bight. Most of the progenies of these selections showed significant improvements in Helminthosporium bight resistance when subsequently evaluated in turf trials. The 65 parental clones of Mustang were chosen from the above on the basis of their progeny performance under turf maintenance. Progenies of the 65 parental clones were established in a large spaced-plant nursery in western Oregon for production of Syn 2 breeder seed. This nursery was rogued for uniformity of maturity and to remove unattractive, off-type plants. Pickseed RP-1 was the experimental designation of Mustang. The first certified seed was produced in western Oregon in 1982.

Mustang is a leafy, persistent, turf-type tall fescue capable of producing an attractive turf of medium density, medium texture and a dark green color. It has improved tolerance to close-mowing and good heat tolerance. Mustang performs well under varying light intensities ranging from full sun to moderate shade. It has good color retention into the cold weather of late fall and good spring greenup. It has shown good winter hardiness in New Jersey turf trials. Mustang has shown very good resistance to Helminthosporium bight and moderate resistance to the brown patch disease caused by Rhizoctonia solani Kühn. Mustang should be useful for the production of a medium low maintenance turf in most regions where tall fescue is well adapted for turf use.

Breeder seed will be maintained by Pickseed West, P.O. Box 888, Tangent, OR 97389, with the cooperation of the New Jersey Agricultural Experiment Station. Propagation of seed is limited to two generations of increase from breeder seed, one each of foundation and certified.

Application (no. 8500023) has been made for United States Plant Variety Protection.

C. R. Funk, W. Kent Wiley, Douglas E. King, and Michael F. Robinson (2)

References and Notes

1. Sincere appreciation is also expressed to the United States Regional Pasture Res. Lab., University Park, PA, for some of the germlasm used in the development of Mustang tall fescue.

2. Professor, Soils and Crops Dep., New Jersey Agric. Exp. Sta.; president, Pickseed West, P.O. Box 888, Tangent, OR 97389; senior agronomist, Pickseed West; and president, Seed Research of Oregon, 29750 Harvest Dr., Albany, OR 97321 (former vice-president, Pickseed West). Publication no. D-15166-2-84; New Jersey Agric. Exp. Sta., Cook College, Rutgers Univ., New Brunswick, NJ 08903. Some of this work was conducted as part of NJAES Project no. 15166, supported by New Jersey Agric. Exp. Stn. funds, other grants, and gifts. Additional support was received from the United States Golf Assoc. Green Section Res. and Educ. Fund. Registration by the Crop Sci. Soc. of Am. Accepted 25 June 1984.

REGISTRATION OF TORO-2 RICE

‘TORO-2’ rice (Oryza sativa L.) (Reg. no. 65), PI 483070, is an early maturing, short-stature, special-purpose, low-amylase, long-grain cultivar developed cooperatively at the Louisiana State University Rice Research Station, Crowley, LA, by the Louisiana Agricultural Experiment Station and the USDA-ARS. TORO-2 was tested in the Cooperative Regional Uniform Rice Nursery under the experimental designations RU7802063 and RU8102063. TORO-2 is being released as replacement for ‘Toro’, a special purpose rice grown is southwest Louisiana for its unique cooking characteristics.

TORO-2 is a selection from the 1970 cross CI 9902/3/‘Rexoro’/‘Lacrosse’/3-D. CI 9902 is a short-stature, lodging- and blast-resistant long-grain line developed at Crowley, LA, and is one parent of the cultivar ‘Leah’. 13-D is a short-stature line, selected at Crowley, LA from the 1951 cross CI 654//Rexoro/‘Fortuna’/3-Dwarf mutation. Winter nursery facilities in Puerto Rico were used to advance selections during the off-season.

TORO-2 has averaged 94 cm in height compared to 123, 114, 91, and 86 cm for the cultivars Toro, ‘Lebonnet’, ‘Leah’, and ‘Lemont’, respectively, at Crowley. TORO-2 is resistant to lodging because of its short and stiff straw, however, lodging of TORO-2 has been observed at high N and high yield levels. Leaf blades are dark green, narrow, erect, and glabrous. The spikelets are straw-colored, glabrous, and awnless. Days to 50% heading for TORO-2, Toro, Lebonnet, Leah, and Lemont have average 79, 100, 79, 79, and 80, respectively. Grains of TORO-2 have been classified as extra-long. Rough rice grain lengths and widths were 10.1 and 2.8 mm for TORO-2, 9.3 and 2.5 mm for Toro, 9.8 and 2.6 mm for Lebonnet, 9.9 and 2.9 mm for Leah, and 9.3 and 2.7 mm for Lemont. Comparative rough rice grain weights for TORO-2, Toro, Lebonnet, Leah, and Lemont averaged 30.8, 22.8, 25.0, 29.2, and 25.7 mg/grain respectively. Mean brown rice kernel lengths and widths were 8.2 and 2.4 mm for TORO-2, 7.2 and 2.1 mm for Toro, 7.9 and 2.3 mm for Lebonnet, 8.0 and 2.4 mm for Leah, and 7.6 and 2.3 mm for Lemont. Brown rice kernel weight averaged 24.3, 19.8, 20.6, 25.4, and 20.8 mg/kernel for TORO-2, Toro, Lebonnet, Leah, and Lemont, respectively. The endosperm of TORO-2 is nonglutinous, nonaromatic, and a light brown bran (nonpigmented pericarp).

TORO-2 has given high milling yields even though it has a large kernel size. Milling yields (percent whole kernel:percent total milled rice) for TORO-2 and Toro in comparative tests for 1980-1983 were 62-71 and 64-69, respectively. In 1982-83 milling experiments showed TORO-2 maintained relatively high whole-kernel milling yields when harvested at different moistures (approximately 15 to 23%) with whole kernel milling yields ranging from 53 to 63% (average of 60%). Whole kernel milled rice lengths and widths were 7.9 and 2.3 mm for TORO-2, 6.9 and 2.1 mm for Toro, 7.6 and 2.1 mm for Lebonnet, 7.8 and 2.3 mm for Leah, and 7.2 and 2.2 mm for Lemont. Milled rice kernel weight for TORO-2, Toro, Lebonnet, Leah, and Lemont averaged 21.2, 16.3, 18.2, 21.2, and 19.2 mg/kernel, respectively.

Unlike standard U.S. long-grain rice cultivars, TORO-2 like Toro, has a low-amylase content (16%) and a low gelatinization temperature as judged by alkali spreading scores of 6. These starch characteristics of the milled rice cause TORO-2 to cook moist and sticky when steamed or boiled as do standard U.S. medium-grain cultivars. In cooking and taste tests TORO-2 was rated satisfactory and comparable to Toro. TORO-2 cannot be comgilled with the standard U.S. market classes of rice because of these special cooking characteristics.

Grain yields of TORO-2 and Toro averaged 5930 and 4550 kg/ha (12% moisture), respectively, in comparative 1980-83 tests at Crowley. In the 1982-83 test conducted at higher management levels, yields for TORO-2, and Toro were 7650 and 5000 kg/ha, respectively. TORO-2 was compared to commercial U.S. cultivars in 1982 and 1983 in north and southwest Louisiana in water- and drill-seeded cultural systems involving different N fertility levels. Yields of TORO-2, Lebonnet, Leah, and Lemont averaged 8130, 7480, 8080, and 8330 kg/ha, respectively. Yields as high as 10 020 kg/ha of TORO-2 have been recorded in rice fertilization experiments.