strength (cN/tex) 19.68 vs. 18.72; yarn tenacity (cN/tex) (1978) 10.40 vs. 10.60; and E, fiber elongation (%) 6.56 vs. 8.29.

High productivity potential, early maturity, multiple disease resistance and fiber characteristics of HYC76-59 are important considerations for its use in cotton breeding and development of inter/intra-specific hybrid cultivars.

Seed of HYC76-59 will be maintained by the Missouri Agricultural Experiment Station. Small quantities of seed can be obtained from W. P. Sappenfield, University of Missouri, Delta Center, P.O. Box 160, Portageville, MO 63873.

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REGISTRATION OF PEE DEE 4548
GERMPLASM LINE OF COTTON1
(Reg. No. GP 161)

T. W. Culp2

Pee Dee 4548 (GP 161), an improved breeding line of upland cotton (Gossypium hirsutum L.), was released to plant breeders and geneticists by AR-SEA-USDA, and the South Carolina Agric. Exp. Stn. in 1981. This breeding stock possesses high yield potential, high fiber and yarn strength, unusually high lint percentage, and wide adaptation.

Pee Dee 4548 is from the seed increase of a single F3 plant from the cross Pee Dee 4381 x Pee 8623. Pee Dee 8623 was developed from a series of crosses involving 'Coker 421,' Triple Hybrid 171, Sealand 7, Earlstable, C 6-5, and Dixie King.

The simultaneous improvement of lint yield and fiber strength has been a persistent problem in cotton breeding. Pee Dee 4548 produced lint yields equivalent to those of SC-1, the highest yielding check cultivar, and fiber and yarn strengths significantly above those of Pee Dee 2165, the superior fiber quality check, from 3 years of testing in South Carolina and Georgia. Pee Dee 4548 produced the highest average lint yield among the breeding lines with improved fiber strength in the 1978 Regional High Quality Test. Its yields also were comparable with those of the check cultivars, Stoneville 213 and ‘Coker 310,’ and its fiber strength and yarn tenacity approached that of ‘Acala SJ-5.’ The high lint yield probably resulted from more than 5% increase in lint percentage over that of the check cultivars and the wide adaptation of this breeding line. Since Pee Dee 4548 has the highest lint percentage and the widest range of adaptability of any high quality breeding line that we have developed, it should be valuable germplasm for use in cotton improvement programs.

Seed (25 g) of Pee Dee 4548 may be obtained from AR-SEA-USDA, Pee Dee Experiment Station, P.O. Box 2131, Florence, SC 29503.

REFERENCES


Ray O. Hammons3

REGISTRATION OF SIX LINES OF PEANUT
GERMPLASM LINES
(Reg. Nos. GP 12 to GP 17)

Ray O. Hammons3

SIX lines of peanut (Arachis hypogaea L.) were developed by AR-SEA-USDA and the University of Georgia Coastal Plain Station in March 1981. These lines include Cylindrocladium black rot (CBR), a disease caused by a soil-borne fungus Cylindrocladium crotalariae (Loos) Bell, K. Stemphylium solani Weber and S. crotalariae Weber and S. solani Weber. There is no known effective control using chemicals or cultural practices. The new peanut lines were developed by a repeated single-plant progeny selection for resistance were practiced.

Seed of HYC76-59 will be maintained by AR-SEA-USDA at the Coastal Plain Station, Tifton, Georgia. Small quantities of seed were provided forage researchers upon written request.

1Registered by Crop Sci. Soc. of Am. Cooperating with AR-SEA-USDA, and Univ. of Georgia Agric. Exp. Stn. Accepted 3 June 1981.
2Registered by Crop Sci. Soc. of Am. Cooperating with AR-SEA-USDA, and Univ. of Georgia Agric. Exp. Stn. Accepted 3 June 1981.
3Research agronomist, AR-SEA-USDA, Pee Dee Experiment Station, Florence, SC 29503.