alternative cultivar to both M-101 and M-202 in the very coldest rice production areas and for late plantings in the warmer areas.

The 1986 M-103 panicle rows from the 1985–1986 winter nursery were uniform for short height and very early maturity. The 1988 foundation field contained 0.21% off-types that were rogued. Major off-types were glabrous medium-grains that were taller, later, and had more erect and flatter flag leaves than M-103. These particular off-types were also segregating for pink apiculus. A few off-types were taller and later pubescent medium-grains, and smooth long-grains with a pink apiculus; these off-types were the result of outcrossing and undetected rogues in the Hawaii winter nursery. The 1988 breeder seed planted in the foundation seed field was relatively free of these off-types. The 360 headrows produced in 1988 expressed uniform heading and maturity except for four taller and later rows that were removed.

Classes of seed will be breeder, foundation, registered, and certified, to be produced in California. Foundation seed can be used to produce foundation seed when necessary. Application is being made for protection of M-103 under the Plant Variety Protection Act, Title V. Headrow seed will be produced as necessary for breeder seed. Breeder and foundation seed will be maintained by the California Cooperative Rice Research Foundation, Inc., P.O. Box 306, Biggs, CA 95917.


References and Notes

4. C.W. Johnson, H.L. Carnahan, S.T. Tseng, J.J. Oster, and K.S. McKenzie, California Cooperative Rice Res. Found. (CCRRF), Biggs, CA 95917; J.E. Hill, Dep. of Agronomy and Range Science, Univ. of California, Davis, CA 95616; J.N. Rutger, Mid South Area, USDA-ARS, Stoneville, MS 38776; and D.M. Brandon, Experiment Station, CCRRF, Biggs, CA 95917. Registration by CSSA. Accepted 31 Dec. 1989. *Corresponding author.


REGISTRATION OF 'QUIRIEGO 88' SAFFLOWER

'QUIRIEGO 88' SAFFLOWER (Carthamus tinctorius L.) (Reg. no. 16, PI 537110) was developed at the Northwest Agriculture Research Center (CIANO), Yaqui Valley Agricultural Experiment Center, Cd. Obregon, Sonora, Mexico. It is a segregating population managed by the pedigree method of selection. Seed of the selected F_2-derived lines from the F_3 generation and tested in regional and national yield trials from 1985 to 1988. It was tested in several locations in the states of Baja California, Chihuahua, Jalisco, Nuevo Leon, Sinaloa, Sonora, and Tamaulipas.

Quiriego 88 is intermediate in flowering and maturing, with moderate resistance to alternaria leaf spot and rust (Alternaria carthami Chow.) and rust component, which is susceptible to both diseases. The flowers are yellow in the bud, full bloom, and wilt stages. Plants of Quiriego 88 have spines on the tip and along the margins of the leaves and involucral bracts. The involucral bracts are short, averaging 3.6 cm long and 1.3 cm wide. The average head diameter is 2.8 cm. Quiriego 88 plants mature about 3 d later in flowering and maturity than Gila in the Yaqui Valley of Sonora, the average number of days to maturity is 145. Mature plants average 5 cm taller than Gila under irrigated conditions.

Seeds of Quiriego 88 have a smooth white hull. The seed size is slightly larger than Gila, averaging 7 mm long and 4 mm wide. The test weight of Quiriego 88 averaged 516 g/L for Gila in tests conducted at Cd. Obregon and Navojoa over a 3-yr period.

Compared to Gila, Quiriego 88 has improved oil yield and meal protein content. Quiriego 88 averaged 35.4% compared to 25.0% for Gila in tests conducted at Cd. Obregon.

Seed of Quiriego 88 was distributed to seed-producing organizations in Sonora in 1989. Breeder seed is maintained by CIANO, Apartado Postal 515, Cd. Obregon, Sonora, Mexico. Additional information on the yield and characteristics of Quiriego 88 has been published.

G.L.C. MUSA* AND V.S. MUNOZ (4).

References and Notes