REGISTRATION OF BRAZOS RICE
(Reg. No. 43)

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'Brazos' rice (Oryza sativa L.), CI 9875, is an early maturing, medium-grain rice cultivar developed at the Texas A&M Univ. Agric. Research and Extension Center at Beaumont, Texas, by the ARS-USDA, in cooperation with the Texas Agric. Exp. Stn. and the Texas Rice Improvement Association. It was officially released on January 28, 1974.

Brazos was developed from the cross CI 9545/'Nova', Beaumont Cross B6334A, made in 1963. The spikelet of Brazos is straw-colored, glabrous, and awnless, and the apiculus is colorless. The shape of the grain is similar to, but slightly wider, plumper, and heavier than that of any other medium-grain cultivar in the southern U.S. In samples from the Regional Uniform Rice Performance Nursery in Texas, Louisiana, Arkansas, and Mississippi in the 3-year period 1971-1973, the milled kernels of Brazos averaged 5.71 mm long and 2.68 mm wide, compared with corresponding measurements of 5.51 and 2.49 for 'Nato', 5.73 and 2.45 for 'Vista', 5.67 and 2.51 for 'Saturn', and 5.74 and 2.59 for 'Nova 66'. Length/width ratios averaged 2.14, 2.20, 2.34, 2.27, and 2.22 for Brazos, Nato, Vista, Saturn, and Nova 66, respectively. Most kernels of Brazos are translucent, but the average number of chalky kernels tend to be greater than for other medium-grain cultivars grown in the southern U.S.

Brazos plants are distinctly shorter than those of other U.S. medium-grain cultivars in both the vegetative and reproductive stages of growth. The average height of Brazos plants at maturity in the Uniform Rice Performance Nursery in the four-state area during the period 1971-1973 was 99 cm, compared with 122, 109, 112, and 114 for Nato, Vista, Saturn, and Nova 66, respectively. The period from seeding to maturity for Brazos is slightly longer than for Vista and shorter than for Nato. Brazos is relatively insensitive to photoperiod. Brazos is equal to Vista and superior to Nato and Saturn in lodging resistance and threshes more freely than Vista.

High yield potential is the outstanding characteristic of Brazos. The four-state, 3-year average yield of rough (paddy) rice (12% moisture) for Brazos was 7,312 kg/ha, compared with 5,979, 6,425, and 6,078 for Nato, Vista, Saturn, and Nova 66, respectively. In these trials, the highest yield recorded for Brazos was 9,030 kg/ha at Stoneville, Mississippi, in 1972. Brazos performed well at all locations and appears to have a wide range of adaptability across the southern U.S. rice area. Limited data indicate that the second (ratoon) crop potential of Brazos is less than that of Vista.

Brazos has acceptable milling quality, but the whole-grain milling yields tend to be somewhat lower than those of Nato, Vista, and Saturn and equal to or slightly better than those of Nova 66. In regional trials in the four-state area in 1971-1973, the average whole-grain milling yield of Brazos was 64.7%, compared to 67.1, 67.2, 65.8, and 61.2% for Nato, Vista, Saturn, and Nova 66, respectively. The percent total milled rice was approximately the same for all varieties.

Brazos possesses the cooking and processing qualities required of U.S. medium-grain rice. It is characterized as a low amylase (16 to 19%) - low-gelatinizing temperature (65 to 68 °C) type. It possesses excellent brewing properties.

Brazos is similar to Nato in disease resistance, except that Nato is moderately susceptible to the straighthead disease, whereas Brazos is resistant. Like Nato, Brazos is resistant to races IP 54, 55, and 56 of the sheath blight (Rhizoctonia solani Kühn); moderately susceptible to sheath blight (R. oryzae Cast.); moderately susceptible to stem blight (Sclerotium oryzae B. Kiihn); and moderately resistant to brown spot (Helminthosporium oryzae Kiihn). The initial foundation seed of Brazos contained 44 gold-hull grains per kilogram, as well as a few slightly later and taller plants with typical Brazos grains were noted in the field. These off-types will be eliminated in head rows in breeder seed purification and increase.

Application is not being made for protection under the Plant Variety Protection Act. Breeder and foundation seed of Brazos will be maintained by the Texas A&M Univ. Agric. Res. and Ext. Cen. at Beaumont, Texas. Other information has been published.

REGISTRATION OF M5 RICE
(Reg. No. 44)


'M5' rice (Oryza sativa L.), CI 9964 is a composite of two similar pure line mutations (experimental numbers S-6001-16) which came from the variety 'CS-M3'. This variety has been described and is grown extensively in California. M5 was released jointly by the Calif. Co-op. Rice Res. Found., Inc., the Calif. Agric. Exp. Stn., and the ARS-USDA. It was approved for certification by the Calif. Co-op. Rice Res. Found., Inc., the Calif. Agric. Exp. Stn., and the ARS-USDA, in cooperation with the Texas Agric. Exp. Stn. and the ARS-USDA. It was released jointly by the Calif. Co-op. Rice Res. Found., Inc., the Calif. Agric. Exp. Stn., and the ARS-USDA, in cooperation with the Texas Agric. Exp. Stn.; and the Calif. Crop Imp. Assoc. Received July 12, 1975.

M5 is a medium-grain variety. It has glabrous lemma, palea, and leaf blade except that some hairs are present on the keel and on the margins of the leaf blade. No panicles show anthocyanin pigmentation. M5 is 10 to 12 days earlier in maturity than 'Colusa', but is intermediate in maturity, is expected to replace a portion of the acreage of 'Calrose' and not significantly different from CS-M3. M5, being 10 to 12 days earlier than 'Colusa', and not significantly different from CS-M3, the parent variety has been described.

M5 is a medium-grain variety. It has glabrous lemma, palea, and leaf blade except that some hairs are present on the keel and on the margins of the leaf blade. M5 is similar to CS-M3 in many respects, except that it is taller, has a wider leaf blade, and has a purple apiculus. Also, a few slightly later and taller plants with typical M5 grains were noted in the field. These off-types will be eliminated in head rows in breeder seed purification and increase.

Grains of M5, like those of CS-M3, average 25 to 26 g/l,000 paddy rice seed. The average moisture content is 12.5% for M5, compared with 12.9% for CS-M3. M5 averages 26 to 27 g/l,000 whole-grain rice seed, compared with 24 to 26 g/l,000 for CS-M3. M5, being 10 to 12 days earlier than 'Colusa', is similar to CS-M3 in taste and cooking characteristics. M5 has a higher percentage of amylose and the alkali reaction for M5 averaged 6.5 and 3.0 mm, respectively. M5 is a medium-grain variety. It has glabrous lemma, palea, and leaf blade except that some hairs are present on the lemma and leaf blade. M5 is similar to CS-M3 in taste and cooking characteristics. M5 has a higher percentage of amylose and the alkali reaction for M5 averaged 6.5 and 3.0 mm, respectively.

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