REGISTRATION OF GERmplASMS

REGISTRATION OF A2 Tx2753 AND B Tx2753 SORGHUM GERMPLASM1
(Reg. No. GP 30 and 31)

K. F. Schertz

A pair of A (male-sterile) and B (maintainer) lines of Sorghum bicolor (L.) Moench with a probable new cytoplasmic-sterility system was released as germplasm in December 1976. The lines, designated A2 Tx2753 (Reg. No. GP 30) and B Tx2753 (Reg. No. GP 31), were developed cooperatively by ARS-USDA and the Texas Agricultural Experiment Station, College Station, Tex.

These lines were developed by crossing IS 12662C × IS 5322C, selecting sterile F₁ plants, and paired-progeny backcrossing for four generations. IS 12662C (SC 171), the source of cytoplasm for the sterile line, is in the Caudatum Nigricans group (Guinea race) from Ethiopia. The source of nuclear genes and the maintainer line is IS 5322C (SC 250), which is in the Roxburghii group (Guinea race) from India. Both lines are from the USDA-TAES Sorghum Conversion Program.

This pair of lines offers an opportunity to reduce genetic vulnerability by diversifying cytoplasms. Differential responses of test crosses with A2 Tx2753 and A Tx3197 (milo cytoplasm) indicate that the cytoplasm of A2 Tx2753 is different from milo in sterility response. Some lines which are restorers in milo cytoplasm produce completely male sterile F₁'s when crossed with A2 Tx2753. USDA will maintain stocks of these lines and germplasm quantities of seed may be obtained from the author at the Department of Soil and Crop Sciences, Texas A&M University, College Station, TX 77843.

1 Registered by the Crop Sci. Soc. Am. Cooperative investigations of the ARS-USDA and Texas Agric. Exp. Stn., College Station, TX 77843. Accepted 20 May 1977.

REGISTRATION OF RP1R AND RP2B SORGHUM GERMPLASM1
(Reg. No. GP 32 and 33)

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GERmplASm of two random-mating populations of Sorghum bicolor (L.) Moench, RP1R and RP2B, developed by the ARS-USDA, the Nebraska and Kansas Agricultural Experiment Stations and the Mayaguez Institute of Tropical Agriculture, have been released to researchers and commercial breeders. The populations carry high levels of resistance to the greenbug, Schizaphis graminum (Rondani), and should be useful in domestic and international breeding programs. RP stands for regional population, while B and R stand for fertility nonrestorer and restorer, respectively, and indicate the predominate type of lines that can be extracted. Both populations carry the ms₃ gene.

RP1R (Reg. No. GP 32) resulted from crossing NP5R, a wide-based population containing American and exotic lines from Kenya and from the Texas-ARS Puerto Rico Conversion Program.

backcrossing. Only the KS 30 type of resistance in the released bulk is a composite of approximately 80% greenbug resistant progeny tests. RP2B has good agronomic characteristics and maturity and is superior in grain quality to the released RP1R, but an improved quality subpopulation is now available.

RP1R and RP2B can be obtained from the ARS-USDA, the Nebraska Agric. Exp. Stn. Published as paper No. 5257, Nebraska Agric. Exp. Stn. Contribution No. 1196, Dep. of Entomology, Exp. Stn. Research was conducted under Nebraska Agric. Exp. Stn. Projects No. 12-009 and 17-027. Accepted 20 May 1977.

2 Geneticist and entomologist, ARS-USDA, Ft. Hays Branch Exp. Sm. Research was conducted under Nebraska Agric. Exp. Stn. Projects No. 12-009 and 17-027. Accepted 20 May 1977.

REGISTRATION OF CHARCOAL GERMPLASM1
(Reg. No. GP 84)

Neal F. Jensen

CHARCOAL, CI 17422, is a composite of 15 selected red winter wheat lines selected for deep purple grain color from Hybrid Series 6671. The Cornell Agricultural Experiment Station released this composite as genetic color markers for use in breeding programs.

The special trait of Charcoal is an extra purplish-black grain color, flat rather than glossy, that approximates (but is darker than) PMS 276-flat. Seed of New Zealand wheat parent was a purplish-brown of PMS 476-flat. Seed of the North Dakota wheat parent was maroon-purple and approximates (but is darker than) PMS 276-flat. Seed of the North Dakota wheat parent was maroon-purple, flat rather than glossy. The color of Charcoal is normal; there is no evidence of a gene for purple kernel color. Kernels are well proportioned, giving a general impression of plumpness, however, kernels often exhibit smooth, rounded areas. This trait may be related to the protein observed in this type.

The parentage of Charcoal may be imprecise, due to sterility, as indicated in the pedigree of Series 6671. 9 / N. Dak. light purple; 9 / N. Dak. light purple; / Coker 62-63 / Coker 62-63. Charcoal is a product of a Cornell program to incorporate color genetic markers in high performance or food; for example in wheats with special nutritional qualities.

The final hybrid in the series was made at Ithaca and may be obtained from the author.