those of leading southeastern cultivars, but they have fibers that are 18% stronger. These two breeding lines differ significantly in fiber properties. Pee Dee 9232 is equivalent to 'Coker 201' in fiber length and micronaire, but Pee Dee 9223 is superior to them.

Pee Dee 9241 was developed from the cross of Coker 421 × PD 4398. Pee Dee 4398 was developed from the cross of FTA 263 × 'Atlas'. FTA 263 was developed from a complex series of crosses involving Triple Hybrid 108 and 171, AHA 6-1-4, Earlstaple, and Sealand 542 in the Pee Dee breeding program. Atlas was developed from related material in the Georgia Agricultural Experiment Station cotton breeding program. Pee Dee 9241 is from the increase of seed from a single F₀ plant selection.

Pee Dee 9241 possesses excellent fiber properties with unusually high fiber elongation. It combines well with other PD lines and gives excellent combinations of fiber quality and yield. Pee Dee 9241 is extremely susceptible to the fusarium-wilt (caused by Fusarium oxysporum F. spp. vasinfectum) rootknot-nematode complex (Meloidogyne spp.), and to verticillium wilt (caused by Verticillium spp.).

Pee Dee 9363 and Pee Dee 9364 were developed from a complex composite cross involving 'Carolina Queen', Triple Hybrids 108 and 171, AHA 6-1-4, Earlstaple, Sealand 542, and C 6-5. Each line is from a single F₀ plant selection.

Pee Dee 9363 and Pee Dee 9364 produce yields equivalent to Coker 201, but their fibers are 20% stronger. Other agronomic and fiber properties of Pee Dee 9363 are equivalent to Coker 201, but those of Pee Dee 9364 are superior.

These five breeding lines are derived from crosses with southeastern commercial cultivars, Coker 421, Atlas, and Carolina Queen. Although numerous crosses of this type have been made, this is the second series of crosses that have led to improved breeding lines. Studies indicate the success in breaking the genetic linkages that control the negative association between lint yield and fiber strength.

Seed (25 g) of these breeding lines may be obtained from AR, SEA, USDA, Pee Dee Experiment Station, Florence, SC 29503.

REGISTRATION OF PEE DEE 4461 COTTON GERMPLASM

T. W. Culp and D. C. Harrell

Pee Dee 6520 (GP 50), a very early maturing breeding stock of cotton (Gossypium hirsutum L.) with improved yields and fiber quality was released by AR, SEA, USDA and the South Carolina Agricultural Experiment Station in 1974. This breeding stock possesses unusually small bolls and seed compared to the southeastern cultivars, the breeding stock has high lint percentage and excellent fiber properties. Pee Dee 6520 was developed from a complex series of crosses involving Triple Hybrids 108 and 171, 'Earlistaple', 'Staple 542', and Coker 201 in fiber quality and yarn strength.

Pee Dee 6520 has given above-average performances in tests and, particularly in fiber properties. Pee Dee 6520 is equivalent to 'Coker 261' in fiber length and micronaire, but Pee Dee 6520 is superior to them.

Pee Dee 6520 was developed from a composite cross involving 'Carolina Queen', Triple Hybrids 108 and 171, AHA 6-1-4, Earlstaple, Sealand 542, and C 6-5. Each line is from a single F₀ plant selection.

Pee Dee 6520 possesses excellent fiber properties with unusually high fiber elongation. It combines well with other PD lines and gives excellent combinations of fiber quality and yield. Pee Dee 6520 is extremely susceptible to the fusarium-wilt (caused by Fusarium oxysporum F. spp. vasinfectum) rootknot-nematode complex (Meloidogyne spp.), and to verticillium wilt (caused by Verticillium spp.).

Although Pee Dee 4461 produces lower yields than southeastern cultivars, the breeding stock possesses unusually high fiber elongation, and is an excellent combiner for yield and fiber properties. Pee Dee 4461 is from the increase of seed from a single F₀ plant selection.

Pee Dee 4461 was developed from the cross of Coker 421 × PD 4398. Pee Dee 4398 was developed from the cross of FTA 263 × 'Atlas'. FTA 263 was developed from a complex series of crosses involving Triple Hybrid 108 and 171, AHA 6-1-4, Earlstaple, and Sealand 542 in the Pee Dee breeding program. Atlas was developed from related material in the Georgia Agricultural Experiment Station cotton breeding program. Pee Dee 4461 is from the increase of seed from a single F₀ plant selection.

Pee Dee 4461 possesses excellent fiber properties with unusually high fiber elongation. It combines well with other PD lines and gives excellent combinations of fiber quality and yield. Pee Dee 4461 is extremely susceptible to the fusarium-wilt (caused by Fusarium oxysporum F. spp. vasinfectum) rootknot-nematode complex (Meloidogyne spp.), and to verticillium wilt (caused by Verticillium spp.).

Pee Dee 9241 was developed from the cross of Coker 421 × PD 4398. Pee Dee 4398 was developed from the cross of FTA 263 × 'Atlas'. FTA 263 was developed from a complex series of crosses involving Triple Hybrid 108 and 171, AHA 6-1-4, Earlstaple, and Sealand 542 in the Pee Dee breeding program. Atlas was developed from related material in the Georgia Agricultural Experiment Station cotton breeding program. Pee Dee 9241 is from the increase of seed from a single F₀ plant selection.

Pee Dee 9241 possesses excellent fiber properties with unusually high fiber elongation. It combines well with other PD lines and gives excellent combinations of fiber quality and yield. Pee Dee 9241 is extremely susceptible to the fusarium-wilt (caused by Fusarium oxysporum F. spp. vasinfectum) rootknot-nematode complex (Meloidogyne spp.), and to verticillium wilt (caused by Verticillium spp.).

Pee Dee 9363 and Pee Dee 9364 were developed from a complex composite cross involving 'Carolina Queen', Triple Hybrids 108 and 171, AHA 6-1-4, Earlstaple, Sealand 542, and C 6-5. Each line is from a single F₀ plant selection.

Pee Dee 9363 and Pee Dee 9364 produce yields equivalent to Coker 201, but their fibers are 20% stronger. Other agronomic and fiber properties of Pee Dee 9363 are equivalent to Coker 201, but those of Pee Dee 9364 are superior.

These five breeding lines are derived from crosses with southeastern commercial cultivars, Coker 421, Atlas, and Carolina Queen. Although numerous crosses of this type have been made, this is the second series of crosses that have led to improved breeding lines. Studies indicate the success in breaking the genetic linkages that control the negative association between lint yield and fiber strength.

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