REGISTRATION OF ‘DELCOT 344’ COTTON

‘DELCOT 344’ cotton (Gossypium hirsutum L.) (Reg. no. 90) was developed at the Missouri Agricultural Experiment Station, Delta Center, Portageville, MO, and released in 1986. The experimental designation was Mo78-344.

Delcot 344 is composed of a 1:1:1 bulk of three similar BC\(_1\)F\(_2\) progeny rows from the cross of ‘Coker 310’ × multiple disease resistant (MDR) Delcot lines. Coker 310 was chosen as the recurrent parent to enhance adaptation. The Delcot MDR lines were selected from a complex germplasm pool developed from a series of crosses involving ‘Delcot 277’, ‘MoDel’, ‘Auburn 56’, ‘Oklahoma 20’ and 101-102B. The Sequential Inoculation Selection (SIS) system (1, 2) was used to select MDR plants in the greenhouse and artificial or natural infestations were used in the field.

Delcot 344 is a full-season cultivar intermediate in maturity between ‘Delcot 311’ and ‘Stoneville 506’. It has produced lint yields competitive with commercial cultivars and is best adapted to the midsouth and northern Mississippi Delta.

Delcot 344 is resistant to races 1, 2, 7, 10, 11, 12, and 18 of bacterial blight [caused by Xanthomonas campestris pv malvacearum (Smith) Dye]. It is resistant to Fusarium wilt [caused by Fusarium oxysporum Schlect f. sp. vasinfectum (Atk.) Snyd. and Hans.] and tolerant to root-knot nematodes [caused by Meloidigyne incognita (Kofoid and White) Chitwood]. Although symptoms of Verticillium wilt (caused by Verticillium dahliae Kleb) are more obvious than those on the resistant Delcot 311, Delcot 344 has produced superior lint yields when both are grown on infected soil.

Delcot 344 has outstanding storm resistant open bolls and heavily fruited plants resist lodging. Plant height is similar to Delcot 311 but taller than Stoneville 506. It produces smaller seed than those of Delcot 311 and Stoneville 506 but has intermediate size bolls. Lint fraction equals that for Delcot 311 but is greater than that of Stoneville 506. Fiber is longer than that of Delcot 311 and Stoneville 506 and is very uniform with a micronaire similar to Delcot 311. Fiber and yarn strengths are superior to that of Delcot 311 and Stoneville 506.

Breeder and foundation seed will be maintained and will be available from the Foundation Seed Project, Department of Agronomy, Missouri Agricultural Experiment Station, Columbia, MO 65211.