REGISTRATION OF ‘M-202’ RICE

‘M-202’ medium-grain rice (Oryza sativa L.), (Reg. no. 72) PI494105, designated experimentally as 81-Y-124, was developed by the California Co-operative Rice Research Foundation, Biggs, CA. It is a pure line selection from the 1977 cross, R4464. The pedigree is ‘IR-8’/‘CS-M3’*/‘10-7’*/‘3’/‘M-101’. The female parent of the final cross was derived from the same cross that gave rise to the early California cultivar ‘M9’ and is similar to M9 (1). M-101 is a cold-tolerant, very early flowering California cultivar that derives its short stature and earliness from two induced mutants from ‘Calrose’ (4). Calrose was the predominant California medium-grain cultivar during the 1950s and 1960s (3). M-202 is a product of pedigree selection. A winter nursery in Hawaii was used to accelerate advancement of generations.

M-202 is a photoperiod insensitive, early maturing, semi-dwarf cultivar. It heads about 2 days earlier than M9. The average plant height of M-202 is 4 cm shorter than that of M9 (90 vs. 94 cm). M-202 is more resistant to lodging than M9, averaging 22 vs. 47% for the latter. M-202 has glabrous lemma, palea, and leaf blades except that some hairs are found on the lemma keel and on leaf margins. M-202 is sparsely awned. No plant parts of M-202 show anthocyanin pigmentation.

Panicles of M-202 normally are exerted completely from leaf sheaths. The new cultivar has seedling vigor comparable to M9 and equal or superior tolerance to sterility caused by cool night temperatures 10 to 14 days before heading. It is less susceptible (score of 4.7 vs. 5.3 on a scale of 1 to 10) than M9 to stem rot (incited by Sclerotium oryzae Catt.). M-202 and M9 are both moderately susceptible to aggregate sheath spot (incited by Rhizoctonia oryzae-sativaef (Saw) Mordue). Reaction of M-202 to other diseases that are not prevalent in California is unknown.

Brown rice kernels of M-202 are slightly smaller than those of M9, averaging 23.8 mg per kernel, 6.1 mm long, and 2.85 mm wide compared to 24.9 mg., 6.2, and 2.87 mm for M9, respectively. Milled kernels of M-202 are translucent. Grains of M-202 have light brown pericarp, and white non-glutinous and non-aromatic endosperm. Results from the Cooperative Regional Rice Quality Laboratory at Beaumont, TX, showed that amyllose makes up 17 to 18% of the endosperm starch, which has a low gelatinization temperature as indicated by an alkali spreading score of 6.3. These values are typical for U.S. medium-grain cultivars (5). Taste panelists rated M-202 as satisfactory. Whole kernel (head) and total milling yield of M-202 were satisfactory and 1 to 2% higher than M9.

M-202 has performed very well in 15 replicated tests conducted in cooperation with the University of California Cooperative Extension. These tests included current early maturing cultivars and experimental varieties at sites in California and the Pacific Northwest. The California Foundation seed of M-202 was made available to seed inspectors in 1981. M-202 has performed very well in 15 replicated tests yielding an average yield of 10,809 kg ha~1 (9642 lbs ac~1) for M-202 for an average yield of 9.7%. M-202 is expected to replace M9 in the average yield of 9853 kg ha~1 (8789 lbs ac~1) for M-9 for an average yield of 1.2%.

REFERENCES AND NOTES


REGISTRATION OF ‘PRIMA’ WINTER RYE

‘PRIMA’ is a winter rye (Secale cereale L.) developed by the Research Station, Research Branch Canada, Swift Current, Saskatchewan. Experimental designation was RT 141. License number for Prima in July 1984, by the Food Production and Inspection Branch of Agriculture Canada.

Prima was selected from the cross ‘Sangaste’//‘Petkus/Dakold’//‘3’//‘Rymin’, made in 1973. Sangaste is a cultivar which has large seeds but poor lodging resistance. Petkus/Dakold is a very cold tolerant selection closely related to ‘Frontier’ (Reg. no. 9), and Rymin (Reg. no. 6) is a high yielding, large-seeded cultivar. Prima was selected from the cross ‘Sangaste’//‘Petkus/Dakold’//‘3’//‘Rymin’, made in 1973. Sangaste is a cultivar which has large seeds but poor lodging resistance. Petkus/Dakold is a very cold tolerant selection closely related to ‘Frontier’ (Reg. no. 9), and Rymin (Reg. no. 6) is a high yielding, large-seeded cultivar. Prima was developed by the Research Station, Research Branch Canada, Swift Current, Saskatchewan. Experimental designation was RT 141. License number for Prima in July 1984, by the Food Production and Inspection Branch of Agriculture Canada.

Prima was selected from the cross ‘Sangaste’//‘Petkus/Dakold’//‘3’//‘Rymin’, made in 1973. Sangaste is a cultivar which has large seeds but poor lodging resistance. Petkus/Dakold is a very cold tolerant selection closely related to ‘Frontier’ (Reg. no. 9), and Rymin (Reg. no. 6) is a high yielding, large-seeded cultivar. Prima was developed by the Research Station, Research Branch Canada, Swift Current, Saskatchewan. Experimental designation was RT 141. License number for Prima in July 1984, by the Food Production and Inspection Branch of Agriculture Canada.

Prima was selected from the cross ‘Sangaste’//‘Petkus/Dakold’//‘3’//‘Rymin’, made in 1973. Sangaste is a cultivar which has large seeds but poor lodging resistance. Petkus/Dakold is a very cold tolerant selection closely related to ‘Frontier’ (Reg. no. 9), and Rymin (Reg. no. 6) is a high yielding, large-seeded cultivar. Prima was developed by the Research Station, Research Branch Canada, Swift Current, Saskatchewan. Experimental designation was RT 141. License number for Prima in July 1984, by the Food Production and Inspection Branch of Agriculture Canada.