Stout) Shoemaker (syn. Helminthosporium carbonum Ulstrup) race 3, compared with a 5 (completely dead) for lines such as A673 and A675 and a 4 for lines such as A680, A681, and B73Ht at University Park, PA.

Breeder seed is maintained by the Pennsylvania Agricultural Experiment Station and is available in small lots (50 kernels) from M.W. Johnson, Agronomy Department, 116 ASI Bldg., University Park, PA 16802.

REGISTRATION OF A/BTxARG-1 SORGHUM

A/BTxARG-1 SORGHUM [Sorghum bicolor (L.) Moench] parental line (Reg. no. PL-235, PI 561072) was developed and released in 1991 by the Texas Agricultural Experiment Station, Department of Soil & Crop Sciences, Texas A&M University, College Station, TX, and Instituto Nacional de Tecnología Agropecuaria (INTA), Estación Experimental Agropecuaria, Manfredi, Argentina. The maintainer line was derived from an intentional cross between MR807, an Indian breeding stock, and BTx624. The complete pedigree is [(MR807/BTx624)bulk F₁]-5-1-2-bk-bk-1-bk with five backcrosses into A₁ cytoplasm. Ing. Agr. C. Domanski selected the original F₃ and F₄ plants at Manfredi, Argentina, from a germplasm observation nursery from ICRISAT (International Crops Research Institute for the Semi-Arid Tropics, Hyderabad, India) designated as B/A line Observation Nursery (BON). Seed was obtained in 1987 from INTA for the Texas Agricultural Experimental Station’s sorghum improvement program by the senior author during a visit to Manfredi. Following introduction into Texas, three additional backcrosses were made using paired plant selection to complete the sterilization of this A₁ cytoplasmic–genetic male-sterile parental inbred line.

A/BTxARG-1 is genetically 3-dwarf (dw₁Dw₂dw₃dw₄), and has excellent exsertion, medium white to translucent seed color, nonpigmented testa, awnless lemmas, and straw colored glumes. The line has good resistance to fusarium head blight (caused by Fusarium spp.). A/BTxARG-1 flowers at about the same time as A/BTx631, and the maintainer sheds an excellent quantity of pollen. Sterility of the A-line under bag is complete and does not appear to be affected by high or low temperature or drought. A/BTxARG-1 has tan necrotic plant color (ppQQ), and leaves exhibit a juicy midrib. The cyropases are round, have a thin mesocarp, and possess an intermediate vitreous waxy (wxwxwx) endosperm. The line has excellent tropical adaptation. The line has a good combine height and in hybrid combinations rarely produces hybrids too tall for mechanical harvest. A/BTxARG-1 has shown excellent general combining ability in experiments in Texas, University of Arizona, and the Philippines.

'ATxARG-1' (Reg. no. PL-234, PI 561073) is a tropically adapted, short 2-dwarf sorghum with exceptional foliage disease resistance, food quality grain, and yield potential developed in collaboration with ICRISAT (International Crops Research Institute for the Semi-Arid Tropics, Centre de Tecnología Agricola de Salvador), and Texas Agricultural Experiment Station. The plants that gave rise to A/BTx635 were selected originally in the ICRISAT nurseries of ICRISAT–Hyderabad, India, and designated as A-5621. A-5621 was derived from Cycle 2 of the RS/R population (see ICRISAT Annual Reports for the origin of this population) and was known as RS/R-S10-20-682-5-1. It was selected in a field test in the 1975 kharif season. A single seed from this S₁ family was advanced to S₂ in 1975 and advanced under pedigree selection to S₇ in 1978 in alternate kharif and rabi nurseries. Pedigree for this stage was RS/R (C2) S₁ 102-1-2-1-5-1-bulked and advanced as such until 1979 rabi test-crossed to a cytoplasmic male-sterile line.