In the 1978 to 1982 inoculated nurseries at Beaumont, TX, TORO-2 was rated resistant to IG-1 and IH-1, the two prevailing pathogenic blast fungus races (Pyricularia oryzae Cav.) that occur in the southern United States. It was also resistant to races IB-45 and IB-54 but susceptible to IB-1, IC-17, and IB-49. TORO-2 plants are moderately susceptible to sheath blight caused by (Rhizoctonia solani Kuhn) and narrow brown leaf spot caused by (Cercospora oryzae Miyake) and are very susceptible to the physiological straigthead disorder. TORO-2, like all other U.S. rice cultivars, is susceptible to damage by the rice water weevil (Lissorhoptrus oryzophilus Kuschel) and the rice stink bug (Oebalus pugnax F.).

The 1983 foundation seed field of TORO-2 contained a low frequency (20/ha) of off-type plants with a smaller long-grain size. These off-types will be eliminated from head rows in future breeder seed production.

TORO-2 is being released cooperatively by the Louisiana Agricultural Experiment Station, USDA-ARS, and the Mississippi Agricultural and Forestry Experiment Station. Breeder and foundation seed will be maintained by the Rice Res. Stn., P.O. Box 1429, Crowley, LA 70527-1429. Application is not being made for protection of TORO-2 under the Plant Variety Protection Act.


References and Notes


REGISTRATION OF L-202 RICE

‘L-202’ long-grain rice (Oryza sativa L.), (Reg. no. 66) PI 485097, designated experimentally as 81-Y-295 was developed by the California Cooperative Rice Research Foundation, Biggs, CA. It originated from a F1 line of the 1976 cross R3980. The pedigree is 72S76/172S2278/L-201. 72S76/1 is a selection from PI 321161, a tall long grain introduction developed by the International Rice Research Institute, Philippines as IR 456-3-2-1. It has pedigree of ‘Dawn’/Century Patna 231’/SLO 17’. The 72S2278 parent is a semidwarf long-grain selection with unknown parentage resulting from accidental mixing of F2 populations. However, 72S2278 carries the semidwarf gene from either ‘IR-8’ or ‘Taichung Native 1’. The L-201 parent (4) is an early maturing long-grain cultivar of intermediate height developed by the California Cooperative Rice Research Foundation, Inc. L-201 was used in the cross before it was named. A winter nursery in Hawaii was used to accelerate the advancement of generations.

L-202 is a photoperiod insensitive, early maturing, semidwarf cultivar. It has headed about the same time as the medium-grain cultivar ‘M-201’ (2) and about 5 days later than the long-grain cultivar ‘California Belle’ (3). The average plant height of L-202, M-201 and California Belle are 82, 88 and 102 cm, respectively. L-202 plants are awnless, have glabrous leaves and glabrous straw-colored hulls, and have anthocyanin pigmentation in the seed apiculi and the stigmas.

Grains of L-202 are slightly longer than those of California Belle. Brown rice kernels averaged 21.5 mg in weight, 7.8 mm in length, and 2.2 mm in width compared to 20.0 mg, 7.2 mm and 2.2 mm for California Belle. L-202 grains have light blanched seed coat (bran), and colorless, non-glutinous, non-aromatic endosperm with starch amylose content of 25.6 to 26.4% as determined at the Cooperative Regional Quality Laboratory at Beaumont, Texas. This is about 2 to 3% higher than the amylose content of typical southern U.S. long-grain cultivars (5). The starch of L-202 has intermediate gelatinization temperature as indicated by 1.7% KOH spreading reaction of 4 to 5. L-202 has given satisfactory milling yield averaging 57.3 and 57.8% head rice in 1982 and 1983, respectively, from samples harvested at grain moisture contents ranging from 19.7 to 26.5% in 1982, and 16.5 to 20.8% in 1983.

Seedlings of L-202 are tolerant of herbicides molinate and thiobencarb, like medium- and short-grain cultivars grown in California. L-202 has seedling vigor in flooded fields similar to that of California Belle, but weaker than that of California medium- and short-grain cultivars. Plants of L-202 have shown moderate tolerance to cool-temperature-induced sterility. They were rated similar to M-201. L-202 did not show significant differences from ‘M9’ (1), a widely grown medium-grain cultivar, in reactions to stem rot (Sclerotium oryzae Catt.) and sheath blight (Rhizoctonia oryzae-sativae (Saw.) Mordue).

L-202 was included in seven state-wide combine-size plot yield trials conducted in cooperation with the University of California Cooperative Extension, in 1982 and 1983 and these trials showed that L-202 responds to high levels of N-fertilizer. It averaged 10,323 kg/ha compared to 10,505 kg/ha and 8541 kg/ha for M-201 and California Belle, respectively, at 12% moisture. L-202 and M-201 did not lodge compared to the average of 32% lodging for California Belle in these trials.

L-202 appears to be adapted to the warmer California rice growing areas where the water level can be managed at the 10 to 12 cm depth. The pattern of adaptation appears to be similar to that of M-201.

L-202 was released jointly by the California Co-operative Rice Research Foundation, Inc., the California Agricultural Experiment Station and ARS, USDA. It was approved for certification by the California Crop Improvement Association in 1984. In the initial Foundation seed field about 0.02% of off-type plants were found and rogued. These off-type plants were slightly taller, later in maturity, and had grain shape between medium- and long-grain rice and appeared to be outcroses to medium-grain rices. Application for plant variety protection of L-202 is not being made. Classes of seed will be breeder, foundation, registered and certified. Breeder and foundation seed of L-202 will be maintained by the California Co-op. Rice Res. Found., P.O. Box 506, Biggs, CA 95917.


References and Notes

