Registration of ‘Wrens 96’ Rye

‘Wrens 96’ winter rye (Secale cereale L.) (Reg. no. CV-17, PI 602997) was developed at the University of Georgia Agricultural Experiment Stations in cooperation with the USDA-ARS and the Florida Agricultural Experiment Station and was released in 1996. Wrens 96 was derived from a recurrent phenotypic selection procedure initiated to improve forage yield of ‘Wrens Abruzzi’ rye (1). The selection procedure included visual selection of spaced plants, grid selection, maintenance of a relatively large population size, biparental selection, a 1-year cycle interval, and intermixing of selected plants in isolation (2).

In each cycle, 1050 hill plots were hand-planted on 45- by 45-cm centers. Each hill was hand-thinned to a single seedling after emergence and establishment. Nonselected plants were removed from the isolation area after visual selection and simulated grazing. About 140 selected plants were allowed to naturally intermate in isolation. Selected plants that were susceptible to leaf rust (caused by Puccinia recondita Roberge ex Desmaz. f. sp. secalis) were discarded during seed development. Wrens 96 resulted from the seed increase of selection Cycle 7, which was completed in 1992.

Wrens 96 is a high-yielding, early-maturing cultivar for the Coastal Plain region of the U.S. Southeast for both forage and grain production. Wrens 96 has medium-strength straw and is similar in plant height, test weight, and winter hardiness to Wrens Abruzzi; it matures an average of 4 d later and grows 2 cm taller. In performance trials grown in Georgia from 1994 to 1997, Wrens 96 was equal in forage yield to Wrens Abruzzi and produced an average of 16% more fall and winter forage than ‘FL 401’. Under severe epidemics of leaf rust, Wrens 96 was an average of 18% superior in grain yield to Wrens Abruzzi. Wrens 96 possesses excellent resistance to the current races of leaf rust in Georgia.

Four pastures of Wrens 96 and Wrens Abruzzi were planted in 1994 to evaluate animal performance. Grazing began in early December and ended in mid-March. Herbage mass declined from 1220 kg ha⁻¹ in January to 490 kg ha⁻¹ in March. The in vitro dry matter digestibility (IVDMD) of clipped Wrens 96 samples (751 g kg⁻¹) was higher than that of Wrens Abruzzi (738 g kg⁻¹).

Average daily gains (1.27 kg) and carrying capacity (439 d ha⁻¹) of steers (Bos taurus) were not influenced by rye cultivar. The high forage quality of rye supported rapid animal growth.

Breeder seed of Wrens 96 has been released to the Georgia Seed Development Commission for multiplication and distribution and will be maintained by the Georgia Agricultural Experiment Stations, University of Georgia, Georgia Station, Griffin, GA 30223-1797. Small quantities of seed for research purposes may be requested from the corresponding author for at least five years.

References and Notes

Registration of ‘MS-Supreme’ Bermudagrass

‘MS-Supreme’ (Reg. no. CV-36, PI 604197), a type bermudagrass (Cynodon × magennisii Hurwitz), was selected for release by the Mississippi Agricultural and Forestry Experiment Station on 16 Dec. 1997. MS-Supreme was tested in full-scale golf course trials.

In an effort to develop a cultivar that could withstand the 3.2-mm mowing height, 24 low-growing bermudagrass cultivars, including MS-Supreme were assembled into a spaced-plant nursery at the Mississippi State University Plant Science Research Center. MS-Supreme was selected for further evaluation because of its high turf density, fine leaves, and prostrate growth habit. MS-Supreme was selected in 1991, originated from a ‘Tifgreen’ (C. dactylon) golf green planted in 1964 at Gulf Shores Golf Club, Gulf Shores, AL.

In a greenhouse experiment to compare the leaf texture of bermudagrass cultivars, unmowed MS-Supreme blades that were significantly shorter and narrower than Tifgreen and ‘Tifdwarf’ (2). Internodes of MS-Supreme were significantly shorter and smaller in diameter than Tifgreen but significantly different from Tifdwarf. DNA amplification revealed that MS-Supreme is clearly distinguishable from Tifgreen.

MS-Supreme is a high-density, fine-textured cultivar that produces a high-quality golf putting surface. Bermudagrass were evaluated at two mowing heights on a USGA-specification putting green at Mississippi State University Golf Course. In 1995 and 1997, MS-Supreme displayed higher turf quality than Tifgreen at 3.2- and 4.8-mm mowing heights. MS-Supreme establishes rapidly compared with other dwarf bermudagrasses due to vigorous prostrate growth. In a test conducted at College Station, TX, the establishment of MS-Supreme was similar to Tifdwarf, but faster than Tifgreen. At College Station, TX, the MS-Supreme was similar to Tifgreen and faster than Tifdwarf.

Leaf texture ratings conducted at Gainesville revealed MS-Supreme to be finer textured than Tifgreen or Tifdwarf.

MS-Supreme is a sterile triploid (2n = 3x = 37) that produces fewer inflorescences than Tifgreen or Tifdwarf. MS-Supreme must be vegetatively propagated. It is recommended for use in greens in regions where bermudagrass is adapted, as it is adapted of its dwarf morphology and vigorous growth from stolons and rhizomes, MS-Supreme will require an intense management program that includes thatch control.

Breeder and foundation stock of MS-Supreme will be maintained by the Mississippi Agricultural and Forestry Experiment Station. Plant material for research is available for at least five years upon request to the corresponding author. Application has been made for a U.S. plant patent.

References and Notes