

LAVEEN LOAM

Robert Eastman & Sons - Buckeye, Arizona

	Seed Cotton, Per Plot			Lint Per A. 1st Pick	Lint Per A. 2nd Pick	Total Lint Per A.
	1	2	3			
Late 9- 4	7750	8435	7920	1440	163	1603
Early 8-29	7150	7055	6760	1148	229	1377

LAVEEN SANDY LOAM SOIL

Hayden Farms - Buckeye, Arizona

	Seed Cotton, Per Plot				Lint Per A. 1st Pick	Lint Per A. 2nd Pick	Total Lint Per A.
	1	2	3	4			
Late 9-14	1300	1360	1380	1280	1221	185	1406
Early 9- 2	1130	1250	1160	1080	1084	108	1192

CROP HISTORY

**Robert Eastman & Sons:** SOIL TYPE: Laveen Loam. PREVIOUS CROP: Safflower. PLANTING: April 18 at 18 pounds seed. HERBICIDE: 2 pints Prowl. FERTILIZER: 200 pounds 16-20-0 preplant, April 12. Sidedressed 200 pounds urea, July 4. IRRIGATION: May 3, May 12, June 4, June 25, July 12, July 24, August 5, August 19, August 29, September 4. Total 8.9 acre-feet. INSECTICIDES: 10 pounds Temik, 6 applications. DEFOLIATION: October 15, November 6. HARVEST: November 14, December 19.

**Hayden Farms:** SOIL TYPE: Laveen Sandy Loam. PREVIOUS CROP: Cotton. PLANTING: April 12 at 14 pounds seed. HERBICIDE: 1 pint Prowl. INSECTICIDE: 6 applications. IRRIGATION: 12 applications, 7 acre-feet. DEFOLIATION: October 12, October 21. HARVEST: November 4, November 24.

A Very Low-Pressure Center Pivot Irrigation System for Cotton

D. D. Fangmeier, Agricultural Engineer

A center pivot irrigation system was converted to a low-pressure system using furrow drop tubes and low pressure spray heads. It was installed at the Marana Farm. Circular furrows were listed under the system with a drop tube for every other furrow. Checks were placed in the furrow 6 to 8 feet apart to hold irrigation water and rainfall. The circular furrows allowed the drop tubes to follow a furrow and placed the water directly in the furrow bottom. The wheel tracks were dry so traction problems were avoided on the clay loam soil.

The system was evaluated for uniformity and coefficients averages 0.9. This indicates a very good uniformity of water distribution.

DP 55 was planted April 24. The first irrigation after planting was applied June 4. The last irrigation was applied September 8. A total of 14.5 inches of water was applied. This was too low because of management problems with the new system and resulted in a yield of only 570 lbs. of lint acre. Because of the water delivery capabilities of the system, high yields should be obtained. The study is being continued.