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among many tested in South Dakota for winterhardiness and yield in 1970-73. The South Dakota selection is SD 7117. It appeared in the Southern and Northern Regional Performance Nurseries in 1972 and 1973 and in state-wide trials from 1972 onward. Gent was released in 1974.

Gent is mid-tall in height and medium in maturity. It ripens at the same time as 'Scout 66'. The stem is white and mid-strong; the spike is awned, fusiform, mid-dense, and inclined; the glumes are glabrous, white, mid-long, and narrow; the shoulders are narrow and oblique; the beaks are narrow, acuminate, and from 1 to 9 mm long; the awns are white and 3 to 9.5 cm long; the kernels are red, mid-long, hard and ovate; the cheeks are rounded to angular; and the brush is mid-sized to large and mid-long.

Gent contains some admixture of brown-headed rogues and resembles Scout 66 in height, straw strength, test weight, and baking characteristics, but may not quite equal Scout 66 in milling characteristics. It is resistant to all endemic races of the leaf rust organism (*Puccinia recondita* Rob. ex desm. f. sp. *tritici*) except race 2A Ag (H. C. Young, Jr., unpublished data). Gent is resistant to stem rust (*P. graminis* Pers. f. sp. *tritici* Eriks.) and is tolerant of wheat streak mosaic virus. In a four replicate Crop Performance Test north of Quinn, S.Dak. in 1974 where all plots were uniformly and heavily infected with the WSMV, Gent yielded 1,887 kg/ha of 73 kg/hl test weight, Scout 66 yielded 1,617 kg/ha of 73 kg/hl test weight, and 'Homestead', a cultivar susceptible to WSMV, yielded 1,213 kg/ha of 65 kg/hl test weight. At Bison, 322 km north of Quinn where WSMV was not present and in the same uniform test, Gent yielded 2,695 kg/ha of 79 kg/hl test weight, Scout 66 yielded 2,089 kg/ha of 78 kg/hl test weight, and Homestead yielded 2,290 kg/ha of 76 kg/hl test weight. Gent then yielded 17% more than Scout 66 at Quinn and 29% more at Bison. It yielded 56% more than Homestead at Quinn and 18% more at Bison. In all South Dakota tests for 1972-76, Gent averaged 4% higher yield than Scout 66.

Breeder seed is maintained by the South Dakota Agricultural Experiment Station, Brookings, SD 57006.

Registration of Germplasms

REGISTRATION OF NORTH CAROLINA 1 AND 2 SMOOTHLEAF COTTON GERMPLASM[1]

(Reg. Nos. GP 36 to 37)

Joshua A. Lee[2]

THESE two sources of Upland cotton germplasm (*Gossypium hirsutum* L.) were released jointly in 1967 by the North Carolina Agricultural Experiment Station and the ARS, USDA. Both cottons are homozygous for Sm_2, an allele originally derived from the wild *G. hirsutum* accession, WH-219. Cottons homozygous for Sm_2 have the trichomes on mature plant parts confined almost entirely to the margins of leaves[3].

North Carolina Smooth 1 (GP No. 36) is in 'Auburn 56' background, and the recurrent parent of North Carolina Smooth 2 (GP No. 37) is 'Carolina Queen', both obsolete cultivars adapted for growth in the southeastern U. S. Six generations of backcrossing was employed in transferring the Sm_2 allele from WH-219 to the two Upland stocks. Selection for Upland-like characters was practiced throughout. Both lines have the fruit size, seed size, and lint properties of their recurrent parents. Both are slightly deficient in fiber yield and earliness in North Carolina, and lower than their recurrent parents in lint percentage in some years. Bonafide breeders and geneticists may obtain small amounts of seed from J. A. Lee, Department of Crop Science, Room 1239 Williams Hall, North Carolina State University, Raleigh, NC 27607.

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[1] Registered by the Crop Sci. Soc. Am. Contribution from the North Carolina Agric. Exp. Stn., Raleigh, NC 27607, and the ARS, USDA. Accepted 9 May 1977.

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[3] Lee, Joshua A. 1968. Genetical studies concerning the distribution of trichomes on the leaves of *Gossypium hirsutum* L. Genetics 60:567-575.