark green color, a high number of reproductive tillers, and good progeny turf performance, were allowed to interpollinate. During the summer of 1990, seed was harvested from 98 plants in this nursery.

During the summer of 1991, seven plants selected from an old turf in Athens, GA, and infected with the fungal endophyte Neotyphodium coenophialum (Morgan-Jones & Gams) Glenn, Bacon, Price & Hanlin (syn. Acremonium coenophialum) were moved into the 59D-90 nursery to be topcrossed. Seed was harvested from the seven endophyte-infected plants and planted with alternating seeded rows of 59D-90 in an isolated nursery near Hubbard during the fall of 1991. Seed was harvested from the most attractive 288 plants in the seven endophyte-infected maternal rows during the summer of 1992 and designated 59D-endo. The harvested plants were dark green, exhibited stem rust resistance, and had excellent panicle production.

During the fall of 1992, seed harvested from 59D-endo and 59D-90 were planted in alternating rows to produce an isolated 5120-spaced-plant nursery near Hubbard. During the summer of 1993, the first breeder seed of Apache II was harvested from 479 endophyte-infected, dark green, stem rust resistant plants.

Apache II is a medium-dark green, low-growing tall fescue that has exhibited good turf quality throughout the USA. It has shown early spring green-up and good turf quality under both low and high maintenance conditions. Apache II has exhibited excellent resistance to gray leaf spot [caused by Pyricularia grisea ( Cooke) Sacc.] (3), and has also shown resistance to the following diseases: stem rust; fusarium patch [caused by Microdochium nivale (Fr.) Samuels & I.C. Hallet], cool-weather rhizoctonia blight (caused by Rhizoctonia cerealis Van der Hoeven), leaf spot and net blotch [caused by Drechslera dicoicodes (Drechs.) Shoemaker], and rhizoctonia blight (caused by R. solani Kühn).

Apache II was developed for turf uses including sports fields, golf course roughs, and lawns. It should perform well in areas where tall fescue is adapted, as a monostand, in blends with other turf-type tall fescues, and in mixtures with up to 5% Kentucky bluegrass (Poa pratensis L.).

Because of its high percentage of endophyte infection, caution should be used when feeding Apache II to livestock. It should be used only in closely managed rotation or as a component with other forage. Apache II should not be the sole source of livestock forage.

Seed production of Apache II is limited to three generations of increase from breeder seed, one each of Foundation, Registered, and Certified. Pure Seed Testing, Inc., maintains breeder seed of Apache II in Oregon. U.S. plant variety protection (PVP Certificate no. 9400135) is pending.

CRYSTAL A. ROSE-FRICKER, MELODEE L. FRASER,* AND WILLIAM A. MEYER (4)

References and Notes

4. C.A. Rose-Fricker, Pure Seed Testing, Inc., P.O. Box 449, Hubbard, OR 97032; M.L. Frasier, Pure Seed Testing, Inc., P.O. Box 176 Rolesville, NC 27571; and W.A. Meyer, Plant Science Dep., New Jersey Agric. Exp. Stn., Cook College, Rutgers Univ., P.O. Box 231, New Brunswick, NJ 08903. Registration by CSSA. Accepted 31 Mar. 1999. *Corresponding author (mlfrasner@aol.com).

Published in Crop Sci. 39:1527 (1999).

Registration of ‘Bandana’ Tall Fescue

‘Bandana’ tall fescue (Festuca arundinacea Schreb.) (Reg. no. CV-69, PI 602978) was released by Pure Seed Testing, Inc., Hubbard, OR, in September 1997. The first certified seed was produced in 1998. Bandana was tested under the designation PST-R5AE.

Bandana was developed as part of a breeding program to develop tall fescue cultivars with improved resistance to rhizoctonia blight (caused by Rhizoctonia solani Kühn). The plants used to develop Bandana were selected for their excellent turf performance and rhizoctonia blight resistance in turf trials at Rolesville, NC, or Adelphia, NJ.

Tall fescue plants selected from turf plots at Rolesville and Adelphia were used to establish a spaced-plant nursery of 7260 plants during the fall of 1993 at Rolesville. During the spring of 1994, 36 attractive plants with similar phenotypes were transferred, prior to anthesis, from this nursery into an isolated crossing block. Selection criteria for these plants were bright green color, freedom from disease, high number of reproductive tillers, and early maturity. These plants were allowed to interpollinate and were designated R5AE. Seed was harvested from the 32 plants with the highest floret fertility during June 1994.

Seed yields of the harvested R5AE were measured, and seed from each of the 24 highest yielding plants was used to establish an isolated spaced plant nursery of 1680 plants at Rolesville in September 1994. During the spring of 1995, prior to anthesis, plants were removed from this nursery to increase uniformity of plant type and maturity. Remaining plants were allowed to interpollinate. Three hundred eighty plants with high floret fertility were harvested in June 1995. Seed from these plants were used to establish an isolated 3600-spaced-plant nursery near Hubbard during the fall of 1995. This nursery was damaged by flooding during the spring of 1996, which reduced the size and number of plants. Additional plants were removed from the population prior to anthesis, to increase uniformity of plant type and maturity. Remaining plants were allowed to interpollinate. During the summer of 1996, 729 plants were harvested to produce the first breeder seed of Bandana.