REGISTRATION OF GERMLASMS

greenhouse tests or reported in the literature. The female lines were genetic male-sterile stocks 30, 33, 46, 47 (Hockett et al., 1982), and the male-sterile diploid plants from the balanced tertiary trisomic 75a msg16. Stocks 20 and 33 contain the msg1 gene. Stocks 46 and 47 contain the msg2 gene. Each male line was crossed to at least two lines having two of the three different male-sterile genes. The crosses were made at Beltsville, Md., from 1973 to 1977. The F2's were grown as individual plants at Aberdeen, Idaho in space-planted nurseries from 1973 to 1977. In 1978, F2's were bulked. The progeny of each male line was equally represented in the population. The bulks were grown at Aberdeen in 1978 and became Composite Cross XXXV and subpopulations XXXX-A, B, and C, described as follows.

CC XXXV (GP 37): Is an equal mixture of F2 seed that went into CC XXXX-A, XXXX-B, and XXXX-C and should contain all of the genes present in those populations.

CC XXXX-A (GP 28): This mixture of 25 sources of leaf rust resistance has known genes Rph6, Pa2, Rph3c, Rph4d, Rph7e, Pa6, and Pa7 and additional unnamed genes.

CC XXXX-V (GP 50): Is a mixture of 17 sources of scald resistance and has known genes Rh2b, Rh3, Rh4, Rh5, Rh6, Rh7, and Rh9 and additional unnamed genes.

A wide cross population will segregate for a wide range of characters. They contain a broad spectrum of disease resistance genes and should be a useful source of germplasm for breeders who need additional sources of resistance. In areas where multiple disease resistance is needed, Composite Cross XXXX should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used. In areas where specific disease resistance is needed, the appropriate subpopulation, Composite Cross XXXV should be used.

The list of male parents used in the development of each subpopulation and seed in 500-g quantities can be obtained from the authors and from the following cotton breeders:

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REGISTRATION OF PEE DEE 695 AND PEE DEE 875 GERMLASM LINES OF COTTON1

T. W. Culp2

TWO breeding lines of cotton (Gossypium hirsutum L.), Pee Dee 695 (GP 42), and Pee Dee 875 (GP 43), were released by AR, SEA, USDA and the South Carolina Agricultural Experiment Station in 1978. Both breeding lines possess resistance to the bollworm (Heliothis sea Boddie) and the tobacco budworm (H. zea Boddie). Pee Dee 695, a freg bract line, is also resistant to the boll weevil (Anthonomus grandis grandis Boheman).

Pee Dee 695 was developed from the backcross of (PD 8562 × L. Frego 2) × PD 8562. PD 8562 was selected from the cross of Pee Dee 461 × PD 3307. Pee Dee 461 or Q, the common parent from which resistance factors for Heliothis spp. must have come, was developed from backcrosses and composite crosses involving G. barbadense L. strain with high lint percentage, 'Earlistaple', 'Coker 100 Will', and 'Auburn 30'. PD 3307 was selected from the intercross of two A.C.N.A breeding lines from crosses involving Tripel Hybrid 171, 'Sealand 7', and 'Earlistaple'. L. Frego 2 was developed from the cross of 'Stoneville 7A' × Stoneville Frego') × Stoneville 7A at the Louisiana Agricultural Experiment Station. Pee Dee 695 is from the progeny of a single freg-bract plant selected in the BCF2 generation.

Pee Dee 875 was developed from the backcross of (Pee Dee 8619 × (DSR-1 × 6-56) × Pee Dee 8619. Pee Dee 8619 was selected from the cross of Pee Dee 441 × MO-DEI. MO-DEI is a commercial cultivar with improved fiber strength developed from a series of complex crosses at the Missouri Agricultural Experiment Station. DSR-1 × 6-56 was selected from the intercross of two dwarf storm-resistant lines at the Texas Agricultural Experiment Station. Pee Dee 875 is from the progeny of a single, normal bract plant selected in the BCF3 generation.

Pee Dees 695 and 875 possess an unidentified source of resistance to Heliothis spp. and SC 206, and 550 kg/ha for the respective checks, Stoneville 215, Coker 310, and Deltapine 16, respectively. Pee Dee 875 appears to possess similar resistance to Heliothis spp., as Pee Dee 695 and should be the preferred breeding stock in areas where bollworm control is needed. Seed (25g) of these breeding lines may be obtained from AR, SEA, USDA, Pee Dee Experiment Station Florence, SC 29503.

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REGISTRATION OF FIVE GERMLASM LINES OF COTTON1

T. W. Culp and D. C. Harrell2

FIVE breeding lines of cotton (Gossypium hirsutum L.), Pee Dee 9223 (GP 44), Pee Dee 9232 (GP 45), Pee Dee 9241 (GP 46), Pee Dee 9363 (GP 47), and Pee Dee 9364 (GP 48), with extra fiber strength were released by AR, SEA, USDA, and the South Carolina Agricultural Experiment Station in 1974. These breeding lines represent a significant step in overcoming the adverse association between yield and fiber quality, particularly extra fiber strength.

Pee Dee 9223 and Pee Dee 9232 were developed from the cross of 'Coker 421' × PD 2164. Coker 421 was selected from 'Coker 419'. Coker 419 was developed from a single freg-bract plant selected from an advanced progeny row of the cross, 'Coker 421' × 'Coker Wilds'. PD 2164 was developed from the cross of AG 229 × FJA 346. AG 229 and FJA 346 were developed from a complex series of crosses involving Tripel Hybrid 108 and 171, 'Sealand 542' and 6-5. Each line is from the increase of seed from a single F1 plant selection. Pee Dee 9223 and Pee Dee 9232 produce yields equivalent to...