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-genic 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 x IS 5322C, selecting sterile F2 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 cytoplasm. Differential responses of test crosses with A2 Tx2753 and A Tx3197 (nilo cytoplasm) indicate that the cytoplasm of A2 Tx2753 is different from nilo 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. Additional descriptive details of Charcoal are medium height, Charcoal, CI 17422, is a composite of 12 near-homozygous hybrid Series 6671. The Cornell Agricultural Experiment Station released this composite as genetic color marking germplasm for use in breeding programs.

The special trait of Charcoal is an extraordinary intensity of purplish-black grain color, flat rather than glossy, purplish-black grain color, flat rather than glossy. The color is influenced by environmental factors.

Additional descriptive details of Charcoal are mildew resistance (race pattern unknown), later habit (moderate hardiness), poor to fair yield, protein (range 14.2 to 15.6% vs. Yorkstar 12.9% in 1974 analysis), and a range of awn types. Seed set of Charcoal is normal; there is no evidence of partial sterility.

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 predominant type of lines that can be extracted. Both populations carry the ms9 gene. RP1R (Reg. No. GP 32) resulted from crossing NP5R, a wide-based population containing American and exotic lines from Uganda and from the Texas-ARS Puerto Rico Conversion Program.

REGISTRATION OF RPIR AND RP2B SORGHUM GERMPLASM1
(Reg. Nos. GP 32 and 33)
W. M. Ross, S. D. Kindler, H. L. Hackett, T. L. Harvey, A. Sotomayor, O. J. Webster, and K. D. Kofoid

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 predominant type of lines that can be extracted. Both populations carry the ms9 gene.

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