

VARIETY EVALUATION FOR THE SAN JOAQUIN VALLEY COTTON DISTRICT
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Objectives: To identify newly developed lines which have a potential for improved yield and quality for the San Joaquin Valley Quality Cotton District

Procedures:

The testing is an ongoing process carried out in two stages. Each year a new group of 36 cottons enters the first stage in small replicated plots at four representative locations. Measurements are made of yield, disease tolerance and other factors affecting production, and fiber quality. Also, miniature spinning tests are carried out to obtain a preliminary estimate of yarn quality. At the end of this first year a cotton is either advanced to the next stage or it is dropped from further testing. Typically, about six of the best performing cottons are advanced each year. These tests are conducted at eight locations in large field length plots. In addition to the previous measurements, large scale spinning tests using fine count yarns provide the ultimate test of processing performance. After three years of testing, one in the screening and two in the advanced, a cotton is eligible to be approved for production if it is found to meet or exceed the existing standard, currently GC-510.

Results:

Since the law change in 1979 providing for private breeding, more than 300 cottons from a half dozen firms have entered the testing program. Of these, eleven have been approved for commercial production. The latest of these, CPCSD C-2881 and Chembred CBX-7, received approval following the 1990 season. Yield and some of the important quality characteristics, averaged over two years of advanced testing, are shown in the following table.

Variety	Pounds lint per acre			
	Little or no Vert. wilt	Mod. wilt	Heavy wilt	Combined locations
	<i>6 loc's</i>	<i>2 loc's</i>	<i>8 loc's</i>	<i>16 loc's</i>
GC-510 standard	1260	1432	1555	1429
C-2881	1307	1408	1557	1445
CBX-7	1291	1455	1515	1424

Variety	Fiber				Yarn combed 50's	
	Length inches	Strength gm/tex	Maturity %	Fineness millitex	Strength B.F.	Non-uniformity CV%
GC-510 standard	1.12	29.3	89.8	155	2604	22.2
C-2881	1.15	31.1	82.9	151	2770	21.8
CBX-7	1.15	30.2	83.3	155	2574	22.4

Future plans:

For 1991, thirty-six entries will be accepted into the screening tests and a total of 15 entries will be in the large scale tests. Four of these are advances from the 1990 screening tests, eight are carryovers entering the final year and, for comparison purposes, three are previously approved cottons including the standard.

With recent legislation permitting commercial Pima production, a testing program will be initiated in 1991 paralleling the Acala program but on a smaller scale. Seventeen entries, including Pima S-6, which has been designated the initial standard, will be in screening tests at the Shafter Field Station and the West Side Field Station. Nine entries will be tested at four locations in large scale tests. Measurements of production and fiber and yarn quality appropriate to Extra Long Staple cottons will be carried out.