REGISTRATION OF KS78H8209 AND KS78H9233 WHEAT GERMPLASM
(Reg. Nos. GP138 and GP139)
R. W. Livers and T. J. Martin

KS78H8209 (CI 17852) and KS78H9233 (CI 17853) are hard winter wheats (Triticum aestivum L. em Thell.) released as germplasm by the Kansas Agric. Exp. Stn. Both lines are sources of dwarfing genes compatible with genes for long coleoptile development.

KS78H8209 (GP 138) is an increase from a single F2 plant selected from the cross 'Pinnacle'/2*Eagle.' Its height is 89% of Eagle but the coleoptile length is 110% of Eagle. The test weight, grain protein, and maturity are equal to Eagle. It is heterogenous for red and white grain and its spike is awned.

KS78H9233 (GP 139) is an increase from a single F2 plant selected from the cross 'Burt' dwarf mutant 937 (WA5435, CI 15076)/2*Goudveld'/4*Bison.' Its height is 98% of Eagle but the coleoptile length is 110% of Eagle. The test weight, grain protein, and maturity are equal to Eagle. It has white grain and awned spikes.

Both KS78H8209 and KS78H9233 produced more grain than Eagle. Disease and insect reactions are unknown. Winterhardiness is unknown but both lines winter damaged at Hays.

Seed of these lines (15 seed/line) may be obtained from the junior author.

Registration of Parental Lines

REGISTRATION OF ND246 AND ND301 PARENTAL LINES OF MAIZE
(Reg. No. PL54 and PL55)
H. Z. Cross

ND246 and ND301 are yellow dent (Zea mays L.) inbred lines developed at the Agric. Exp. Stn., North Dakota State Univ., Fargo. These lines were evaluated for yield and agronomic performance and in hybrid combinations. ND246 was released because of its apparent potential as a parent to produce early hybrids with good yields, low ear moisture, high test weights, and good stalk and root lodging resistance adapted to central North Dakota. ND301 was released for potential use for producing high yielding hybrids adapted to eastern and southeastern North Dakota.

ND246 (Reg. No. PL 54) was selected from (W755 × W771), a cross of two early Wisconsin experimental inbreds. This line was developed by self-pollination and selection for early silking and agronomic type for seven generations. At Fargo, ND, ND246 silks about 9 days earlier than ND408 and 6 days earlier than ND474. This inbred typically produces a medium height plant with ears borne slightly below the midpoint of the stalk. Plants have narrow leaves of intermediate length and relatively small tassels. Ears are borne singly on short shanks and are long and slender with 10 to 14 rows of rather shallow kernels. In North Central Corn Breeding Research Committee (NCR-2) tests in 1979, ND246 was rated susceptible to Northern leaf blight (caused by Helminthosporium turcicum Pass.), Southern leaf blight (caused by Helminthosporium maydis (Nisik and Miyake)), eyespot (caused by Kabatiella zeae Narita and Hirata), maize dwarf mosaic virus (MDMV), maize chlorotic dwarf virus (MCDV), and the second brood of European corn borer. It had intermediate stalk crushing strength and root pulling resistance. ND246 was rated resistant to wheat streak mosaic virus (WSMV), and the second brood of European corn borer. It was rated susceptible to Diplodia stalk rot [caused by Diplodia maydis (E. F. Smith)], Anthracnose leaf blight [caused by graminicola (Ces) G. W. Wils.], Anthracnose corn leaf spot (caused by Helminthosporium maydis), and first brood of European corn borer. It had high stalk crushing strength and root pulling resistance. ND246 was rated resistant to wheat streak mosaic virus (WSMV) and bacterial leaf blight [caused by Erwinia stercoraria (Dye.)], and had high stalk crushing strength and root pulling resistance. In diallel tests in eastern and central North Dakota, ND246 had demonstrated good general combining ability (GCA) effects for yield and very good GCA effect for ear moisture, and root and stalk lodging resistance. Its maturity classification is AES200.

ND301 (Reg. No. PL 55) is a selection from W673. It was self-pollinated for seven generations for agronomic type during each generation about three days later than ND246. Plants have a slightly lower ear placement than ND246, medium large tassels and wide leaves of intermediate length. Ears of intermediate length and diameter are born singly on short shanks and have 14 to 16 rows of medium length kernels. In the 1979 NCR-2 tests indicated ND301 was intermediate for resistance to Diplodia stalk rot, eyespot, Anthracnose leaf blight and stalk rot and first brood European corn borer. It had intermediate stalk crushing strength and root pulling resistance. ND301 was rated resistant to Northern corn leaf blight, MDMV, MCDV, maize dwarf mosaic virus (MDMV), and the second brood of European corn borer. It had low stalk crushing strength and root pulling resistance. ND301 was rated susceptible to Anthracnose leaf blight and Northern corn leaf spot. In North Dakota, ND301 exhibited high GCA effects for yield and test weight. It produced hybrids with adequate moisture and acceptable levels of root and stalk lodging resistance. ND301 is an early AES300 maturity.

Breeder seed of both lines is maintained in germplasm quan-