Registration of Parental Lines

REGISTRATION OF ND257 AND ND258
PARENTAL LINES OF MAIZE

ND257 and ND258 (Reg. no. PL-69 and PL-70) are yellow dent maize (Zea mays L.) inbred lines developed at the Agricultural Experiment Station, North Dakota State University, Fargo, ND. These lines were evaluated for yield and agronomic performance alone and in hybrid combinations. Both inbreds were released in 1985 because of their apparent potential as parents to produce early hybrids with good yields, low grain moisture at harvest, and good resistance to lodging. These inbreds are adapted to short-season areas such as central and eastern North Dakota. Breeder seedstocks are maintained by the North Dakota Agricultural Experiment Station and can be obtained in germplasm quantities (50 kernels) from H. Z. Cross, Agronomy Department, North Dakota State University, Fargo, ND 58105.

ND257 was selected from NDSC derived germplasm, which had received one cycle of selection for high R-nj aleurone color expression using the method previously described (1). ND257 was developed by self-pollinating for eight generations with selection for desirable plant and ear traits. This inbred silks 3 days later than ND246 at Fargo. Plants typically are medium-tall with ears borne slightly above midpoint of the stalk, and have short, wide leaves and medium-sized tassels. Medium-long ears with 14 to 18 rows of medium-depth kernels are borne on short shanks. ND257 is resistant to common rust (caused by Puccinia sorghi Schew.) in North Dakota. In North Central Corn Breeding Research Committee (NCR-2) tests in 1984, ND257 was rated resistant to first generation European corn borer (Os- trinia nubilalis Hubner), maize dwarf mosaic virus (MDMV), and maize chlorotic mottle virus (MCMV). It was rated intermediate for second generation European corn borer, southern leaf blight (caused by Helminthosporium maydis Ni- sik. and Miy.), wheat streak mosaic virus (WSMV), maize chlorotic dwarf virus (MCDV), Goss’s wilt (caused by Cor- ynebacterium nebraskense Schuster et al.), northern leaf spot (caused by Helminthosporium carbonum Ullstrup), anthracnose leaf blight (caused by Colletotrichum graminicolum (Ces.) G. W. Wils.), and root pull resistance. ND257 was rated susceptible to northern leaf blight (caused by Helminthosporium turcicum Pass), Stewart’s wilt (caused by Erwinia ste- wartitii E. F. Smith Dye), corn lethal necrosis (a combination of WSMV or MDMV and corn chlorosis virus), and diplodia stalk rot (caused by Diplodia maydis (Berk. ) Sacc.) in diallel tests in eastern and central North Dakota. ND257 has been- dianed in nurseries at Texas Agricultural Experiment Station, College Station, Beeville, and Thrall, TX, and Isabela, PR.

REGISTRATION OF RTx435 SORGHUM
PARENTAL LINE

RTx435 sorghum (Sorghum bicolor (L.) Moench) (Reg. no. PL-143) parental line was developed and released by Texas Agricultural Experiment Station, College Station, TX, in 1985. The pollinator RTx435 was from an intentional cross between RTx430, a widely used male, and breeding line 77CS1 and was selected in Puerto Rico in 1970 from materials received from Thailand. The line is slightly sensitive to photoperiod, possesses excellent foliar disease resistance, yellow endosperm, white translucent pericarp color. The complete pedigree of RTx435 is (77CS1 X IS2930 X IS3922). IS2930 is a three-dw dwarf, IS3922 was selected in Puerto Rico in 1970 from materials received from Thailand. The line is slightly sensitive to photoperiod, possesses excellent foliar disease resistance, yellow endosperm, white translucent pericarp color.