high root-pulling resistance. Both lines perform well in testcrosses with Mo17. Yields are equivalent to B73 × Mo17, and grain moisture at harvest is approximately 40 g kg⁻¹ lower as measured in trials conducted over 4 yr at four locations in Wisconsin.

Inbred W576 (previously designated W17D-282-3) was developed from a Mo17 composite population from Missouri after eight generations of selfing with selection for desirable plant and ear traits. Evaluation in hybrid combinations was initiated at the S₃ generation. Silking date is about 2 d later than Mo17, and maturity classification is AES700–800. Inbred W576 was evaluated in the 1985 NCR-2 uniform test of inbred lines and had good resistance to southern corn leaf blight and Diplodia stalk rot [caused by Diplodia maydis (Berk.) Sacc.]. In testcross evaluations conducted over 1985 and 1986 at three locations in Wisconsin, W576 combined well with A665 and A632. Ear and plant heights are above average, and W576 should be crossed with inbreds possessing strong stalks.

Supporting data from field evaluations are available upon request. Breeder seedstocks will be maintained and distributed in germplasm quantities (50 kernels) by the Department of Agronomy, University of Wisconsin, Madison, WI 53706. It is requested that appropriate recognition of the source be given when these lines contribute to the development of new germplasm.

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References and Notes
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REGISTRATION OF NC264 PARENTAL LINE OF MAIZE

NC264 (Reg. no. PL-115) (PI 520774) is a yellow dent maize (Zea mays L.) parental line developed cooperatively by the USDA-ARS and the North Carolina Agricultural Experiment Station. The line was released in February 1987, because of its potential value as a parent of productive hybrids and its resistance to gray leaf spot caused by Cercospora zeae-maydis Tehon and Daniels.

NC264 was developed from a cross between inbred SC276Q and Gaspe Flint. The F₁ was backcrossed to Gaspe Flint once and then backcrossed to SC276Q twice and three times. The approximate inbreeding coefficient of NC264 is 0.48 cm shorter and flowers a week later than its recurrent parent SC276Q. SC276Q (also called SC76) was derived from a cross of inbreds from 'Hastings' and an inbred from 'Manwiller', personal communication.)

In two years of field evaluations in gray leaf spot plots, NC264 has been rated highly resistant as an inbred (rating of 8 on a 1–9 scale where 9 is most resistant) and moderately resistant in hybrid combinations (rating of 4) and A632 (rating of 7) for resistance to gray leaf spot. Resistance genes have not been determined, but NC264 may have resistance genes different from those of NC250 (1). Three years of yield data from three locations in North Carolina showed that the cross (A632 × BHA) × NC264 had grain yield and moisture equal to Pioneer 3369B and about 1.5% less yield and 0.6% more grain moisture at harvest than B73 × Mo17.

NC264 flowers about a day later than SC276Q and combines well with inbreds of Iowa Stiff Stalk origin, such as A632 and B73. NC264 also combines well with inbred of Southern dent origin. Because of its small and large tassel (averages 17 lateral branches), NC264 can be used either as a male or female in hybrid combination. It is a vigorous inbred under North Carolina conditions, averaging 191 cm to tassel tip and 78 cm to ear. NC264 has a strong two-eared tendency. The leaves are wavy, medium green, with chlorotic spotting. It has restorer genes for cms-C and cms-S but not for cms-T. The ears are white-cobbed, averaging 12 cm in length with 14 kernel rows. Maturity classification is AES700. Breeder seed is maintained by the North Carolina Experiment Station and distributed (50 seed per sample) by B.E. Caldwell, Head, Department of Crop Science, North Carolina State University, Box 7620, Raleigh, NC 27695-7620.

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References and Notes

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