the fusarium wilt-rootknot nematode complex usually give satisfactory yields in the Southeast.

Breeder seed may be obtained by bonafide seed breeders upon written request to USDA-ARS, Pee Dee Res. and Educ. Ctr., P. O. Box 271, Florence, SC 29503.

T. W. Culp, R. F. Moore, and J. B. Pitner (7)

References and Notes

REGISTRATION OF NGSDCRW1(S2)C4 MAIZE GERMPLASM

NGSDCRW1 (S2)C4 MAIZE (Zea mays L.) (Reg. no. GP 137) germplasm was released jointly by the USDA-ARS and the Agricultural Experiment Station, South Dakota State University, Brookings, in 1984.

The parent SDCRW1 SYN population was synthesized in 1965 by mixing equal amounts of single-cross hybrid seed from selected matings (primarily based on flowering times) among 57 diverse germplasm stocks. The stocks included mid-season and early Corn Belt inbred lines and hybrids, germplasm from Pioneer HiBred International (including West Indian lines, broad-based Mexican lines, Zaplote lines, and Corn Belt lines with good stalk quality), unreleased breeding lines, and early inbred lines selected for root-rot resistance in South Dakota. In 1967, single-cross hybrid R802 X R109B was interplanted into the open-pollinated population to introduce the opaque-2 gene. The population was grown in isolation without conscious selection for five generations and released as early maturing “corn-rootworm composite” SDCRW1CO in 1970. This released germplasm was predominantly yellow dent. Subsequently, the population has undergone one cycle of S1 family selection [NGSDCRW1(S1)C1] followed by two cycles of S2 selection NGSDCRW1(S2)C2 and C3 on the basis of both root-damage caused by western corn rootworm (WCR, Diabrotica virgifera virgifera (Le Conte)) larvae and root-pull resistance in previously fall-planted plots in 1971–1972.

In 1983, evaluation trials at Brookings showed that root-pull resistance increased with recurrent selection for root systems, good potential for new compensatory root growth which results in good standability after root damage by WCR larvae, and for plants with good resistance (tolerance) to feeding damage caused by WCR larvae.

Seeds of randomly mated plants of dried in isolation will be maintained in 500 seed-lot samples by the USDA-ARS and by WCR larvae and root-pull resistance. It is expected to be at 300–500 maturity) germplasm source for selected resistance to WCR. Seeds of randomly mated plants of UDCRW1(S2)C4 will be provided until the available seed supply is exhausted.

A. L. Kahler, R. E. Telkamp, L. H. Penny, T. F. Branson, and D. J. Fitzgerald (3)

References and Notes
3. Research geneticist (USDA-ARS), Oilsseeds and Cereals, North Dakota, Northern Grain Experiment Station, and North Dakota State University, Fargo.
7. Research geneticist (USDA-ARS), Oilsseeds and Cereals, North Dakota, Northern Grain Experiment Station, and North Dakota State University, Fargo.
10. USDA-ARS, North Central Region, Peoria, IL. Regional Director, A. L. Kahler.
11. USDA-ARS, South Dakota State University, Brookings, SD. Accepted 30 July 1984.

REGISTRATION OF ND304W GERMPLASM

ND304W (Reg. no. GP-138) is a white, dent, early maturing line of maize (Zea mays L.) developed by the Agricultural Experiment Station, North Dakota State University, Fargo.

D planted to ND304W was selected from a cross of 3.9 ± 0.2.

The results suggest that population NGSDCRW1(S2)C4 has potential for further improvement in root-pull resistance. It is expected to be at 300–500 maturity) germplasm source for selected resistance to WCR. Seeds of randomly mated plants of UDCRW1(S2)C4 will be provided until the available seed supply is exhausted.

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