crop yields about equal to those of Belle Patna. Bluebell is similar to Belle Patna and Bluebonnet 50 in milling, cooking, and processing qualities. Bluebell is very similar to Belle Patna in reaction to diseases. It is susceptible to the blast fungus, P. oryzae, races 1B-5, 1D-8, and 1G-1, of Piricularia oryzae Cav. Bluebell is moderately resistant to straighthead and is susceptible to hoja blanca, brown spot, narrow brown leaf spot, kernel smut, and leaf smut. Breeder seed of Bluebell will be maintained at the Rice-Pasture Research and Extension Center, Beaumont, Texas. Additional information on the performance of Bluebell has been published.4


REGISTRATION OF DAWN RICE

(Reg. No. 33)

C. N. Bollich, J. G. Atkins, J. E. Scott, and B. D. Webb

'Dawn' rice (Oryza sativa L.), C.I. 9534, B505A1-28-7-1-2, is a blast-resistant, early maturing, long-grain variety developed at the Rice-Pasture Research and Extension Center, Beaumont, Texas, by the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture in cooperation with the Texas Agricultural Experiment Station and the Texas Rice Improvement Association. Simultaneous release of foundation seed was made to growers in the spring of 1966 by the Texas, Louisiana, and Arkansas Agricultural Experiment Stations. Dawn was developed by H. M. Beachel from the cross 'Century Patna 231' × HO 12-1-1, made at Beaumont in 1956. HO 12-1-1 is a selection from the cross 'TP 49' × C.I. 9515. C.I. 9515 is from the cross 'Carolina Gold' × 'Piricularia oryzae Cav.' of rice. On the basis of greenhouse reaction tests with P. oryzae isolates from the United States, Dawn is rated as resistant to international races IB-5, IC-3, ID-1, IE-1, IC-1, IG-2, and IH-1 and intermediate to races IB-2 and IB-4. The most prevalent race of the blast fungus in the United States has been IG-1, followed by IB-5, IC-3, and ID-8. Dawn is moderately resistant to brown leaf spot. It is susceptible to straighthead, hoja blanca, bordered sheath spot, narrow brown leaf spot, and kernel smut. Reaction to stem rot, leaf smut, and white tip is undetermined.

In Texas, in the absence of blast, rough rice yields of Dawn and Belle Patna tend to be about equal, and below those of Bluebell. In the presence of blast, Dawn can be expected to produce higher yields than any other long-grain variety. It is especially adapted to areas in Texas, Louisiana, and Arkansas where this disease occurs. Because of the longer growing period of Dawn, it is less suited to second-cropping than Bluebell or Belle Patna.

Dawn is similar to Bluebell, Belle Patna, and Bluebonnet 50 in head rice yield but has generally higher milling yields than Bluebonnet 50 in total milled rice yield. The cooking and processing qualities of Dawn compare favorably to those of Bluebell, Belle Patna, and Bluebonnet 50.

Breeder and foundation seed of Dawn will be maintained at the Rice-Pasture Research and Extension Center, Beaumont, Texas. Additional information on the performance of Dawn in Texas, Louisiana, Arkansas, and Mississippi has been published.5


REGISTRATION OF MAGNOLIA ANNUAL RYEGRASS

(Reg. No. 15)

Hugh W. Bennett and Howard W. Johnson

'Magnolia' annual ryegrass (Lolium multiflorum Lam.) was developed by the Mississippi Agricultural Experiment Station in cooperation with the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, was released in 1966. The variety traces to five plant introductions, T.O. 1882, PI 193 145; PI 194 394; PI 194 395; and PI 201 980. Magnolia is similar to annual ryegrass in morphology, plant height, rate of recovery after cutting, and time of maturity. The roots of one-fourth to one-half of the seedlings give negative reaction when tested for fluorescence presumably because the original introductions contain natural crosses of annual and perennial ryegrass (L. perenne L.). Magnolia is resistant to crown rust and shows considerable tolerance to certain leaf spot diseases. Preliminary testing was started in 1951 at McNeil, Miss., where natural epiphytotics of crown rust occur each year. In 1954, selling and progeny testing after artificial inoculation with crown rust began at State College and Stoneville, Mississippi. Seedlings that remained rust-free after greenhouse inoculations were transplanted each spring to a space-planted field nursery for evaluation. Another cycle of selling continued with only rust and leafspot-free plants. This process established several rust-resistant strains at both locations. In 1962, State College 7 and Stoneville 3 strains were chosen as being productive, comparable in maturity and rust resistance. Equal amounts of seed were blended and used to plant an isolated seed field at both locations. Seed harvested in 1963 was planted in new isolated fields that fall. Seed harvested from these two locations were blended to constitute breeder seed.

Magnolia is more rust resistant and produces higher forage yields than the parent introductions, 'Gulf,' and domestic rye-grass.8 Only Mississippi collections of crown rust were used in the artificial inoculations, but widespread uniform regional ryegrass plantings have failed to reveal marked susceptibility at any location. Magnolia is adapted to southeastern United States. The Mississippi Agricultural Experiment Station maintains breeder seed of Magnolia. Other seed classes are one generation each of foundation, registered, and certified.

1 Registered by the Crop Science Society of America. Received March 6, 1968. Cooperative investigations of the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture; the Rice-Pasture Research and Extension Center of the Texas Agricultural Experiment Station, and the Texas Rice Improvement Association.
2 Research Agronomist and Research Pathologist, Crops Research Division,ARS, USDA, Beaumont, Texas 77706; Research Associate, Texas Agricultural Experiment Station; and Research Chemist, Crops Research Division, ARS, USDA, respectively.
4 Registered by the Crop Science Society of America. Received Feb. 29, 1968. Cooperative investigations of the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture and the Mississippi Agricultural Experiment Station. Approved for publication as Journal Article No. 1397 of the Mississippi Agricultural Experiment Station, State College, Miss.
5 Registered by the Crop Science Society of America. Received Feb. 29, 1968. Cooperative investigations of the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture and the Mississippi Agricultural Experiment Station. Approved for publication as Journal Article No. 1397 of the Mississippi Agricultural Experiment Station, State College, Miss.
6 Agent, Research Agronomist and Research Plant Pathologist, Crops Research Division, ARS, USDA, State College, and Stoneville, Miss.
7 Watson, H. W., and H. W. Bennett. Magnolia is new rust resistant ryegrass variety.
8 Magnolia Farm Res. 28 (No. 7) 1. July 1965.