REGISTRATION OF SD42 PARENTAL LINE OF MAIZE

SD42 (Reg. no. PL-95) (PI 508277) is a yellow 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. SD42 was released in March 1986, because of its potential to produce competitive hybrids for central and southern South Dakota.

SD42 was derived by selfing an individual plant of the cross SDP232 × H96. Selfing was practiced for 10 generations with selection for desirable plant, ear, and root types. SD42 was evaluated for 5 yr at Brookings, and as a line, would be considered intermediate to late flowering because it silked 2 days after A632, 5 days after A619, and 8 days after CM105 and A654.

At Brookings, plants are approximately 1.50 m tall with ear placement about 0.85 m from the ground. It is dark green in appearance and has average (10 cm) width leaves, average to large tassels, and a red cob. Ear length is about 15 cm and ears are borne on 18-cm shanks. There are 16 to 18 rows of medium-sized kernels on each cob. Moisture content of the seed generally has averaged 18%, 60 days after pollination. It has good vigor, average ear fill, good to excellent stalk strength, average stay green, very loose husks, stiff stalks, and average root strength. It combines well with A632 producing a 5-yr average of 6.72 Mg ha⁻¹, compared to 7.10 Mg ha⁻¹ for Pioneer 3901 and 6.33 Mg ha⁻¹ for Pioneer 3732 when tested at Brookings. Full location and year data are available on request.

Corn borer (Ostrinia nubilalis Hübner) resistance ratings on a 1 to 9 scale averaged 3.33 in trials conducted in 1984 and 1986. SD42 has good resistance to northern corn leaf blight [caused by Exserohilum turcicum (Pass.) Leonard & Suggs] and resistance to Diplobia stalk rot [caused by Diplodia maydis (Berk.) Sacc.]. Breeder seedstocks are maintained by South Dakota Foundation Seeds and can be obtained in germplasm quantities (50 kernels) from South Dakota State University Foundation Seed, Box 2125, Brookings, SD 57007.

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References and Notes


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