REGISTRATION OF PARENTAL LINES

REGISTRATION OF T165 AND T167 PARENTAL LINES OF MAIZE

T165 and T167 (Reg. no. PL-101, PI 511804, and PL-102, PI 511805) are inbred lines of white dent maize (Zea mays L.) developed at the Tennessee Agricultural Experiment Station, University of Tennessee, Knoxville. These lines resulted from an applied breeding project to convert elite yellow dent lines to white dent grain. Both T165 and T167 were evaluated as inbreds and as parents in hybrid yield trials. They were released in February 1987 because of their potential in producing white dent hybrids adapted to the mid-South and southern Corn Belt regions. Germplasm quantities (50 seeds) of T165 and T167 may be obtained from the Department of Plant and Soil Science, University of Tennessee, Knoxville, TN 37901-1071.

T165 was selected from T232 × Ga209 with one backcross to T232. Ear-to-row selection and self-fertilization were used to advance this line to the S<sub>3</sub> generation. Testcrossing was initiated in the S<sub>4</sub> generation. We have rated this line AES 1000 in maturity. Heat units to 50% pollen shed at Knoxville were 1480 for T165 and 1400 for Mo 17. Plants of T165 are compact, with short internodes and green brace roots. There are usually seven leaves above the ear-bearing node, which is midway on the stalk. The tassel has 10 to 12 branches, yellow anthers, and produces ample pollen over a 4-d period. Green silks emerge 1 or 2 d after the onset of pollen shed. T165 produces a medium-sized ear with a white cob and 14 rows of kernels. The grain has a medium dent with a large cap, and often has a pronounced silk scar. The ear is protected by a tight husk that extends past the ear tip. T165 was evaluated for susceptibility to the maize dwarf mosaic virus-strain A (MDMV-A) and maize chlorotic dwarf virus (MCDV) disease complex in johnsongrass [Sorghum halepense (L.) Pers.] infested areas, and was rated slightly lower in resistance than T232. T165 has been tested as a parent in hybrid yield trials and appears to have combining ability for yield.

T167 was selected from Mo17 × CI 66 by ear-to-row selection and self-fertilization for eight generations. This selection was initiated in the S<sub>4</sub> generation. Testcrossing of T167 is AES 1000. Heat units to 50% pollen shed at Knoxville were 1590 and 1400 for T165 and Mo 17, respectively. This line is taller than T165 and Mo17. The plants produce a small tassel with one to two to four branches. Anthers and silks are salmon pink. Silks usually emerge 3 d after the onset of pollen shed, this delay combined with its small tassel delays silk emergence. There are usually six leaves above the ear-bearing node, which is midway on the stalk. The tassel produces a long ear with 12 or 14 rows of kernels. The cob. Kernels are small, rounded, relatively hard, and have a good white color. Plants of T167 deteriorate rapidly soon after maturity as possible. T167 has resistance to the MDMV-A/MCDV disease complex in johnsongrass CI 66. In hybrid yield trials, T167 appears to have good general combining ability for yield. If used in hybrid combination, T167 would probably be unsatisfactory due to its small tassel and poor pollen production.

D. R. West,* D. R. Kincer, L. M. Josephson, and H. C. Kincer (1)

References and Notes


REGISTRATION OF WEBSTER OAT ISOLINES AS PARENTAL LINES

NINE isolines of oat (Avena sativa L.), PI 501535 (Reg. no. PL-27), PI 501536 (Reg. no. PL-28), PI 501537 (Reg. no. PL-29), PI 501538 (Reg. no. PL-30), PI 501539 (Reg. no. PL-31), PI 501540 (Reg. no. PL-32), PI 501541 (Reg. no. PL-33), PI 501542 (Reg. no. PL-34), and PI 501543 (Reg. no. PL-35), were developed by the Iowa Agriculture and Home Economics Experiment Station in cooperation with the Department of Plant and Soil Science, University of Tennessee, Knoxville. These lines resulted from an applied breeding project to convert elite yellow anthers, and produces ample pollen over a 4-d period. Green silks emerge 1 or 2 d after the onset of pollen shed. T165 produces a medium-sized ear with a white cob and 14 rows of kernels. The grain has a medium dent with a large cap, and often has a pronounced silk scar. The ear is protected by a tight husk that extends past the ear tip. T165 was evaluated for susceptibility to the maize dwarf mosaic virus-strain A (MDMV-A) and maize chlorotic dwarf virus (MCDV) disease complex in johnsongrass [Sorghum halepense (L.) Pers.] infested areas, and was rated slightly lower in resistance than T232. T165 has been tested as a parent in hybrid yield trials and appears to have combining ability for yield.

T167 was selected from Mo17 × CI 66 by ear-to-row selection and self-fertilization for eight generations. This selection was initiated in the S<sub>4</sub> generation. Testcrossing of T167 is AES 1000. Heat units to 50% pollen shed at Knoxville were 1590 and 1400 for T165 and Mo 17, respectively. This line is taller than T165 and Mo17. The plants produce a small tassel with one to two to four branches. Anthers and silks are salmon pink. Silks usually emerge 3 d after the onset of pollen shed, this delay combined with its small tassel delays silk emergence. There are usually six leaves above the ear-bearing node, which is midway on the stalk. The tassel produces a long ear with 12 or 14 rows of kernels. The cob. Kernels are small, rounded, relatively hard, and have a good white color. Plants of T167 deteriorate rapidly soon after maturity as possible. T167 has resistance to the MDMV-A/MCDV disease complex in johnsongrass CI 66. In hybrid yield trials, T167 appears to have good general combining ability for yield. If used in hybrid combination, T167 would probably be unsatisfactory due to its small tassel and poor pollen production.

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