Registration of Tift 8593 Pearl Millet Genetic Stock

Tift 8593 pearl millet [Pennisetum glaucum (L.) R. Br.] (Reg. no. GS-2, PI 592891) was released cooperatively by the USDA-ARS and the Univ. of Georgia Coastal Plain Exp. Stn. in April 1995.

Tift 8593 is a cytoplasmic–nuclear male-sterile (cms) F₁ hybrid from the cross Tift 85DA₄ (2) × Tift 93 (1). Tift 93 maintains male sterility induced by the A₄ cytoplasm. Tift 85DA₄ is maintained by pollinating with Tift 85D₂B₁ (3); Tift 93 is maintained by open pollination in isolation. Tift 8593 produces up to twice as much commercial hybrid seed when pollinated with inbred Tift 383 to produce ‘Tifleaf 3’ (4) as does Tift 85DA₄ alone. Seeds are brownish-gray. Inflorescences of Tift 8593 are about 27 cm long, compared with 16 cm for Tift 85DA₄. Tift 8593 flowers about 71 and 84 d after 30 June and 7 May plantings, respectively.

Seed of this genetic stock will be maintained by the author. It is proposed that Tift 8593 will be released under an exclusive or limited agreement. Genetic material of this release will be available for research purposes, including development and commercialization of new cultivars. It is requested that appropriate recognition be made if this germplasm contributes to the development of a new breeding line or cultivar.

W. W. Hanna* (5)

References and Notes

5. USDA-ARS and Univ. of Georgia, Coastal Plain Exp. Stn., Tifton, GA 31793-0748. Project supported in part by DOE Grant no. DE-FG05-93ER200991. Registration by CSSA. Accepted 30 Nov. 1996. *Corresponding author (wdbranch@tifton.cpes.peachnet.edu).

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Registration of Georgia Non-Nod Peanut Genetic Stock

Georgia Non-Nod peanut (Arachis hypogaea L. subsp. hypogaea var. hypogaea) genetic stock (Reg. no. GS-6, PI 595385) was released by the Georgia Agricultural Experiment Stations in 1994. It originated as an F₅ segregate from the double cross PI 341879/PI 109839/PI 371965/F439-16-10-3. F439-16-10-3 is a component line of the cultivar, ‘Florunner’. Each of the four parental lines had normal nodulation. Pedigree selection was subsequently used to develop a pure-line genotype without nodulation, designated GA normal nodulation. Pedigree selection was subsequently used to produce ‘Tifleaf 3’ (4) as does Tift 85DA₄ alone. Seeds are brownish-gray. Inflorescences of Tift 8593 are about 27 cm long, compared with 16 cm for Tift 85DA₄. Tift 8593 flowers about 71 and 84 d after 30 June and 7 May plantings, respectively.

Since selection may have occurred with inbred lines during multiple generations of the seed of the recurrent parent (and, where applicable, a cytoplasmic male-sterile) used by this project to develop the genetic stocks to maximize similarity of germplasm of the various cytoplasms.

Seed of these genetic stocks will be maintained by the USDA-ARS, Wheat, Sorghum, and Grasses Research Unit, Dep. of Agronomy, University of Nebraska, Lincoln, NE 68583-0937, and will be provided without cost to each applicant on written request to the author.

Registration of 43 Sorghum Genetic Stocks

Forty-three sorghum (Sorghum bicolor (L.) Moench) male-sterile genetic stocks (Reg. no. GS-53 to GS-95, PI 595272 to PI 595314) were jointly developed by the USDA-ARS Agricultural Research Division, Institute of Plant Genetics and Crop Resources, University of Nebraska, and the Univ. of Georgia Coastal Plain Exp. Stn. in April 1995. These lines have A₂, A₃, or A₄ cytoplasm (Table 1). These genetic stocks were developed by crossing the recurrent parent and were completely male-sterile in Lincoln and Mead, NE, as determined in the field by covering test panicles with pollinating bags prior to anthesis during all backcross generations. Sterility reactions in other environments have not been confirmed. These genetic stocks significantly broaden the commonly used inbred lines in alternate cytoplasms of sorghum. They also may be used in crosses to test for hybrid vigor with maintainer cytoplasmic–nuclear male-sterility systems, as by Schertz et al. (14).

Since selection may have occurred with inbred lines during multiple generations of the seed of the recurrent parent (and, where applicable, a cytoplasmic male-sterile) used by this project to develop the genetic stocks to minimize similarity of germplasm of the various cytoplasms.

Seed of these genetic stocks will be maintained by the USDA-ARS, Wheat, Sorghum, and Grasses Research Unit, Dep. of Agronomy, University of Nebraska, Lincoln, NE 68583-0937, and will be provided without cost to each applicant on written request to the author.