REGISTRATION OF Mp313E PARENTAL LINE OF MAIZE

Mp313E (Reg. no. PL-150, PI 539859) is a white dent maize (Zea mays L.) inbred released jointly by the USDA-ARS and the Mississippi Agricultural and Forestry Experiment Station in 1988. It was released primarily as a source of resistance to kernel infection by Aspergillus flavus Link ex Fr.

Mp313E was developed by direct selfing for eight generations in ‘Tuxpan’. Mp313E was identified as resistant to kernel infection by the fungus A. flavus, which produces aflatoxin in corn. During a 3-yr period of testing, using a pinbar inoculation technique (1) to enhance kernel infection by A. flavus, Mp313E averaged 7% kernel infection compared with an average of 31% for five susceptible inbreds (2).

Mp313E is resistant to maize chlorotic dwarf virus and has a low to intermediate level of resistance to maize dwarf mosaic virus. This inbred also has resistance to Race O of Bipolaris maydis.

Mp313E is a tall inbred with relatively high ear placement on the stalk. It is late in maturity, AES1200 or later. Mp313E has white kernels and white cobs. This inbred has long, tight husks, which undoubtedly contributes to resistance to corn earworm, Heliothis zea. Based on data from diallel crosses, Mp313E has good general combining ability for yield.

Seeds are available to plant breeders in the Agronomy Department, P.O. Box 39762, Mississippi State, MS 39762. The USDA has no seed.

Gene E. Scott* and Nathale Zummo (3)

References and Notes

3. USDA-ARS Crop Sci. Res. Lab., P.O. Box 5248, Mississippi State, MS 39762. Contribution of USDA-ARS in cooperation with the Agric. and Forestry Exp. Stn., and published in cooperation with the Mississippi Agric. and Forestry Exp. Stn. Registration 1441 was joined on 31 Mar. 1990. *Corresponding author.

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REGISTRATION OF ICMA 841 AND ICMB 841 PEARL MILLET PARENTAL LINES WITH A1 CYTOPLASMIC-GENIC MALE STERILITY SYSTEM

One pair of A (male sterile) and B (maintainer) lines of pearl millet [Pennisetum glaucum (L.) R. Br.], with the A1 cytoplasmic-genic male sterility system, was made available in 1987 as seed parents for the production of hybrids throughout India. The lines are designated as ICMA 841 and ICMB 841 (Reg. no. PL-18; PI 537587); they were previously tested as 841A and 841B. They carry high levels of resistance throughout India. The lines are designated as ICMA 841 and ICMB 841 have medium height (140-180 cm), moderate tillering (2-5 tillers/plant), resistance to downy mildew caused by Sclerospora graminicola (Sacc.) Schroet. The A line, being medium in height, can give evidence of 48%, with a range of 17 to 92% across the tests. In comparison, the susceptible check (NHB-3) had a mean downy-mildew incidence of 0 to 9% across the tests. In addition, ICMA 841 and ICMB 841 were tested in the All India Coordinated Millets Improvement Project (AICMIP) trials for 2 yr, during the 1984 (seven locations) and 1986 (three locations) rainy seasons. These lines did not develop downy mildew sick-plot conditions.

Test hybrids made with ICMA 841 mature 4 to 6 d later than those made with 5141A, and are long, with medium height (140-180 cm), moderate tillering (2-5 tillers/plant), resistance to downy mildew caused by Sclerospora graminicola (Sacc.) Schroet. The A line, being medium in height, can give evidence of 48%, with a range of 17 to 92% across the tests. In comparison, the susceptible check (NHB-3) had a mean downy-mildew incidence of 0 to 9% across the tests. In addition, ICMA 841 and ICMB 841 were tested in the All India Coordinated Millets Improvement Project (AICMIP) trials for 2 yr, during the 1984 (seven locations) and 1986 (three locations) rainy seasons. These lines did not develop downy mildew sick-plot conditions.

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