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Vegold was released as a special-purpose, very-short-season, long-grain variety with desirable processing and cooking characteristics. It is well adapted for June seeding in Arkansas. Since Vegold, like Belle Patna, develops rapidly, it likewise requires adequate weeding in which careful management of irrigation water and nitrogen fertilization for satisfactory production. Several cycles of purification and breeder row production of Vegold were carried out at Stuttgart prior to the release of Foundation seed.

Literature Cited

PALMYRA RICE

(Reg. No. 26)

J. M. Poehlman

'Palmyra' (Oryza sativa L.) C.I. 9463, Mo. R 207, originated from the cross 'Caloro' X 'Blue Rose'. The cross and original selection were made at the Rice Experiment Station, Biggs, California, by the late Jenkin W. Jones, former superintendent of the Biggs Station and Leader, Rice Investigations, U.S. Department of Agriculture. A selection from this cross, 'Calif. 2400', was sent to the Missouri Agricultural Experiment Station in 1949. It was tested on the J. L. Cook farm near Palmyra, Missouri, from 1952 to 1955 under the Missouri accession number, R 27. No tests were conducted during the years 1956 through 1958, but Mr. Cook and his son, Lester, continued to grow the strain during this period and made mass reselection from it. Yield tests were resumed by the Missouri Agricultural Experiment Station in 1959. The mass reselection was then grown under the Missouri accession number R 207 and it was assigned the C.I. No. 9463.

Palmyra is a rough-hulled (pubescent), early-maturing variety with high yield. It is adapted to the rice-growing area in Northern Missouri, and as an early variety for late seeding in Southeastern Missouri. In these areas it will probably replace Mo. R 500, the only other medium-grain variety previously available with sufficiently early maturity to be grown there safely.

The feature in which Palmyra is superior to Mo. R 500 are stronger straw, higher grain yield, easier threshing, and better grain quality, along with early maturity. Palmyra has a thicker and heavier culm than Mo. R 500 and is distinctly superior in this respect.

Breeder seed of Palmyra was increased in 1961 from the mass selection made by Mr. J. L. Cook. This increase was seeded in 1962 by Messrs. J. L. and Lester Cook at Palmyra, Missouri, and about 1500 bushels of seed was produced.

The official release date of January 15, 1963, was announced jointly by the Missouri Agricultural Experiment Station and the Crops Research Division, ARS, USDA.

BELLE PATNA RICE

(Reg. No. 27)

C. N. Bollich, J. E. Scott, and H. M. Bechelli

'Belle Patna' (Oryza sativa L.), C.I. 9435, FAO Genetic Stock No. 1334, is a smooth-hulled, very early-maturing, long-grain rice variety developed cooperatively by the Texas Agricul-
tural Experiment Station, the Texas Rice Improvement Association and the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture. Approximately 3,500 cwt of foundation seed was released to growers in the Southern rice area in the spring of 1961, from the Rice-Pasture Research and Extension Center, Beaumont, Texas.

Belle Patna is a pedigree selection from the cross C.I. 9122 X 'Rexoro' made by H. M. Bechelli at Beaumont, Texas, in 1955. C.I. 9122 is a progeny of the cross 'Hill Selection' X 'Bluebonnet'. The description of 'Rexoro' has been published. Derived from a bulk of six F4 panicle rows, Belle Patna was entered in the Uniform Yield Nursery in 1958 as selection B5517A-6. Initial head-rows were grown at Beaumont in 1958, and a 4-acre increase of breeders seed was grown at the Larry Burkhaart farm near Bay City, Texas, in 1959.

Named in honor of the late J. E. Broussard, one of the founders of the Texas rice industry, the name "Belle" compliments Mr. Broussard's widow, the former Mary Belle Bordages.

Belle Patna was released primarily on the basis of high yield potential through the production of a stubble, or second, crop; reduced irrigation costs; and more efficient land use made possible by the shorter growing period. This variety has a long slender grain that is smaller in all three dimensions than 'Bluebonnet 50', and only slightly larger than Rexoro. The spikelet is straw-colored, nonpubescent, and usually awnless, and has faint anthocyanin pigmentaion in the stigma and apiculus.

Precise cultural practices are required to produce satisfactory yields. Prompt and uniform germination and seedling development are necessary for uniform grain development. The seedlings of Belle Patna appear to be more sensitive to low soil and air temperatures and to deep irrigation than those of Bluebonnet 50. Therefore, it is advisable to avoid seeding this variety extremely early and to delay the initial flood as long as possible.

Fertilizers should be applied in the first 30 days of the growth period. Since Belle Patna is somewhat more susceptible to lodging than Bluebonnet 50, late or excessive nitrogen applications should be avoided.

Belle Patna matures approximately 30 days earlier than Bluebonnet 50. The average period from seeding to harvest for Belle Patna in 18 experiments over 3 years was 108 days, ranging from 96 to 117 days.

In Texas the first crop yield per acre of Belle Patna is usually equal to, or higher than, that of Bluebonnet 50. When sown April 25 or earlier, Belle Patna under bluebonnet can produce a second or stubble crop that is one-third to one-half that of the first crop. The first crop usually will ripen by August 10 and the stubble crop by October 15.

Belle Patna is resistant to straightthead and susceptible to hoja blanca. It is susceptible to Races 1 and 6 of the blast fungus (Piricularia oryzae), the two most common races in Texas or Louisiana.

Millling, cooking and processing characteristics of Belle Patna and Bluebonnet 50 are similar.

Since the release of Belle Patna, the acreage seeded to this variety in Texas has rapidly increased. In 1964, Belle Patna was the leading variety in the state in acreage sown, and it also produced the highest state average yield per acre of rough rice.

1 Registered under a memorandum of understanding between the Crops Research Division, ARS, USDA, and the American Society of Agronomy. Cooperative investigations, Crops Research Division, ARS, USDA; Rice-Pasture Research and Extension Center, Texas Agricultural Experiment Station; and Texas Rice Improvement Association. Received Feb. 27, 1965.
2 Research Agronomist, Crops Research Division, ARS, USDA; Assistant Agronomist, Rice-Pasture Research and Extension Center, Texas Agricultural Experiment Station; and formerly Research Agronomist, Crops Research Division, ARS, USDA; all located at Rice-Pasture Research and Extension Center, Beaumont, Texas.