REGISTRATION OF KS78H8209 AND KS78H9233 WHEAT GERMPLASM
(Reg. Nos. GP138 and GP139)

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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 *F₀* plant selected from the cross 'Pinnacle'/2*Eagle.' Its height is 89% of Eagle but the coleoptile length is 150% 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 *F₀* plant selected from the cross 'Burt' dwarf mutant (CI 15076)/2*Goudveld'/4*Bison.' Its height is 98% of Eagle but its coleoptile length is 110% of Eagle. The maturity of KS78H9233 is equal Eagle but 98% of Eagle. It has white grain and awned spikes. Both KS78H8209 and KS78H9233 produced slightly less grain than Eagle. Disease and insect reactions are intermediate or unknown. Winterhardiness is unknown but neither line had winter damage at Hays.

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

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 Hiratsu), 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 intermediate in resistance to Diplodia stalk rot [caused by *Diplodia maydis* (Berk.) Sacc.], Anthracnose leaf blight [caused by *Gnomonia graminicola* (Ces.) G. W. Wils.], Anthracnose leaf blight [caused by *Helminthosporium turcicum* Pass.], and first brood European corn borer. It was rated resistant to wheat streak mosaic virus (WSMV) and bacterial leaf blight [caused by *Erwinia stewartii* (Dye.)].

The 1979 NCR-2 tests indicated ND301 is a cross of two early Wisconsin experimental inbreds. ND301 had demonstrated good general combining ability (GCA) effects for yield and very good GCA effects for ear moisture, and root and stalk lodging resistance. ND301 was rated resistant to Southern leaf blight, and second brood European corn borer. It had intermediate stalk crushing strength and root pulling resistance. ND301 was rated resistant to corn leaf blight and Northern corn leaf spot. In diallel tests in eastern and central North Dakota, ND301 exhibited high GCA effects for yield and very good GCA effects for ear moisture, and root and stalk lodging resistance. Classification is AES200.

ND301 (Reg. No. PL 55) is a selection from *W673*. It was self-pollinated for seven generations, and selected for agronomic type during each generation about three days later than ND246. Plants had 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 12 to 16 rows of medium kernels. The 1979 NCR-2 tests indicated ND301 was resistant to Northern corn leaf blight, MDMV, MCDV, leaf blight, and second brood European corn borer. It is intermediate for resistance to Diplodia stalk rot, 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 corn leaf blight and Northern corn leaf spot. In North Dakota, ND301 exhibited high GCA effects for yield and very good GCA effects for ear moisture, and root and stalk lodging resistance. ND301 is an early AES300 maturity class variety.

Breeder seed of both lines is maintained in germplasm lots by the North Dakota State University at Hays.