REGISTRATION OF SIX GERMPLASM SOURCES OF CEREAL LEAF BEETLE RESISTANT HARD RED SPRING WHEATS
(Reg. No. GP 132 to GP137)

D. H. Smith, Jr., J. A. Webster, and E. H. Everson

The Michigan State Agric. Exp. Stn. and AR-SEA-USDA have developed a group of hard red spring wheats (Triticum aestivum L.) resistant to the cereal leaf beetle, Oulema melanopus (L.). Six highly resistant lines, CI 17832-17837, (Reg. Nos. GP 132-CP 137) inclusive, from four different crosses have been released. Pedigrees of entries included in the germplasm releases are shown in Table 1.

The crosses and backcrosses were made in the greenhouse in 1971 and progeny of the backcrosses were tested in the field in 1973. Heads were selected from beetle-resistant rows in 1974 and tested from 1975–1978. Counts of leaf hairs and oviposition tests made during the winter 1976–77 were used to confirm field reactions and to aid in selecting the elite lines. Oviposition tests in cages in the greenhouse and neither CI 9321, a susceptible check, nor any of the six elite lines had any length and number of the six elite lines are superior to CI 9321 which is highly resistant to the cereal leaf beetle.

Stocks of these germplasm releases will be maintained by AR-SEA-USDA. Limited quantities may be obtained upon written request to the Curator, Grain Collection, Bldg. 046, Agric. Exp. Stn., Beltsville, MD 20705, or Dr. D. H. Smith, Jr., AR-SEA-USDA, or K. J. Starks, Crop and Soil Sciences, Michigan State Univ., respectively, East Lansing, MI 48824.

Registration of Parental Lines

REGISTRATION OF GTS1 AND GTS2 PARENTAL LINES OF MAIZE
(Reg. No. PL 51 and PL 52)

W. W. McMillian, N. W. Widstrom, B. R. Wiseman, and K. J. Starks

Two yellow sweet corn (Zea mays L.) inbred lines, GTS1 and GTS2, were developed cooperatively by AR-SEA-USDA and Georgia Agric. Exp. Stns. The lines were released on 26 Apr. 1979 as breeding lines that perform well in hybrid combination.

GTS1 and GTS2 are yellow counterparts of the previously released white lines 471-U6 and 81-1, respectively. In hybrid combination, they produce a high quality sweet corn with resistance to the corn earworm, Heliothis zea (Boddie). These lines were developed by Dr. D. H. Smith, Jr., AR-SEA-USDA, and professor, Crop and Soil Sciences Dep., Michigan State Univ., respectively, East Lansing, MI 48824.

ND245 is a yellow dent (Zea mays L.) inbred line developed cooperatively by AR-SEA-USDA, Michigan State Agric. Exp. Stn. and AR-SEA-USDA, and Georgia Agric. Exp. Stn. ND245 was selected from (CK98 × ND12Rf) × ND12Rf and 11 days earlier than ND408. ND245 is a medium tall plant with ears borne on the low third of the stalk. Plants have narrow, stiff leaves of intermediate length and number, slender ears borne singly on a short shank. Ears are 14 inches long and are of rather shallow kernels. In the North Central Regional Research Committee (NCR-2) tests in 1978, ND245 was resistant to Northern leaf blight (caused by Helminthosporium maydis (E. F. Smith) Dye), and second brood European corn borer (Ostrinia nubilalis Hubner) and had good root pulling resistance. In diallel tests in eastern North Dakota, ND245 was resistant to Diplodia stalk rot (caused by Diplodia graminicola (Ces.) G. W. Wils.), Sclerospora sorghi (Pers.) H. Z. Crnss, Southern leaf blight (caused by Helminthosporium maydis), and white lines 471-U6 and 81-1, respectively. In hybrid combination, GTS1 and GTS2 are yellow counterparts of the previously released white lines 471-U6 and 81-1, respectively, East Lansing, MI 48824.

Table 1. Data on hard red spring wheats and the cereal leaf beetle compared to CI 9321, a resistant check, in the winter 1976-77.

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<thead>
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<th>Reg. no.</th>
<th>CI no.</th>
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<td>17837</td>
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Research geneticist and research entomologist, AR-SEA-USDA, and professor, Crop and Soil Sciences Dep., Michigan State Univ., respectively, East Lansing, MI 48824.

REGISTRATION OF ND245 PARENTAL LINE OF MAIZE
(Reg. No. PL 53)

H. Z. Cross

ND245 is a yellow dent (Zea mays L.) inbred line developed cooperatively by AR-SEA-USDA, Michigan State Agric. Exp. Stn. and AR-SEA-USDA, and Georgia Agric. Exp. Stn. ND245 was released because it appears to have potential for producing early maturing hybrids with good yields, high test weights and good lodging resistance.

ND245 (Reg. No. PL 53) was selected from a cross of ND12Rf and 11 days earlier than ND408. ND245 is a medium tall plant with ears borne on the low third of the stalk. Plants have narrow, stiff leaves of intermediate length and number, slender ears borne singly on a short shank. Ears are 14 inches long and have rather shallow kernels.