Table 2. Yields of Seed Cotton in Pounds per Acre, 1966

Method of Planting	Date of Planting										Average two Varieties
	Mar. 10		Mar. 19		Apr. 4		Apr. 16		Apr. 28		
	4-42	DPL	4-42	DPL	4-42	DPL	4-42	DPL	4-42	DPL	
Mulched	5533	5100	5377	5817	4996	5242	4320	5063	3887	4816	5016
Irrigated Up	4947	5660	4936	6161	4607	5492	4436	4585	3607	4383	4882
Average	5240	5380	5157	5989	4802	5367	4378	4824	3747	4600	4949
	5310		5573		5085		4601		4174		

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DRY PLANTING WITH AN EXPERIMENTAL BED SHAPER

M. D. Cannon, Associate Agricultural Engineer
K. R. Frost, Agricultural Engineer

This was basically a test of an experimental bed shaper-incorporater-planter combination. The test incorporated three planting dates, two methods of planting (wet and dry), and two synthetic strip mulches.

Planting dates and methods were as follows: (1) dry planted, watered up March 18, (2) planted in moisture on March 25 and, (3) dry planted and watered up on March 30.

The two mulches were: (1) petroleum mulch sprayed in a six-inch band over the drill and, (2) petroleum coke (dry) applied in a two-inch band over the drill.

Neither date nor method of planting resulted in any significant increase in yield, although the earlier dates resulted in higher yields. There was a difference due to mulching treatment; the coke and the check resulted in higher yields than the petroleum mulch. This was probably due to poor stands in the petroleum-mulch treatment.

Results are shown in the following table. Figures are seed-cotton yields, first picking, pounds/acre.

Second picking yields were very light, approximately 300 pounds of seed cotton per acre.

Planting Method and Date	Type of Mulch Used			Mean
	Coke	None	Petroleum	
Shaped beds, Planted dry, Watered up March 18	4,130	3,635	3,735	3,833
Planted in moisture, Conventional method, March 25	3,825	4,054	2,793	3,557
Shaped Beds, Planted dry, Watered up March 30	3,577	3,670	3,526	3,591
Mean for Mulch Treatment	3,884	3,786	3,351	3,660

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MOISTURE-COMPACTION TESTS

M. D. Cannon, Agricultural Engineer

An experiment was designed to evaluate the effect of soil moisture and compaction pressure on seedling emergence. A clay loam soil was used.

Four levels of moisture, 14, 16, 18, and 20 percent were used in combination with four compaction pressures, 0, 1/2, 1, and 2 pounds per square inch. Previous tests had indicated that pressures above 2 p.s.i. would inhibit emergence.

Results from this test indicated that any combination of compaction and moisture within these ranges were optimum for emergence.

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COMPACTION REDUCES COTTON PRODUCTION EFFICIENCY

C. R. Farr, Agricultural Extension Agent, Maricopa County

Compaction lowers the efficiency of cotton production. Some of the yield decline in fine-textured soil areas appears to have been caused by loss of desirable soil structure.

Timeliness in field operations may reduce the amount of damage caused by compaction. Tests in a demonstration field having clay loam soil showed that waiting 10 days after an irrigation before cultivating was desirable.