REGISTRATION OF 'CALMOCHI-201' RICE1
(Reg. No. 82)

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'CALMOCHI-201' rice (Oryza sativa L.), CI 9721, was designated experimentally as S-8157-101 and as 77-Y-25. Calmochi-201 was one of three waxy endosperm mutants identified in 1975 from an examination of 2,000 X2 generation panicles following radiation of seed of the non-waxy cultivar, 'S6' with Cobalt-60. The germplasm was collected from old turf areas in the eastern United States. Published September, 1979

Plants of Calmochi-201 resemble those of the S6 parent; they are tall and have short grain shape, glabrous leaves and hulls (except for pubescence on leaf blade margins and on the lemma keel bow), are white non-aromatic endosperm, and have no anthocyanin pigments in any plant part, are early maturing and moderately tolerant to the stem rot fungus (incited by Sclerotium oryzae Catt.). Calmochi-201, like S6, also has white non-aromatic endosperm, is non-sensitive to photoperiod, and has rather non-synchronous heading. Starch of Calmochi-201 kernels has a low gelatinization temperature, as indicated by an alkali reaction of 6.8 to 6.5 in 1.7% KOH. Physicochemical characteristics determined at the Cooperative Rice Quality Laboratory at Beaumont, Tex., indicated that Calmochi-201 is comparable to commercial California waxy rice.

The primary difference between Calmochi-201 and S6 is that the new cultivar has waxy endosperm which contains 98 to 100% amylopectin whereas the starch of the non-waxy endosperm of S6 contains 18 to 21% amylopectin. Individual seed weight of Calmochi-201 averages 24.8 mg compared to 28.0 for S6. This reduced seed weight of the waxy endosperm mutant agreed with a previous study involving isogenic materials. The reduced seed weight appears to be the basis for the slightly reduced average grain yield for Calmochi-201 (6,940 kg/ha) compared to that of S6 (7,400 kg/ha) at 12% moisture in six replicated state-wide tests conducted cooperatively with the University of California Cooperative Extension Service in 1977 and 1978. Both averaged 99 days from seeding to 50% heading. Comparative values for other characteristics of Calmochi-201 and S6, respectively, were 4.4 and 4.6 in rating for seedling vigor (1 = very poor to 5 = excellent), 58 and 75% lodging, and 110 and 114 cm in plant height. Calmochi-201 appears to be adapted to those areas in California where S6 is grown successfully. Like S6, it is not as resistant to low-temperature-induced sterility as the semidwarf cultivars 'M7' and 'Calrose 76'.

Calmochi-201 was released jointly by the California Co-operative Rice Research Foundation, Inc., the California Agricultural Research Foundation, Inc., the California Agricultural Experiment Station, and AR-SEA-USD. It was approved for certi-
fication by the California Crop Improvement Association in 1979. Application for plant variety protection of L-201 is not being made.

Calmochi-201. Classes of seed are Breeder, Foundation, Regis-
tered, and Certified. Foundation seed was allocated to growers in 1979. No further production of basic seedstocks is planned since Calmochi-201 is considered an interim cultivar until seed of a short stature, waxy cultivar can be multiplied for release.

REGISTRATION OF MATON RYE1
(Reg. No. 8)

Richard P. Bates2

'MATON' rye (Secale cereale L.) CI 521, was developed at the Noble Foundation, Ardmore, Okla. It was tested as strain NF22. Joint release was made in January 1976 by the Noble Foundation and the Oklahoma Agricultural Experi-
mentation Station. The Oklahoma Foundation Seed Stocks, Inc. and Oklahoma Crop Improvement Association are increasing seed and maintain-
inng purity of Maton.

The name is derived from the first letter of the states and agencies that cooperated in the development and testing of this cultivar: (M -- Missouri; A -- Arkansas and Alabama; O -- Ohio; T -- Texas and Tennessee; O -- Oklahoma; and N -- Noble Foundation). This rye was also tested in Florida, but is not repre-
sented in the table.

MATON originated from a single plant selection made in 1968 from a space-planted F3 population of Tcnn 4906.2. This plant was outstanding in early forage production, freedom from diseases, winterhardiness, heavy tillering, total forage produc-
tion, and seed production. During the 1968-69 season, F3 plants were evaluated in a progeny row test. The same characteristics listed above were exhibited. The F4 generation was evaluated in a progeny row test and also included in a replicated forage and grain yield test during the 1969-70 season. It has been tested in a replicated forage and grain yield test for the last 6 years at Ardmore, Okla.

Total annual forage production, fall and winter forage produ-
tion, spring forage production, and grain production were 105, 106, 110, and 101% of 'Bonel' rye, respectively. MATON combines superior early forage production and increased total forage yield along with equal or superior late forage produc-
tion. It offers increased grain yields and improved disease toler-
ance, particularly to leaf rust (incited by Puccinia recondita Rob. ex Desm.), septoria leaf blotch (incited by Septoria tritici Rob. ex Desm.), and anthracnose (incited by Colletotrichum graminicola (Ces.) Wilson). It is slightly superior to Bonel in winterhardiness and lodging, but slightly lighter in test weight as recorded in Missouri. It appears to be better adapted to southern Oklahoma, Arkansas, Alabama, and Missouri than Bonel. Information on tour performance and characteristics of MATON have been published.

Breeder's seed, F0 generation, was used in the fall of 1975 by the Oklahoma Foundation Seed Stocks, Inc. to start the produc-
tion of foundation seed. This agency will maintain a supply of breeder's seed.

1 Registered by the Crop Sci. Soc. Am. Accepted 22 June 1979.

REGISTRATION OF OMEGA PERENNIAL RYEGRASS1
(Reg. No. 57)

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'OMEGA' perennial ryegrass (Lolium perenne L.) is a turf-
type cultivar developed by Turf-Seed, Inc., from germplasm obtained from the New Jersey Agric. Exp. Stn. The germplasm was collected from old turf areas in the eastern United States.

1 Registered by the Crop Sci. Soc. Am. Accepted 22 June 1979.