again intermated in isolation, using ≈5000 plants of each population in both 1989 and 1990. During the two generations of intermating, off types or undesirable plants were eliminated prior to anthesis. At harvest, plants were selected on a grid basis, using ≈10% selection intensity.

NPM-1 and NPM-2 and their topcrosses to the male sterile line 68A (ICMA-2) (3), derived from ms 2068A obtained from W.D. Stegmeier, Ft. Hays Branch Exp. Stn., Kansas State University, were entered in regional trials in 1988, 1989, and 1990. Mean grain yields over 16 locations were 2.66 Mg ha⁻¹ for NPM-1 and 2.44 Mg ha⁻¹ for NPM-2. Topcrosses were male-fertile and averaged 28 and 33% heterosis for grain yield relative to the high parents (NPM-1 and NPM-2, respectively). NPM-1 and NPM-2 have value for direct use as pollen parents, or as sources of restorer lines for producing early-maturing grain hybrids. Across locations, plant height and days from planting to bloom varied from 84 to 136 cm and 45 to 77 d, respectively, for NPM-1 and 76 to 122 cm and 41 to 70 d, respectively, for NPM-2. Grain color is light gray; grain weight averages 9.5 mg seed⁻¹ for NPM-1 and 9.3 mg seed⁻¹ for NPM-2. Susceptibility to major pathogens has not been observed. In eastern Nebraska, European corn borer [nubilalis (Hübner)] has occurred in the peduncles.

Small quantities of seed may be obtained from the Subtropical Agricultural Research Laboratory at Weslaco, Mont Alto, and Corpus Christi, TX. Small quantities of seed will be available upon written request to the corresponding author. Appropriate recognition is requested when this germplasm contributes to the development of a new cultivar or germplasm.

References and Notes


Registration of C21S781-2 Cotton Germplasm

C21S781-2, a germplasm line of cotton (Gossypium hirsutum L.) (Reg. no. GP-603, PI 576439), was developed by the USDA-ARS in cooperation with the Texas Agricultural Experiment Station and Rio Farms, Inc., a private agricultural research foundation, and was released in 1993. This germplasm was developed as part of an ongoing effort to combine the glabrous character for all plant parts with early fruit set and maturity. Glabrousness reduces fiber trash content and imparts some resistance to the bollworm [Helicoverpa zea (Boddie)], tobacco budworm [Helicoverpa virescens (Fabricius)], and sweetpotato whitefly [Bemisia tabaci (Gennadius)] (6).

C21S781-2 was derived from two cycles of mass selection from TX-CAMD-21-S-7-81, an advanced multi-adversity resistant (MAR) strain developed by L.S. Bird, Texas Agricultural Experiment Station, College Station, TX. TX-CAMD-21-S-7-81 originated from crossing 'Tamcot SP21' (1) and 'Tamcot SP21S' (2). In the initial selection, TX-CAMD-21-S-7-81, a strongly taproot genotype (3), was grown under greenhouse conditions in soils artificially inoculated with the phymatotrichum root rot organism [Phymatotrichopsis omnivora (Duggar) Hennebert; syn. Phymatotrichum omnivorum (Duggar)]. Two plants that recovered from pathogen attack were selected, bulked, and later evaluated under the designation TX-CAMD-21-S-7-81-86. In the second selection, three plants exhibiting reduced sensitivity to the cotton flea hopper [Pseudatomoscelis seriatus (Reuter)] were selected from TX-CAMD-21-S-7-81-86. These three plants were intermated, offtypes or undesirable plants were eliminated, and then intermated in isolation, using ≈5000 plants of each population in both 1989 and 1990. During the two generations of intermating, off types or undesirable plants were eliminated prior to anthesis. At harvest, plants were selected on a grid basis, using ≈10% selection intensity.

NPM-1 and NPM-2 and their topcrosses to the male sterile line 68A (ICMA-2) (3), derived from ms 2068A obtained from W.D. Stegmeier, Ft. Hays Branch Exp. Stn., Kansas State University, were entered in regional trials in 1988, 1989, and 1990. Mean grain yields over 16 locations were 2.66 Mg ha⁻¹ for NPM-1 and 2.44 Mg ha⁻¹ for NPM-2. Topcrosses were male-fertile and averaged 28 and 33% heterosis for grain yield relative to the high parents (NPM-1 and NPM-2, respectively). NPM-1 and NPM-2 have value for direct use as pollen parents, or as sources of restorer lines for producing early-maturing grain hybrids. Across locations, plant height and days from planting to bloom varied from 84 to 136 cm and 45 to 77 d, respectively, for NPM-1 and 76 to 122 cm and 41 to 70 d, respectively, for NPM-2. Grain color is light gray; grain weight averages 9.5 mg seed⁻¹ for NPM-1 and 9.3 mg seed⁻¹ for NPM-2. Susceptibility to major pathogens has not been observed. In eastern Nebraska, European corn borer [nubilalis (Hübner)] has occurred in the peduncles.

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