

Acala Types Merit

Growers' Favor

ACALA 44 vs DELTAPINE 15

Robert E. Briggs

The entire future of the Arizona cotton industry may well depend on variety selection.

The Acala type varieties have always been the principal upland cotton types produced in the irrigated areas of the Southwest. The Acala varieties are known for their high fiber strength and good fiber length. Cotton buyers depend on the Southwest to obtain cotton with these good fiber properties. Arizona cotton has a "quality" reputation, bestowed by the cotton buyers and textile mills.

Varieties other than the Acala types are constantly being tried by cotton growers. In recent years the Deltapine 15 (DPL-15) variety has been grown as the major variety in the Imperial Valley of California. Very high yields have been reported from that area compared with Acala 4-42, the recommended California variety.

Table 1 — Yield of Acala 44 and DPL-15 grown at the Yuma Experiment Station and the Cotton Research Center*

Location	Variety	Calculated Lint Yield Per Acre	Percent of A-44
		lbs.	
Yuma	A-44	2039	100
	DPL-15	1988	97.5
CRC	A-44	1044	100
	DPL-15	1035	99

*Averages for 1956 and 1957 at Yuma and for 1956, 1957 and 1958 at the CRC.

Fair Comparisons Made

Variety tests of various non-Acala types have been made the past three years in Arizona at the Yuma Branch Experiment Station and at the University of Arizona's Cotton Research Center. Acala 44 (A-44) has been included in these tests as a check variety. The DPL-15 variety and A-44 were tested at both locations in all three years.

Yield and fiber data for A-44 and DPL-15 are shown in accompanying tables. Yield data were not included for the 1958 test at Yuma because of an unsatisfactory stand for yield comparisons.

Lint yields of A-44 and DPL-15 have been nearly equal at Yuma and at the

Dr. Briggs is an assistant professor in the Department of Agronomy.

Cotton Research Center as shown in Table 1. The production level at Yuma was nearly twice as high as at the Cotton Research Center. Yields of DPL-15 when grown in Arizona have not shown a significant difference compared with A-44 in University of Arizona variety tests.

Some of the fiber properties and other characteristics of A-44 and DPL-15 are shown in Table 2. First pickings were made for all three years at both locations with second pickings in 1957 and 1958. Fiber properties were close enough at both locations so averages of both locations are shown in Table 2.

The lint per cent of DPL-15 is approximately 1½ per cent higher than A-44. Lint per cent is nearly the same for each variety with both pickings.

DPL Has Smaller Bolls

Boll size of DPL-15 is much smaller than A-44, thus it takes more bolls of DPL-15 to make a pound of seed cotton. This also means that costs of hand picking could reasonably be expected to be more expensive with DPL-15 than with A-44.

Acala 44 is approximately 1/32 inch longer in fiber length than DPL-15. The difference is even greater later in the season as shown in the second picking, in Table 2.

Fiber strength of A-44 is greater than DPL-15. Fiber strength is the main factor

in determining yarn strength. The Acala varieties are outstanding in their high fiber strength compared to the southeastern varieties.

Deltapine 15 is expected to have a coarser fiber than A-44. This is true in the first picking data; however, in the

Table 2 — Fiber properties of Acala 44 and DPL-15 grown at the Yuma Experiment Station and the Cotton Research Center

Variety	Lint %	Bolls per Pound of Seed Cotton	Length UHM	Fiber Strength‡	Fiber Fineness‡
First Picking*					
A-44	36.8	66	1.08	3.39	4.57
DPL-15	38.2	81	1.05	2.96	4.98
Second Picking†					
A-44	36.7	64	1.07	3.13	4.33
DPL-15	38.1	90	1.02	2.77	4.14

*Averages for 1956, 1957 and 1958 at both locations.

†Averages for 1957 and 1958 at both locations.

‡The larger number indicates greater strength or coarser fiber.

second picking A-44 was coarser than DPL-15. Acala 44, therefore, had a more uniform Micronaire reading than DPL-15.

Machine Harvest Hazard

Other factors are important in the comparison of A-44 and DPL-15. Acala 44 is a tall-growing variety which may lodge when the boll load is heavy. Deltapine 15 is shorter in height than A-44 and it usually lodges when grown under irrigated conditions. Seed cotton is held tightly in the boll of A-44, giving it good storm resistance. On the other hand, DPL-15 has little storm resistance and tends to "string out" badly. Machine harvesting could be less satisfactory and lint quality lower for DPL-15 than A-44.

However, the most important consideration is market reputation. With the Acala cottons, Arizona has a reputation for producing and marketing a cotton with known fiber qualities of uniform strength and fineness.

A Good Reputation Is Precious

It is basic in agricultural marketing — whether the product is butterfat, beef, wheat or maple sirup — that a reputation for a quality product, a uniform product, is slowly earned and very precious. It can be lost quickly if uniformity and quality are replaced by varied quality, by the marketing of products with varied characteristics. An entire producing area can have a "quality" reputation — and lose it overnight. Buyers will shun the area from which come products lacking uniformity and a straight known level of quality.

Mill men and buyers have become familiar with the Acala varieties grown in Arizona. It has taken a number of years to establish a good reputation. There should always be a demand for the Acala varieties with their high fiber strength.

Improvements Will Continue

Cotton producers in the irrigated Southwest should be proud of their high producing, good quality Acala varieties. Plant breeders will continue to improve the existing cotton varieties and more desirable Acala varieties will be released. Cotton growers should consider the importance of growing the Acala types when selecting their planting variety.