the state experiment stations in Texas, Kansas, and Oklahoma. Lines with IS prefixes were derived from the Sorghum Conversion Program of the Texas Agricultural Experiment Station and the USDA, and have shown good combining ability as male parents of single crosses and three-way hybrids in Iowa tests (2).

Seed from the 22 crosses was composited in equal amounts, and an isolation planting of approximately 6000 plants was grown near Ames in 1980 and in each succeeding year through 1983. Gridded mass selection was practiced each cycle, with 375 to 425 tagged male-sterile panicles harvested annually. Equal amounts of seed of the 10 largest panicles (seed weight) from each of 30 cells within the grid were composited to advance each cycle of selection. In 1983, seed was saved in the third cycle from 449 male-sterile and 450 fertile panicles. Seed composites from the male-sterile panicles are suitable for additional cycles of random mating, and seed composites from the fertile panicles provide a broad germplasm source in which to inbreed for R-line development.

IAP5R(M)C3 provides additional input of diverse parents beyond that available in IAP1R(M)C4. The IAP5R population is highly variable for many plant and seed characteristics. Selection for panicle type, maturity, and seed type and color was not practiced during developmental cycles. Medium to moderately short plants were selected in each cycle, but there were many tall plants as well in the C3 isolation block, probably due to recombination of different height genes. The population provides a source of genetically diverse types useful for R-line selection to A1 cytoplasm. Breeders quantities of seed composited from either the fertile or male-sterile panicles may be obtained from the Committee for Agric. Develop., 112 Agronomy Bdg., Iowa State Univ., Ames, IA 50011.

R. E. Atkins (3)

References and Notes

REGISTRATION OF Tx2786 SORGHUM GERMPLASM

Tx2786 (Sorghum bicolor (L.) Moench) (Reg. no. GP-171) is resistant to Maize Dwarf Mosaic Virus strain A and is immune to Maize Dwarf Mosaic Virus strain B. It is immune to MDMV strain A Venezulan isolate. § Maize Dwarf Mosaic Virus Strain A. t Maize Dwarf Mosaic Virus Strain B. t Sugarcane Mosaic Virus Strain H. Tx2786 shows resistance to infection with MDMV strain A, allowing only a low percentage of plants infected.

Tx2786 was derived from material in the Texas Agricultural Experiment Station and USDA's conversion program and was released in 1983. It was selected from the BC4 of SC0097 (IS12602) as PI221624. The original IS12602 was derived from Zonkwa, Nigeria, where it was known as Glume'. IS12602, a Class 3 Conspicuum with the A1 cytoplasmic-genetic sterility system and its original cytoplasm. Tx2786 is a typical conspicuum with a large, lax panicle which droops conspicuously at maturity. Peduncle length is excessive, accounting for about a third of the plant’s height (100 to 150 cm). Exsertion is 50 to 50 cm. Seeds are almost flat and are large. Seed color is genetically white (colorless), and the mesocarp is present, nor is there a pigmented testa present. Tx2786 is awnless, and the straw-colored glumes are large, tending to involute at maturity. Plant color is purple. Tx2786 tillers profusely from the crown region. The remaining plants self-pollinated for inbreeding. Responses of Tx2786 to virus treatments are given in Table 1.

Table 1. Reaction of Tx2786 to MDMV infection

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<th>Year</th>
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References and Notes