Registration of N209 and N215, Two Parental Inbred Lines of Maize

Inbreds N209 (Reg. no. PL-286, PI 595366) and N215 (Reg. no. PL-287, PI 595367) are yellow dent maize (Zea mays L.) lines developed by the Nebraska Agricultural Experiment Station. The lines were released by the Nebraska Agricultural Experiment Station on 17 Mar. 1994 based on their potential as parents in hybrid seed production and as germplasm sources to be used in maize breeding programs.

N209 was developed directly from NSS1(6), the sixth cycle of per se selection in the Nebraska Stiff Stalk Synthetic. The original selfed plant from which N209 was derived was one of 10 plants selected to initiate Cycle 7 of line per se selection based on an index of grain yield, root and stalk lodging, and dropped ears. The line was advanced ear-to-row by self-pollination and selected on the basis of testcross performance at each stage of inbreeding. Seed for the line was increased by sib-mating selfed progeny of an 85 plant.

N209 is a medium-short S5 line with a maturity classification of AES 700. Flowering at Lincoln, NE, occurs approximately 1 d earlier than B73. The plant is strong and vigorous, maintaining good plant health late in the season. N209 has a prolific tendency with medium to large ears. Yield of the line is very good, consistent with its derivation from a population improved by selection based on per se performance. The tassel of N209 is relatively small but sheds ample amounts of pollen. The line performs well under dryland conditions. N209 has 16 to 18 kernel rows, yellow kernels, green anthers, colorless silks, and a light red cob. N209 could be used as either a male or female parent in hybrid production.

Although N209 was selected from the Nebraska Stiff Stalk population, it combines well with other Stiff Stalk lines (e.g., N201), as well as non-Stiff Stalk lines (e.g., N197, N198, N203, B97), based on replicated data from trials at Lincoln and Mead, NE, and the NCR AES 700-800 regional test. The yield advantage of hybrids with N209 as a parent was particularly evident under nonirrigated conditions. Hybrids of N209 would be best adapted to southeastern and south-central Nebraska and east toward the central Corn Belt.

N215 was developed directly from NB(S)RF1(5) of reciprocal recurrent selection in the Nebraska Stif Stalk Synthetic. The opposing population in the reciprocal selection was the Nebraska Stiff Stalk synthetic. The original selfed plant from which N215 was derived was one of 10 plants selected to initiate Cycle 6 of full-sib selection based on an index of yield, root and stalk lodging, and dropped ears. The line was advanced ear-to-row by selfing to the S5 generation, with selection based on testcross performance at each stage of inbreeding. Seed for the line was increased by sib-mating selfed progeny of an S5 plant.

N215 has a maturity rating of AES 700, flowering 1 to 2 d earlier than Mo17. The plant is average in height and has medium-sized ears. The tassel of N215 is relatively large and sheds ample amounts of pollen. Ears have 14 kernel rows of yellow kernels and seed yield is good. N215 has green anthers, colorless silks, and a light red cob. N215 is recommended as a male parent in hybrid production.

N215 has performed well in hybrid combinations with lines including B73 and N201. The yield advantage of hybrids with N215 is particularly evident in nonirrigated trials. N215 would be best adapted to southeastern and south-central Nebraska and east toward the central Corn Belt.

Breeder quantities of seed will be maintained by the Department of Agronomy, University of Nebraska-Lincoln, and distributed upon written request. Recipients of seed are asked to make appropriate recognition of the original seed source if these lines are used to develop a new population, parental line, or hybrid.

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References and Notes

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