

Narrow Row Cotton Evaluation, Marana Agricultural Center

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ABSTRACT

In a preliminary, unreplicated test, cotton was planted in 40 inch and 27 inch rows on April 10 and again on May 1. Narrow rows outyielded 40 inch rows at both planting dates. The yield difference between the row spacing treatments was greatest in the May 1 planting. Both row spacings had higher yields when planted on the later date, as did both the DPL 90 and ST506 varieties used in the test.

INTRODUCTION

This test was conducted at the Marana Agricultural Center in Marana, Arizona. The row spacing and planting date treatments were not replicated because there was no harvester available to pick the narrow row cotton. Twenty-seven inch rows were used for the narrow row treatment so that three rows would nearly fit the 80 inch track width of the tractors at the Marana Agricultural Center.

The seeding rate was approximately 16 lbs/A for all treatments. Within each row spacing and planting date, DPL 90 and ST 506 varieties were planted in randomized complete blocks within the treatment. Plots were 50 feet long, separated by 5 foot alleyways, and replicated 4 times.

Normal cultural practices for the Marana Agricultural Center were followed, except that the narrow rows did not receive a layby application due to a lack of suitable equipment.

Yield data were taken by hand picking subplots within the test. Turnouts are based on laboratory ginning results.

RESULTS

Yields in this experiment ranged from 1110 pounds per acre to 2210 pounds per acre (Table 1). Narrow rows outyielded 40 inch rows at both planting dates. Both row spacings and both varieties yielded more lint in the late planting than in the early planting. But because the row spacings and planting dates were not replicated, no statistical confidence can be placed on these observations.

Varieties were replicated within each row spacing and planting date. The only significant difference detected was in the 40 inch rows planted on April 10, with DPL 90 outyielding ST 506.

Table 1. Lint Yields per Acre by Planting Date, Row Spacing, and Variety. Marana Agricultural Center, 1986.

Row Spacing	<u>April 10 Planting</u>		Row Spacing Average
	DPL 90	ST 506	
27 Inch	1720	1470	1595
40 Inch	1380	1110	1245
Variety Average	1550	1290	
Planting Date Average			1420

Row Spacing	<u>May 1 Planting</u>		Row Spacing Average
	DPL 90	ST 506	
27 Inch	2050	2210	2130
40 Inch	1560	1360	1460
Variety Average	1805	1785	
Planting Date Average			1795