selection from the cross 'Northrose'/Zenith', is a high yielding, blight resistant, stiff-strawed, true-breeding short-statured grain cultivar developed in the cooperative program at Stuttgart, Ark. It emerged from an inheritance study by Atkins and Johnston (1965). Zenith was described by Johnston (1958), and Northrose by Johnston and Henry (1965). Saturn is an important high yielding cultivar developed and grown in Louisiana (Jodon, 1965). It possesses considerable resistance to blast disease, but has inherently weak straw when grown under moderately high levels of N-fertilization.

The cross from which Mars was derived as an F$_4$ selection was made at the University of Arkansas Rice Branch Experiment Station at Stuttgart in 1965 (Cross No. 65Slla). Early testing was made under the experimental designation Stg 70M7857 (1970 Stuttgart row M7857). Some information on Mars has been published (Anon. 1978; Wells and Shockley, 1978).

Mars has shorter straw and possesses considerably more lodging resistance than either parent or other adapted medium-grain cultivars including 'Nato', Saturn, and 'Brazez'. Plants of Mars also have narrower, more erect, and darker green leaves than other adapted medium-grain cultivars. Mars averages 15 to 18 cm shorter in plant height than Nato, 5 cm shorter than 'Nova 76' and taller than 'Saturn' by an average of 5 cm taller than the upright yellowing Brazez. Mars averages 4 days later than Brazez in days from seeding to heading but 3 and 5 days earlier than Nova 76 and Nato, respectively.

In numerous cooperative performance trials over a 5-year period, Mars exhibited the ability to produce grain (rough rice) yields about equal to those of the high yielding cultivars 'Saturn' and Nato; slightly longer grains; pink to purple coloration on apiculus; and Nato, respectively. The spikelet of Mars is straw-colored, glabrous, awnless, and the apiculus is colorless.

The original release of Mars contained a trace or sprinkling of off-type plants with the following characteristics: early and tall; pubescent plant parts; later and taller plants resembling Nato; slightly longer grain; pink to purple coloration on apiculus, etc., and (or) husk and glumes (bracts). In subsequent production of breeder seed, careful hand picking of seed and severe roguing of seed increase fields are being used to eliminate all possible off-types.

Breeder and foundation seed of Mars will be maintained at the University of Arkansas Rice Branch Experiment Station, P. O. Box 351, Stuttgart, AR 72160. Application is not being made for protection of Mars under the Plant Variety Protection Act.

REFERENCES


REGISTRATION OF LA 110 RICE

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‘LA 110’ rice (Oryza sativa L.), Gi 9962, is a midseason maturity, high yielding, semidwarf, pubescent cultivar selected from the cross ‘Taichung (Native) No. 1’/H4 made in 1965 at the Louisiana Rice Experiment Station. It was officially released 15 May 1976. Taichung (Native) No. 1 (TN-1) is a high yielding, semidwarf, pubescent cultivar with medium grain length. It was introduced into the United States from Taiwan. H4 is a tall, pubescent, medium-grain introduction from Sri Lanka having superior blast resistance.

LA 110 does not meet typical milling or cooking quality standards for rice cultivars grown in the United States due to chalkiness and high percent amylose of grain endosperm. The intended use of LA 110 is solely for industrial purposes, primarily as brewers' rice to be grown under contract. Additional information on LA 110 has been published.

Spikelets of LA 110 are pubescent and generally awnless, although tipawns are not uncommon. The apiculus lacks pigmentation and the lemma and palea are typically straw-colored. LA 110 is susceptible to lodging at plant maturity. Grain dimensions of LA 110 are very similar to those of ‘Saturn’. The average length and width of LA 110 rough rice grains are 8.0 and 3.1 mm, compared to 7.2 and 3.1 mm for TN-1.

Brown rice kernels of LA 110 and TN-1 average 5.8 and 5.4 mm in length, and 2.7 and 2.6 mm in width, respectively. Endosperm of LA 110 is non-glutinous and non-aromatic. Amylose values for LA 110 average about 20%, and alkali reactions of milled kernels in 1.7% KOH indicate a low gelatinizing temperature for the starch, as is typical of U.S. medium-grain cultivars.

LA 110 averaged 89 days from seeding to heading as compared to 87 and 95 days for Saturn and TN-1, respectively, in 1974-78 tests seeded late in March or early April. Late April-early May and late May-early June seedings resulted in 10- to 14-day reductions in the heading to harvest period of LA 110. LA 101 and TN-1 averaged 141 and 144 days from seeding to harvest, respectively, for 10 to 15 April seedings, and 137 and 130 days for late April-early May and late May-early June seedings in the same 1974-78 tests. LA 110 is not sensitive to photoperiod.

Average height of LA 110 is 89 cm as measured to panicle tip plant maturity or approximately the same as that of TN-1. Leaves of LA 110 are relatively narrow, upright at heading and maturity, and extend well above the panicle tips at plant maturity. Like TN-1, LA is susceptible to lodging under conditions of heavy fertilization if adverse weather occurs near plant maturity.

LA 110 is outstanding in yielding ability, having consistently ranked high among entries in recent yield trials of short stature.