

1971 NARROW-ROW UPLAND COTTON VARIETY TESTS

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Two variety tests were conducted at the Cotton Research Center, Phoenix in 1971 with two rows planted 14 inches apart on 40-inch beds. One test included nine early maturing varieties primarily developed for Texas growing conditions. The other test was with longer season varieties including Arizona Experimental 6401, Deltapine 16, and Stoneville 213.

The experiments were planted on April 3, 1971. Because of differences in seed size and quality between varieties, there was quite a range in final plant population. Four beds were planted per variety with four replications and a plot length of 545 feet.

A preplant herbicide application was incorporated using Treflan at 1 1/2 pints per acre and Karmex at 1 1/4 pounds per acre. Excellent weed control was obtained with no cultivation. A few weeds were hand chopped during the season. Thirty-five pounds of nitrogen was applied preplant and 50 pounds was side dressed in early June. Irrigation was applied with the normal farm schedule for conventionally planted cotton except for the last irrigation date. The early maturing variety test received the final irrigation on August 14. The final irrigation was applied August 31 for the long-season variety test. Excellent insect control was obtained in these tests resulting in essentially no yield loss by insects.

The two middle beds were stripped with an Allis-Chalmers stripper to determine yield. The seed cotton was weighed and samples were taken to determine gin turnout.

The final plant populations and yields obtained for the short- and long-season variety tests are shown in Tables 1 and 2, respectively.

Large differences resulted in plant population between varieties with the short-season variety test. This should be considered when making comparisons between varieties. We had originally desired a final population of 60,000 to 70,000 plants per acre. With the exception of three varieties, yields for the short-season entries were about two bales per acre. The varieties Deltapine 16 and Stoneville 213 produced an excellent yield of approximately three bales lint per acre.

The results of these experiments indicate that excellent cotton yields can be obtained using two rows per 40-inch bed. Better yields were obtained with Arizona adapted varieties than with the short-season types. In addition to having a shorter growing season, these varieties are probably not adapted to Arizona temperatures.

Table 1. Yield and plant populations of a short-season cotton variety test planted two rows/40" bed at the Cotton Research Center, Phoenix, 1971.

Variety	Plants/A	Calculated lint yield in lbs/A
Anderson Clayton 1764	26,000	1,046
Dunn 56C	50,000	998
Dunn 118	39,000	1,147
Dunn 119	26,000	876
Lambright X-15, 3A	39,000	571
Lambright X-15, 5A	46,000	784
Lockett 4789	68,000	978
Stripper-Cala N	62,000	975
Stripper-Cala S	43,000	986

Table 2. Yield and plant populations of three long-season cotton varieties planted two rows/40" bed at the Cotton Research Center, Phoenix, 1971.

Variety	Plants/A	Calculated lint yield in lbs/A
Arizona Expt. 6401	68,000	1,301
Deltapine 16	79,000	1,505
Stoneville 213	64,000	1,487