strains. With N applications of 168 kg/ha, yields of LAII0 averaged 16% higher than yields of TN-1 in preliminary tests conducted over the period 1973-78, was not significantly higher than that of TN-1 grown in the same tests. Louisiana tests seeded 8 May 1976 and 22 Apr. 1978 and fertilized at 146-73-73 and 168-67-67 kg/ha rates, respectively, resulted in rough rice yields of 9,400 and 8,300 kg/ha for LA 110. Yields of 10,050 and 9,160 kg/ha were observed for LA 110 by Wells et al. at a 194 kg/ha N application rate in 1974 and 1975, respectively.

LA 110 is resistant to all races of the blast fungus (incited by *Pyricularia oryzae* Cav.) known to occur in the United States at the present time, whereas TN-1 is susceptible to IB-4, IB-1, and IB-5. It is susceptible to stem rot (incited by *Sclerotium oryzae* Catt.) and the "straighthead" disease, and moderately susceptible to sheath blight (incited by *Rhizoctonia solani* Kuhn) and brown leaf spot (incited by *Helminthosporium oryzae* Re de Haan), but resistant to narrow brown leaf spot (incited by *Cercospora oryzae* Miyake) and leaf smut (incited by *Entyloma oryzae* Syd.). Reactions of LA 110 and other U.S. cultivars to major rice diseases occurring in Louisiana have been published.1

Growers should note that although LA 110 does not shatter as does red rice, its volatilizing and germination behavior is very similar to that of red rice under field conditions. In contrast to most domestic rice cultivars, LA 110 has been observed to volunteer persistently for as long as 3 years in fields previously planted to breeder or foundation seed. Accordingly, growers should plan to follow fields used for LA 110 production before planting another rice cultivar for pure seed production on the same land. LA 110 has been found suitable for brewing purposes in tests by major companies using rice in their product.

Breeder and foundation seed of LA 110 is maintained by the Louisiana Rice Research Foundation, Inc., at the Rice Experiment Station, Crowley. Application is not being made for protection of LA 110 under the plant Variety Protection Act.

REGISTRATION OF CROP CULTIVARS

(Leg. No. 51)

S. T. Tseng, H. L. Carnahan, G. W. Johnson, and D. M. Brandon

"L-201" long grain rice (*Oryza sativa* L.), CI 9971, designated experimentally as 77-Y-46, was developed by the California Cooperative Rice Research Foundation, Inc., at the Rice Experiment Station at Biggs, Calif. It is a pure-line selection from the cross 'Belle Patna'//CI 9184-1 // R48-257//R50-11. F, plants from the first and second crosses were used for making the second and third crosses, respectively. All of the immediate parent strains are long grain rices. CI 9701 is an unnamed selection from the cross 'Belle Patna'//CI 9187 developed at Stuttgart, Ark., while the other parents were developed at the Rice Experiment Station at Biggs. R154-1 is a stiffstrawed, semidwarf selection from the cross 'IR8'//2//R1-7 that has lower amylose content than the typical U.S. long grain cultivars. R48-257 is a tall, large-seeded experimental from the cross CI 9701/3/CI 9702. C 9702//R50-11 is a very tall, weak-strawed experimental from the cross CI 9425-2//PI 275453, which has higher content of amylose starch than do the typical U.S. long grain cultivars. CI 9425-2 is a very short, long grain developed by Haan, La. from the cross 'Reeho'//Red//Un-known. PI 275453 is an introduction from Italy.

L-201 is the first long grain rice cultivar to be released for commercial cultivation in California. The designation "L-201" indicates that it has long grains (L), is early maturing (2) and is the first cultivar (0) released in this series. L-201 is not sensitive to photoperiod. It is 8 to 10 days earlier than the long grain rice 72/3794 (CI 11032) which was released as germplasm in 1977 and which is being grown commercially on a limited acreage in California. L-201 plants average about 20 cm shorter and have more erect and darker green leaves than CI 11032; they averaged 96 cm in height, compared to 91 cm for the semidwarf cultivar, 'MO'. L-201 plants are awnless, have glabrous leaves and hulls, and have anthocyanin pigmentation only in the apiculus of the grains. Seeds of L-201 are similar in size to those of CI 11032. Rough rice grains averaged 26.4 mg each in weight, 9.7 mm in length, and 2.5 mm in width compared to 29.6 and 2.6 mm for CI 11032. Brown rice kernels of L-201 averaged 7.5 mm long and 2.2 mm wide compared to 7.3 and 2.2 mm for CI 11032. The seed coat (bran) color of L-201 is light brown, the same as for other California rice cultivars.

L-201 has colorless, non-glutinous, non-aromatic endosperm with amylose starch content of 22.0 to 24.7%, as determined at the University of California at Berkeley. The kernels of L-201 have intermediate to low starch gelatinization temperature as indicated by the alkali reaction of 4 to 6 when tested in a 1.7% KOH solution. White rice of L-201 grown in California cooks slightly less firm than that of southern grown, long grain cultivars, but is similar to that of the current California long grain rice 72/3794.2

Seedlings of L-201 emerge less vigorously in flooded fields than do most of the current California cultivars. However, L-201 seedlings are more vigorous in California tests than are most long grain cultivars from southern states. L-201 plants have shown moderate tolerance to sterility induced by cool temperatures at the microsporogenesis stage (about 2 weeks before heading). They were rated similar to those of the California short grain rice cultivar '56' in several tests for blanking tolerance.

L-201 averaged 8,550 kg/ha compared to 8,440 kg/ha at 12% moisture for the semidwarf medium grain M9 in 10 replicated combine-size-plot, state-wide yield tests conducted in 1977 and 1978. Days from heading to maturity are about 7 less for L-201 than for the current medium and short grain cultivars in California. L-201 is similar to the California semidwarf cultivars in lodging resistance. It threshes easier than other California cultivars. To enhance head rice (whole kernel) milling yields, it should be harvested at 23 to 25% moisture. Reaction of L-201 to the stem rot fungus (*Sclerotium oryzae* Catt.) is similar to that of current California cultivars. L-201 appears to be adapted to the warmer California rice growing areas with the possible exception of areas which have highly saline and/or high pH and low Zn soils.

L-201 was released jointly by the California Cooperative Rice

REGISTRATION OF 'L-201' RICE

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2 Respectively, research agronomist, AR, SEA, USDA, Crowley, La. 70526; collaborator, AR, SEA, USDA, and consulting professor, Louisiana State Univ., Crowley; assistant professors, Louisiana State Univ. Rice Exp. Station, Crowley; research plant pathologist, AR, SEA, USDA, Beaumont, TX 77706.


8 Plant breeder, Director of plant breeding, and plant breeder, California Coop. Rice Res. Found., Inc., Biggs CA 95917; and formerly extension agronomist, Dep. of Agronomy and Range Science, Univ. of California. Certified collaborator, Rice Exp. Stn., Louisiana State Univ., P.O. Box 1429, Crowley, LA 70526.

