REGISTRATION OF DEX BROOMCORN
(Reg. No. 3)
D. E. Weibel, J. B. Sieglinger, H. C. Young, Jr.,
and R. A. Hunter

'Dex' broomcorn, Sorghum bicolor (L.) Moench, was released in 1968 by the Oklahoma Agric. Exp. Stn. and the ARS-USDA. The variety was selected from the cross 'Black Spanish' CI 827; 'Evergreen Dwarf'-CI 597; 'Red Kafir' CI 34, × 'Leoti'-Black Spanish, CI 827, in a pedigree breeding program at the Southern Great Plains Field Station, Woodward, Okla. The pedigree of Dex was abbreviated to Exserted × 0-stem-1-2 during evaluation, a descriptive designation to indicate that the brush was exserted from the boot and that there was no center stem or rachis in the inflorescence.

Dex grows to the height of the western dwarf type of broomcorn (177 cm in 7-year average at Woodward), but it is somewhat taller than 'Rennells No. 11'. Dex matures earlier than Rennells No. 11, but later than Black Spanish. Dex has red plant color, good exsertion, high quality brush, similar to that of Black Spanish, but the fibers are slightly shorter (46 cm) than those of Black Spanish with seed-bearing branches occurring along the terminal one-half to one-third of the head. The glumes are tan to reddish tan; the lemmae are awned. The kernels are light brown, small, obovoid, and almost entirely covered by the glumes.

At Woodward, Dex had a substantial yield advantage over Rennells No. 11 and Black Spanish in 7 years of testing, 1957-63. It also exhibited a high degree of tolerance to anthracnose stalk rot, Colletotrichum graminicolum, in areas where Rennells No. 11 and Black Spanish were damaged. Dex is best adapted to the eastern areas of broomcorn production in Oklahoma.

Breeder seed will be maintained by the Oklahoma Agric. Exp. Stn., Stillwater, OK 74074.

REGISTRATION OF DEER BROOMCORN
(Reg. No. 4)
D. E. Weibel, H. H. Hadley, H. C. Young, Jr., and R. A. Hunter

'Deer' broomcorn, Sorghum bicolor (L.) Moench, was released in 1968 by the Oklahoma and Illinois Agric. Exp. Stns., University of Georgia College of Agriculture Exp. Stns., Coastal Plain Stn., Tifton, Ga. This research was conducted in cooperation with the Agricultural Research Service, U. S. Department of Agriculture. Accepted December 16, 1976.

'Deer' broomcorn is a first-generation hybrid between 'Tift 23DA' (or 'Tift 23A') and 'Tift 186'. Because Tift 23DA and Tift 23A are near-isogenic except for the d1 gene that reduces the height of Tift 23DA by 50%, either female parent pollinated with the tall Tift 186 male produces Gahi 3. The short Tift 23DA is currently used in the commercial production of Gahi 3 to facilitate cross-pollination and seed harvest.

Gahi 3 is a very uniform, medium-stemmed, leafy hybrid with smooth (non-hairy) leaves and stems. Its nodes and sheaths develop the reddish color of the female Tift 23DA parent as they approach maturity. The hybrid vigor of Gahi 3 seedlings makes this hybrid well suited for grain drill planting. Gahi 3 matures later than Gahi 1 and furnishes good grazing for a longer period in the summer. It is immune to Pyricularia grisea and resistant to stinging nematodes.

Gahi 3 has been tested at Tifton in various ways since 1965. In several trials and years it has produced from 10 to 19% more dry matter than Gahi 1 and 10% more than 'Millex 22'. With delayed cutting it produced 41 and 61% more than Gahi 1 and Millex 22, respectively, in the third cuttings in 1970. Average daily gains and acre gains of animals grazing Gahi 3 exceeded Gahi 1 by 55 and 53%, respectively. Gahi 3 is more resistant to damage.

Breeder seed will be maintained by the Oklahoma Agric. Exp. Stn., Stillwater, OK 74074.