Table II. Sodium Content of Washed Cotton Leaves (% oven dry weight)

Year	Day Sprinkled		Night Sprinkled		Furrow	
	Short Staple	Long Staple	Short Staple	Long Staple	Short Staple	Long Staple
1964	.67	.32	.32	.13	.21	.03
1965	.79	.19	.59	.12	.64	.17

These plots have proven their value with respect to sprinkler irrigation of cotton with saline water. It is expected that the project will be revised and that the experimental layout will be utilized for similar tests with other crops.

* * * * *

Sprinkler Irrigation Using Sequa-Matic and Solid Set Systems on Cotton versus Surface Irrigation

K. R. Frost

Two years of operations have been completed in 1965. Cotton yields from the sprinkled areas were approximately the same as for the surface irrigated area in 1964. The Sequa-Matic system used in the 1964 season operated quite efficiently and proper water applications were made throughout the season. Since all pipe was installed at the beginning of the season no labor except for throwing the switch was involved with the sprinkler system. About 2 man-hours per acre were required to irrigate the surface irrigated plots.

In 1965 the system was changed to solid set with a low application rate for 36 hours. About 75 percent of the water was used by the sprinklers both seasons to grow the equivalent crop of cotton compared with the check plots using surface irrigation. Labor involved with the Sequa-Matic System or solid set was negligible compared to that for surface irrigation.

Over a period of years the savings in water and labor with these two systems tested or the equivalent in a mechanical move should offset the cost of the system and cost of pumping against line pressure. No great increase in yields is expected in general by use of sprinklers especially on the medium soils used in these tests.

1965 Cotton Yields

Treatment	Yield (lb) Seed Cotton	Irr. Appl. Ac. ft./Ac	Yield lb/Ac. ft.
Sprinkler	3165	3.03	1055
Surface	2875	3.88	740