2 are available upon request to C. Wayne Smith, P. O. Box 789, Cotton Branch Exp. Stn., Marianna, AR 72360.

C. WAYNE SMITH (1)

References and Notes


REGISTRATION OF NDSAB AND NDSF MAIZE GERMPLASM

TWO MAIZE (Zea mays L.) (Reg. no. GP125 & GP126) breeding populations developed at the Agricultural Experiment Station, North Dakota State University, were released in 1983 for breeding programs for short growing season areas. Breeder seedstocks are maintained by the North Dakota Agricultural Experiment Station and can be obtained in germplasm quantities from H.Z. Cross, Agronomy Dep., North Dakota State Univ., Fargo, ND 58105.

NDSAB (Reg. no. GP125) is a yellow dent endosperm maize synthetic developed by one cycle of full-sib family selection among 100 full-sib families between NDSA and NDSB, synthetics released in 1979 (1). Twenty families were recombined to form the original population, which was then mass selected for three cycles for yield and standability. Equal numbers of seeds from 30 ears (half-sib families) were composited to give an improved population each cycle. Selection intensity was approximately 1%. NDSAB plants are tall with ears borne slightly above midplant. NDSAB is similar in maturity, shelling percentage, and test weight to NDSC, which has been previously described (2). NDSAB is higher yielding than NDSC, but may be slightly more susceptible to root lodging. It is AES300 maturity.

NDSF (Reg. no. GP126) is a yellow dent synthetic which was developed by intercrossing approximately 65 inbreds. Parental inbreds were selected for very early maturity and prolificacy. This population was then intermated for two generations. NDSF plants are moderately short with ears placed slightly below midplant. NDSF has higher shelling percentages and test weights than NDSAB. Yields and lodging resistance are similar to NDSC. NDSF is much earlier than either NDSC or NDSAB with an AES 100 to 200 maturity.

H. Z. CROSS (3)

References and Notes

2. ———. 1983. ND249, ND250, ND251, NDSC, and NDSD: Three new inbred lines and two germplasm sources of early corn. N. Dak. Farm. Ext. Serv. Bull. 225. NDSC is AES 300 maturity. NDSD is AES 150 maturity. PI470928 was bred for resistance to Hessian fly (Mayetiola destructor (Say)] and for early maturity. PI470928 is a yellow dent associated with PI470924, and was selected from the cross ‘McNair 1813‘/Purdue 67130 (‘Beau’ sib *2/4/’Arthur‘*2/3/’Riley 67‘*2/2/’Riley‘/’Bulgaria 88‘, similar to ‘Oasis‘).

PI470928 has resistance to Hessian fly (H5 gene) to bioassay tests conducted at the USDA laboratory, Purdue University, West Lafayette, Indiana. PI470928 had the earliest heading date (107 days) in the Uniform Southern Wheat Nursery across locations in 1981 and 1982 which was approximately 3 days earlier than ‘FL 301’. It is a short plant (80 cm height) at maturity, which is similar to ‘Florin’. PI470928 has high lodging resistance and displays excellent winterhardiness similar to McNair 1813. PI470928 exhibited excellent milling and baking quality in tests conducted at the Soft Wheat Quality Laboratory, Wooster, Ohio.

It has shown resistance to powdery mildew caused by Erysiphe graminis DC. f. sp. tritici E. Marchal and leaf rust caused by Puccinia recondita Rob ex. Desm. 1813. However, it is now moderately resistant to the new races of powdery mildew that occurred in the Southeast in 1982, respectively.

Spikes are middense, oblong, apically acute. The glumes are white, middling and midwide and kernels are red. Because of its early maturity, Hessian fly resistance, and yield characteristics, PI470928 is an important germplasm source for soft red winter wheat improvement.

Seed will be maintained at the Georgia Station, Experiment, GA 30212. Small quantities (100 g) are available upon request from the senior author.

J. W. JOHNSON, B. M. CUNFER, AND A. R. BROWN (1)

References and Notes

1. Associate professor, Dep. of Agronomy, Georgia Agric. Exp. Stn., 30212; associate professor, Dep. of Plant Pathology, Dep. of Agronomy, Coastal Plain Stn., GA 30201; associate professor, Dep. of Agronomy, College Stn., AR 72360. Received May 1983. Accepted 9 Jan 1984. Funds for this research were provided by State and Hatch funds allocated to the Georgia experiment station by Crop Sci. Soc. of Am. Accepted 9 Jan 1984.

REGISTRATION OF WHEAT GERMPLASM

PI 466704 AND PI 466705

PI 466704 (GP222) and PI 466705 (GP226) are semidwarf common winter wheat (Triticum aestivum L.) (Reg. no. GP221) breeding lines, GA73-1-1-2), PI470928 was developed by the Georgia Agri. Exp. Stn., Georgia Agricultural Experiment Station and can be obtained in quantities from the senior author. PI470928 had the earliest heading date (107 days) in the Uniform Southern Wheat Nursery across locations in 1981 and 1982 which was approximately 3 days earlier than ‘FL 301’. It is a short plant (80 cm height) at maturity, which is similar to ‘Florin’. PI470928 has high lodging resistance and displays excellent winterhardiness similar to McNair 1813. PI470928 exhibited excellent milling and baking quality in tests conducted at the Soft Wheat Quality Laboratory, Wooster, Ohio.

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