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Registration of Crop Cultivars

REGISTRATION OF TOUCHDOWN KENTUCKY BLUEGRASS[1]

(Reg. No. 14)

T. F. Rewinski, A. M. Radko, W. K. Wiley, M. C. Pick, and C. R. Funk[2]

'TOUCHDOWN' Kentucky bluegrass (*Poa pratensis* L.) was developed by the National Golf Links of America in cooperation with the U.S. Golf Association Green Section, the New Jersey Agric. Exp. Stn., and Pickseed West, Inc. Its experimental designation was NJE P-143. The first certified seed was harvested in 1974.

Touchdown was selected from the ninth fairway of the National Golf Links of America, Southhampton, N. Y. An attractive, vigorous, moderately dark green patch of grass approximately 9 m in diam. was observed to give outstanding performance over a period of years under close-cut fairway maintenance. Examination of the site indicated that Touthdown most likely originated as a single plant which persisted and spread to its present size. Field-grown, spaced-plant seed progenies were very uniform with over 90% of the plants being indistinguishable from their maternal parent. This indicates a high level of apomictic reproduction.

Touchdown is a moderately low-growing, turf-type cultivar with a bright, moderately dark green color, good density and medium texture. Under New Jersey conditions, Touchdown has produced an attractive, aggressive, persistent turf of good density and vigor under medium levels of turf maintenance. The cultivar has demonstrated good resistance to leaf spot and crown rot disease caused by *Helminthosporium vagans* Drechsler, the stripe smut disease caused by *Ustilago striiformis* (Westend.) Niessl, and the leaf rust disease caused by *Puccinia poaenemoralis* Otth. It has shown moderate to good resistance to many races of powdery mildew caused by *Erysiphe graminis* Pers. It has been susceptible to stem rust caused by *Puccinia graminis* Pers.

Touchdown appears well suited for lawns, parks, and sports turf in most regions where Kentucky bluegrass is well adapted. It appears to be compatible and highly useful in blends with most other Kentucky bluegrass cultivars and in mixtures with fine fescues and improved, turf-type perennial ryegrasses.

Seed propagation is limited to two generations of increase from breeder seed, one each of foundation and certified. Breeder seed is produced in spaced-plant nurseries under the direction of the New Jersey Agric. Exp. Stn.

A U.S. certificate of plant variety protection number 7400066 has been issued for Touchdown. The cultivar has been assigned licence No. 1593 in Canada.

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[2] Superintendent, National Golf Links of America, Sebonac Inlet Road, Southhampton, NY 11968; National research director, U.S. Golf Association Green Section, Highland Park, NJ 08904; president Pickseed West, Inc., Box 888, Tangent, OR 97389; vice president Otto Pick and Sons Seeds Ltd., Box 126, Richmond Hill, Ontario, Canada; and research professor of turfgrass breeding, Soils and Crops Dep., Rutgers Univ., respectively.

REGISTRATION OF ACALA 1517C COTTON[1]

(Reg. No. 64)

D. D. Davis, N. R. Malm, Glen Staten, R. L. Wood, and G. N. Stroman[2]

'ACALA 1517C' is the cultivar designation given to three separate strains of cotton (*Gossypium hirsutum* L.) of similar parentage and plant type. It has been widely grown throughout the world and may be considered as the basic type for 'Acala 1517' cultivars. The original cross was made in 1935 at New Mexico State Univ. The pedigree record was lost by fire, but the parents are believed to be of the same general family[3] as the original Acala 1517 which was released in 1938. Pedigree line selection was practiced through 1947 when line 7133 was bulked, tested for 4 years and released as the original Acala 1517C in 1951. Selection was continued in this same material resulting in strain 8893, which replaced the original in 1954.

Further selections were made within the variety cultivar in 1954. After 3 years of testing, strain 1028 was released as the final refinement of the cultivar in 1958.

A moderate increase in resistance to *Verticillium* wilt was the main reason for the release of the newer strains. In parts of the world each of these strains may still subsist, depending on the original seed source and method of propagation.

When grown in its area of adaptation, Acala 1517C is medium to medium-late in maturity. It is one of the tallest commercial cultivars grown in the USA, generally ranging from 1 to 1.25 m in height. At spacings normally used in commercial production, the fruiting branches are of medium length, and there is no strong tendency for vegetative branches to develop. The bolls usually have five locks, are very broad, ovate, and pointed when green, and average 7.5 g of seed cotton when mature. Acala 1517C is considered mildly resistant to *Verticillium albo-atrum* Reinke and Berth, but is fully susceptible to races 1 and 2 of *Xanthomonas malvacearum* (E. F. Smith) Dows.

Seed of Acala 1517C are medium-large and the cultivar has excellent seedling vigor.

The fiber is generally in the 1-1/8 in. to 1-5/32 in. American staple length classes, with high strength for an upland cotton. Averages of hand-picked field samples show it to have a 2.5% span length of 31 mm, with a bundle strength of 211 N m/Tex and an average micronaire of 3.7. The tensile strength of Acala 1517 types is lowest, when grown in its original center of adaptation (New Mexico) and is often significantly higher when grown in hotter (Arizona and California) or cooler (Texas High Plains) locations.

Acala 1517C adapts primarily to the drier irrigated areas where the minimum night temperatures for the blooming period are 17 to 23 C. Optimal maximum temperature is around 35 C, although occasional days of 40 C are tolerated fairly well. Acala 1517C probably has the highest level of tolerance to high temperatures that is to be found in the Acala 1517 series of cultivars.

Small quantities of breeder seed will be maintained by the New Mexico Agric. Exp. Stn.

[1] Registered by the Crop Science Society of America. Accepted 23 Sept. 1977.

[2] Associate professor, professor, professor emeritus, associate professor, and professor emeritus, Dep. of Agronomy, New Mexico State Univ., Las Cruces, NM 88003.

[3] Staten, G. 1971. Breeding Acala 1517 cottons, 1926 to 1970. New Mexico State Univ. College of Agric. Home Econ. Mem. Ser. No. 4. 48 p.

REGISTRATION OF ACALA 1517V UPLAND COTTON[1]

(Reg. No. 65)

N. R. Malm, D. D. Davis, C. R. Roberts, C. E. Barnes, R. L Wood, and Glen Staten[2]

'ACALA 1517V' cotton (*Gossypium hirsutum* L.) was developed by the cooperative work of New Mexico State Univ. and ARS-USDA. The cultivar was the outgrowth of a 15-year effort to produce a high-yielding, wilt-resistant cotton neither excessively leafy nor late in maturity. This cultivar resulted from a cross made in 1956 of 'Acala 2503' × 'Coquette'. Acala 2503 came from a cross of two experimental Acala strains, one of which