REGISTRATION OF PARENTAL LINES

REGISTRATION OF SD101 PARENTAL LINE
OF MAIZE

SD101 (Reg. no. PL-130, PI 533658) is a yellow flint/dent maize (Zea mays L.) parental line developed at the Agricultural Experiment Station, South Dakota State University, Brookings. This line was evaluated for agronomic performance and in hybrid combinations for yield and moisture. SD101 was released in March 1987 because of its resistance to northern corn leaf blight [caused by Exserohilum turcicum (Berk.) Sacc.] and its potential to produce competitive hybrids for central and southern South Dakota.

SD101 supported an average of only 540 lesion nematodes (P. hexincisus) per gram dry root in greenhouse tests and 598 in field tests. These nematode populations were significantly lower (P = 0.05) than the susceptible checks SD45 and SD47, which supported 4643 and 2113 lesion nematodes (P. hexincisus) per gram dry root in the greenhouse tests and 5601 and 3943, respectively in the field. In separate tests, SD101 was found to support only 799 lesion nematodes (P. scribneri) per gram dry root at 81 d in irrigated trials and 894 at 127 d. These populations were significantly lower (P = 0.05) than the susceptible checks SD45 and A619Ht, which supported 9742 and 7209 lesion nematodes (P. scribneri), respectively at 81 d and 4732 and 4741 at 127 d (1).

SD101 was derived by selfing an individual plant from a cross of the inbred line CM65 by an unreleased line related to SD37. Selfing was practiced for 10 generations with selection for desirable plant, ear, and root traits. The maturity of SD101 is intermediate to late. In 5 yr of evaluation at Brookings, it flowered 3 d after A632, 5 d after A619, 10 d after CM105, and 7 d after A654. This line is AES400.

Plants are approximately 137 cm tall with ear placement approximately 60 cm above the ground. Plants are dark green in appearance and have small tassels and red cobs. Ear length is about 19 cm, and ears are borne on 5 cm shanks. Ears have 14 to 18 rows of medium-sized kernels/cob. Moisture content of the seed generally has been about 19% at 60 d after pollination. The line has good stay green, ear fill, stalk and root strength, average husk looseness, and excellent ear length. The only publicly released parental line with resistance to P. hexincisus and P. scribneri in corn inbreds. AES400.

References and Notes

1. J.D. Smolik, and Z.W. Wicks, III. 1987. Registration of SD101 parental line resistant to northern corn leaf blight (P. hexincisus) and their ability to produce competitive hybrids for central and southern South Dakota. CROP SCIENCE, 27:709-710.


REGISTRATION OF SD102 AND SD103 PARENTAL LINES OF MAIZE

SD102 (Reg. no. PL-131, PI 533659) and SD103 (Reg. no. PL-132, PI 533660) are yellow dent maize parental sister lines developed at the Agricultural Experiment Station, South Dakota State University Foundation Seed, Box 2125, Brookings, SD 57007.

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References and Notes

1. J.D. Smolik, and Z.W. Wicks, III. 1987. Registration of SD101 parental line resistant to northern corn leaf blight (P. hexincisus) and their ability to produce competitive hybrids for central and southern South Dakota. CROP SCIENCE, 27:709-710.