was derived from a sister of the original 'Acala 1517'. Coquette was an experimental strain developed at the Louisiana Agric. Exp. Stn. Acala strain 6612 was bulked in 1961, tested for 5 years, and released as Acala 1517 in 1964. The plants of Acala 1517 have a medium-narrow profile, and the locks of the boll are attached to some extent to the burr at the bottom of the lock. These characters make it well adapted to machine harvesting with the spindle picker. This cultivar has a relatively high level of resistance to *Verticillium albo-atrum* Reinke and Berth, and is moderately resistant to *Fusarium* wilt. It is susceptible to *Xanthomonas malvae-carum* (E. F. Smith) Dow. Acala 1517 is similar in height to 'Acala 1517C'. Bolls are ovate and average 7.1 g of seed cotton as compared to 7.5 g for Acala 1517C. Seeds are quite fuzzy and medium large (15.7 g/100). Lint percentage averages 86.5, as compared to 86.0 for Acala 1517C. The 2.5% span length averages 31.0 mm as measured on the digital fibrograph. Tensile strength averages 227 m N/Tex as measured on the stelometer. At the time of release, Acala 1517-70 deviates in several particulars from the original Acala 1517 type as described for 'Acala 1517C'. When grown in New Mexico, the plants are about 8% shorter than Acala 1517C and wider in profile. The leaves are generally slightly smaller and more numerous. Vegetative (monopodial) branches are more numerous but individually smaller than those produced by Acala 1517C. Bolls of Acala 1517-70 are more narrowly ovate and average only 7 g of seed cotton as compared to 7.5 g for Acala 1517C.

Seeds are quite fuzzy and medium-large, and the lint percentage averages 37 for hand-picked samples as compared to 36 for Acala 1517C. Acala 1517-70 is slow in coming into bloom, but fruits very rapidly in mid-season and is medium in maturity for an Acala type. Acala 1517-70 does not yield as well as Acala 1517C when planted in the hot valleys of Arizona and California but is more tolerant of marginally cool conditions and in some seasons has performed very well on the Southern High Plains of Texas. Probably owing to tolerance of low temperatures, Acala 1517-70 matures bolls well into the autumn months and averages about 0.2 to 0.3 higher in micronaire than Acala 1517C. Acala 1517-70 produces premium quality fiber averaging 50.5 mm in 2.5 span length, generally classing as 1/1-1/8 in. staple. Fiber elongation is lower than for other Acala types, but the tenacity strength is excellent, averaging about 220 m N/Tex as measured on the stelometer when grown in New Mexico.

Seed will be maintained by the New Mexico Agric. Exp. Stn.

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REGISTRATION OF Acala 1517-70 COTTON

(Reg. No. 66)


'Acala 1517-70' cotton (*Gossypium hirsutum L.*) is the result of many years of over 7,000, and selection with the objectives of combining high yield and fiber quality with practical levels of resistance to the two major diseases of cotton in New Mexico. The cross from which Acala 1517-70 was developed was made in 1961. The bulked progeny was tested for 4 years under the experimental designation, B3604, and released in 1970. Included in the ancestry of Acala 1517-70 are the cultivars 'Hopicala' and 'Acala 49' and experimental strain 9136 which was derived from the cross of *G. barbadense* 'Tanguis' into Acala *lupium* (E. F. Smith) Dow. Also included in the pedigree is 'Hartville', an American southeastern type of obscure origin. All four parents may have contributed to the high level of field resistance to *Verticillium albo-atrum* Reinke and Berth, that is characteristic of Acala 1517C. The resistance to races 1 and 2 of *Xanthono- mos malvae-carum* (E. F. Smith) Dow. was derived from the Acala 9136 parent. Acala 1517-70 was the first wilt and blight-resistant cultivar to outyield, under disease-free conditions, the susceptible cultivars that it replaced.