leaves of Rely and Crew had mean rust severities of 20 and 39%, respectively. The percentage of plants of Rely and Crew with resistant, intermediate, and susceptible reaction types were 47 vs. 34%, 39 vs. 42%, and 14 vs. 24%, respectively.

The mean grain yield of Rely has generally been comparable to other club cultivars. In 32 Washington state trials (1986–1989) Rely, Tres, Crew, and ‘Hyak’ had mean yields of 5500, 5550, 5270, and 5340 kg ha⁻¹, respectively. In 24 regional tests conducted in Oregon, Idaho, and Montana during 1987 to 1998, Rely, Tres, Hyak, and ‘Moro’ had mean yields of 5920, 6060, 5860, and 4850 kg ha⁻¹, respectively. Rely has a mean grain volume weight averaging 8 kg m⁻³ heavier than Hyak and 18 kg m⁻³ heavier than Moro. Rely is similar to Crew for plant height, straw strength, seedling vigor, and cold-hardiness. It is less coldhardy than Hyak.

Based on quality evaluations conducted by the USDA-ARS Western Wheat Quality Laboratory during 1987 to 1989, Rely has milling and baking quality that is comparable to most currently grown club wheat cultivars. It is equal to Tres, Moro, and Hyak for flour yield, milling score, flour ash, sponge cake score, and volume. It is similar to Tres and Hyak, but lower than Moro, for percent flour protein and absorption. The flour viscosity of Rely is equal to Tres and Moro, but lower than Hyak. The cookie diameter of Rely is equal to Tres and Hyak, but slightly less than Moro.

Rely is generally adapted to the club wheat growing regions of eastern Oregon and eastern Washington. Rely is eligible for propagation under a seed certification agreement of the Washington State Crop Improvement Association (WSCIA) for only three generations from breeder seed, one each of foundation, registered, and certified. Differences in gladiin banding patterns of Crew components indicated that Crew could be grown for three generations before significant shifting occurred among its components (1). To reconstitute breeder seed of Rely, seed of its components will be maintained by WSCIA under the supervision of the Crop and Soil Sciences Department, College of Agriculture and Home Economics, Washington State University, Pullman, WA 99164-6420.

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References and Notes


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Registration of ‘FX-10’ St. Augustinegrass

‘FX-10’ St. Augustinegrass [Stenotaphrum secundatum (Walter) Kuntze] (Reg. no. CV-153, PI 561856) is an asexually propagated clone that was developed at the Fort Lauderdale Research and Education Center, University of Florida. It was released by the University of Florida in April 1990. FX-10 was selected from second-generation progeny produced through controlled pollination among African germplasm. The pedigree of FX-10 was (PI 290888 × PI 293666) × (PI 300127 × PI 300130). Planting stock of FX-10 has been increased and maintained by vegetative propagation of stolon cuttings. FX-10 is sparsely pubescent on both surfaces of the youngest leaf blades. The 0.5 to 1.0 m long hairs are more numerous (mean = 21) on the adaxial surface than on the abaxial surface (mean = 12) and are discernible to the unaided eye. Except for FX-33, other recognized cultivars of St. Augustinegrass have no hairs on the leaf blade surfaces, although hairs are present in all cultivars on the ligule and collar region. Adaxial leaf color of FX-10, based on Munsell color notation (1), varies between 7.5 GY 5/4 (approximately grass green) and 7.5 GY 4/4 under typical fertilization levels, and the overall color, when viewed in a plot, is more blue and less saturated than other cultivars. Leaf texture of FX-10 is very coarse, with individual leaf blades varying from 8 to 14 mm wide. Leaf dimensions and other vegetative traits of St. Augustinegrasses vary greatly in response to age, light level, and other environmental factors. Spikelet length in St. Augustinegrass is adequately free of environmental effects for use in cultivar description and identification (2). Spikelets of FX-10 average 4.5 mm long, which is much shorter than ‘Floratam’ and ‘Floralawn’ and slightly shorter than ‘Bitterblue’ and ‘FX-33’. Another color of FX-10 is approximately 10YR 7/10 (approximately orange-buff) and stigma color is 5RP 3/10 (approximately true purple). FX-10 produces more inflorescences per unit ground area than Floratam or Floralawn. The unreduced chromosome number of FX-10 is 2n = 30 and chromosomes associate in diakinesis principally as bivalents with regular disjunction (3).

In southern Florida, FX-10 survives seasonal drought with greater canopy coverage compared with other cultivars of St. Augustinegrass. FX-10 roots penetrate the 1.4 m aquifer, thus it is drought resistant due to avoidance. FX-10 survived well in Fort Lauderdale test plots for 2 yr without irrigation, but died during the third year. In another experiment at Fort Lauderdale, a lawn of FX-10 remained alive and provided acceptable turf quality when it received an average of four irrigations per year. While irrigation would thus be necessary to maintain FX-10, the grass is usable as a sparingly irrigated turfgrass in southern Florida. The unmannown height of FX-10 is shorter than Floratam and Floralawn, and it can be maintained with a rotary mower set at 6 cm height. Fertilization can best be accomplished in two to three applications per year, totaling 5.0 to 7.5 g N m⁻² yr⁻¹, in a complete formulation that includes adequate P.

While Floratam is susceptible, FX-10 is resistant to the PDP (Polyploid Damaging Population) southern chinch bug (Blissus insularens Barber) based on laboratory (3) and field evaluation. The PDP southern chinch bug has damaged Floratam in Florida since 1985 (4). FX-10 is also resistant to the STD (Standard) southern chinch bug, a race which is not adapted to Floratam (5). FX-10 has moderate resistance to gray leaf spot disease, caused by Pyricularia grisea (Cooke) Sacc., as evidenced by reduced leaf spot damage ratings compared with Bitterblue, Floralawn, and FX-33. In sandy soil, and under irrigation, FX-10 has exhibited slower ground coverage than other cultivars and is more prone to weed infestation than Floratam. FX-10 has shown moderate damage from atrazine when the herbicide is applied to sandy soil. Under 5% relative outdoor illumination deriving from neutral shade cloth, FX-10 has shown unacceptable turf quality. The critical range for field survival of FX-10 plugs in the winter of 1989 was between −5 and −9 °C. Clonal breeder stock of FX-10 is maintained by the University of Florida and small quantities are available for experimental purposes. Foundation planting stock is available from the Florida Sod Growers Cooperative, Box 745, Murdock, FL 33938. U.S. Plant Patent 7852 has been issued for FX-10.

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