Registration of ‘Tar Heel’ Tall Fescue

‘Tar Heel’ tall fescue (Festuca arundinacea Schreb.) (Reg. no. CV-63, PI 595679) was released in October 1996 by Pure Seed Testing, Inc., Hubbard, OR. Germplasm obtained from the New Jersey Agricultural Experiment Station (NJAES) was used in the development of Tar Heel. The first certified seed was produced in 1996.

Tar Heel is an advanced-generation synthetic cultivar selected from progenies of five clones. The parental clones were selected from a tall fescue breeding program initiated by Pure Seed Testing, Inc., at Rolesville, NC, to improve tolerance to brown patch disease (caused by Rhizoctonia solani Kühn). In October 1991, 15,000 tall fescue plants were transplanted into a ‘Sunrye’ perennial ryegrass (Lolium perenne L.) turf to create a spaced-plant screening nursery. This nursery was mowed at a 5-cm height, received 19.5 g N m⁻² per growing season, and was irrigated to prevent drought stress. During the summer of 1992, high levels of brown patch disease developed.

In August 1992, 108 tall fescue plants that showed little or no visible symptoms of brown patch disease were selected from the screening nursery. These plants were transplanted into a spaced-plant nursery at Rolesville in October 1992. Five phenotypically similar plants were selected from this nursery during the spring of 1993 and transplanted into an isolated crossing block prior to anthesis. Selection was for dark green color, low growth profile, freedom from disease, high number of reproductive tillers, and medium maturity. Seed was harvested from the four clones exhibiting the best floret fertility and designated PST-R5DNB.

Three of the harvested clones were from the tall fescue breeding program at the NJAES. Two of these clones, AB-17 and MW-198, trace their maternal origins to plants selected from old turfs in Atlanta, GA. The third clone, ESD-64, traces its maternal origin to a plant selected from an old turf in Mississippi. The other two parental clones of PST-R5DNB were from tall fescue breeding projects conducted by Pure Seed Testing. One of these clones traces its maternal origin to a population (PST-5DE) selected for low-growing, endophyte-containing, early-maturing plants. The fifth clone, used only as a pollen parent, traced its maternal origin to a population (PST-5RM) selected for medium-maturing, low-growing, dark-green plants from ‘Coronado’. Three of the four maternal clones harvested to produce PST-R5DNB were infected with the fungal endophyte Neotyphodium coenophialum (Morgan-Jones & Gams) Glenn, Bacon & Hanlin (syn. Acremonium coenophialum).

Seed harvested from the four maternal clones of PST-R5DNB was used to establish an isolated spaced-plant nursery of 360 plants at Rolesville. Thirty plants were removed from the nursery, prior to anthesis, to improve population uniformity of plant type and maturity. Seed from the remaining 330 plants was harvested in June 1994 and given the experimental designation PST-R5DR.

During the fall of 1994, an isolated spaced-plant nursery of 1,100 plants was transplanted near Hubbard, OR. This nursery was completely free from disease, and the herbage from these plants is the material now being sold under the designation PST-R5DR.

Tar Heel is a low-growing cultivar with good performance. It has excellent heat tolerance and a high level of tolerance to brown patch disease. It is susceptible to gray leaf spot [caused by Pyricularia grisea (Cooke)]

Tar Heel was developed for turf uses, including sports fields, and golf course roughs. It should perform well in a stand, in blends with other turf-type fescues, and in a mixture containing up to 5% Kentucky bluegrass (Poa pratensis L.). Tar Heel should perform well in regions where tall fescue is adapted, and should be particularly well-suited to these regions that have hot, humid summers.

Seed increase of Tar Heel is limited to three generations from breeder seed: one each of foundation, registered, and certified. Breeder seed of Tar Heel is maintained by Pure Seed Testing, Inc., in Oregon. Tar Heel is a stable and uniform variety. U.S. plant variety protection (PVP Certificate no. 9600364) is pending.

References and Notes

Published in Crop Sci. 38:539 (1998).

Registration of ‘Rimrock’ Indian Ricegrass

‘Rimrock’ Indian ricegrass [Achnatherum hymenoides (Roem. & Schult.) Barkw.; syn. Oryzopsis hymenoides (Roem. & Schult.) Ricker, Stipa hymenoides Roem. & Schult.] (Reg. no. CV-478833) was released on 29 Jan. 1997. Participation are the USDA-NRCS, Montana Agricultural Experiment Station, and the NJAES. Rimrock was tested under the designations M-33, P-15597, T-05424, 9005424, and PI 478833.

Rimrock was collected as seed on 29 June 1987 near Pipal from a site 1100 m in elevation (Township Section 28), approximately 1 km north of Billings, MT, which overlooks the city and the Yellowstone River Valley. The collection site is a Worland fine sandy loam (coarse-loamy, calcareous, mesic Typic Torriorthents) with 2 to 7% slope. The material is sandstone. This site is classified by USDA-NRCS as Major Land Resource Area G58A (Northern Rolling hills, Northern Part) (1). Estimated average annual precipitation is 250 to 350 mm. The stand was noted as being sparse, and of plants sampled was not recorded. No intense selection has been practiced on the original collection.