

Registration of N244 and N245 Sorghum Germplasm R-Lines

Sorghum [*Sorghum bicolor* (L.) Moench] germplasm lines N244 (Reg. no. GP-563, PI 606744) and N245 (Reg. no. GP-564, PI 606745) were jointly developed by the USDA-ARS and the Agricultural Research Division, Institute of Agriculture and Natural Resources, University of Nebraska, and were released in June 1998.

N244 and N245 are R-lines (A1 cytoplasm) with the potential to produce hybrids with high grain yield. These lines originated from crosses made among converted sorghum lines by William Ross (USDA-ARS, retired). N244 is an F_{16} line from the cross IS 12610C \times IS 3759C. N245 is an F_{18} line from the cross IS 2816C \times IS 12624C. In yield trials conducted at Lincoln and Mead, NE, in 1992 and 1993, N244 hybrids averaged 8053 kg ha⁻¹ when crossed with ATx399 and 8016 kg ha⁻¹ when crossed with AN122. N245 hybrids averaged 7901 and 7789 kg ha⁻¹ with the same A-lines. Check hybrids Pioneer 8379 and DK48 averaged 8348 and 8169 kg ha⁻¹, respectively, and were not statistically different ($P = 0.05$) from the N244 and N245 hybrids in these trials.

N244 reached anthesis in 86 d, averaged 115 cm in height at Lincoln in 1995, has purple plant color, white seed, and no pigmented testa. N245 reached anthesis in 72 d, averaged 95 cm in height, has tan plant color, white seed, and no pigmented testa. For comparison, BTx399 was 95 cm at maturity and reached anthesis in 73 d and RTx430 was 125 cm at maturity and reached anthesis in 83 d at Lincoln in 1995. Reactions of these germplasm lines to specific insects or diseases have not been determined.

These germplasms are a source of genetic diversity and heterosis potential. They have immediate application for use as a source of these characters in applied breeding programs. They may also have potential application as pollen parents for hybrid production.

Seed of these germplasms will be maintained and distributed by the USDA-ARS Wheat, Sorghum, and Forage Research Unit, Dep. of Agronomy, University of Nebraska, Lincoln, NE 68583-0937, and will be provided without cost to each applicant on written request. Genetic material of this release will be deposited in the National Plant Germplasm System, where it 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.

J. F. PEDERSEN* AND J. J. TOY (1)

References and Notes

1. USDA-ARS and Dep. of Agronomy, Univ. of Nebraska-Lincoln, Lincoln, NE 68583-0937. Joint contribution of the USDA-ARS and the Dep. of Agronomy, Univ. of Nebraska-Lincoln, as Journal Series Paper no. 12339. Registration by CSSA. Accepted 28 Feb. 1999. *Corresponding author (jfp@unlserv.unl.edu).