

FINAL IRRIGATION TESTS

Charles R. Farr, Maricopa County

Replicated field tests of various final irrigation dates were made in 1965 and 1967 on medium to heavy soil types. In both years early September final irrigation produced little or no yield increase over mid-August dates in Gila silt loam or Mohave clay loam. These have been related to farming practices where October irrigation commonly occurred.

Non-replicated tests in 1968 on sandy loam in variable-row plantings indicate more cotton production from an early September irrigation. These results are expected since these soils have approximately one-half the water-holding capacity of the previously described soils and alternate-row irrigation was employed. Each application of water in the center furrow only in 32"-48" variable rows may be less than alternate row applications in uniformly spaced rows.

FINAL IRRIGATION TEST NO. 1

Travis Jones - Buckeye. Roosevelt Irrigation District.

Plot Number	No. of Irrig.	Date of Last Irrigation	Yield - lint#/acre			
			1st picking	2nd picking	GPU*	Total
Plot 1	12	Sept. 2	1599	250	275	2124
Plot 2	11	Aug. 22	1428	200	225	1853

Location:	Six miles west of Buckeye
Planting Date:	March 25
Soil Type:	Sandy loam
Planting Pattern:	Variable row
Fertilizer:	200# NH ₃ in water irrigating up 164 units
	100# NH ₃ injected prior to first water 82 units
	100# NH ₃ injected June 15 82 units
	Urea in water July-August <u>30 units</u>
	TOTAL N 358 units
Irrigation Pattern:	Center row only of variable 32-48" rows
Harvest Dates:	First - October 16
	Second - December 24

* Ground cotton

FINAL IRRIGATION TEST NO. 2

Travis Jones - Harquahala Valley

Plot Number	No. of Irrig.	Date of Last Irrigation	Yield - lint#/acre			
			1st picking	2nd picking	GPU*	Total
Plot 1	11	Sept. 4	1437	Not Completed		-
Plot 2	10	Aug. 25	1347	Not Completed		-

Location: Harquahala Valley
 Planting Date: April 23
 Soil Type: Sandy loam
 Planting Pattern: Variable row
 Fertilizer: 200# NH₃ in water irrigating up 164 units
 100# NH₃ injected prior to first water (May 15) 82 units
 100# NH₃ injected June 20 82 units
 Urea in water July-August 30 units
 TOTAL N 358 units

Irrigation Pattern: Center row only of variable 32-48" rows
 Harvest Dates: First - November 1
 Second - (not picked to date)

* Ground cotton

* * * * *

PIMA COTTON IRRIGATION-SPACING-VARIETY TESTS

D. L. KITTOCK, Agronomist, USDA

Two Pima varieties of different adaptation, S-3 (high altitude) and S-4 (low altitude), were tested in irrigation tests at Tempe and Safford. Time of irrigation was determined by soil sampling at Tempe. Wet treatments were irrigated when approximately 50% of the moisture in the top three feet of soil was used. Medium was at 65% used and dry was at 80% used. Irrigation at Safford was on the human judgment basis.

Irrigation treatments were split in four plant population subplots at each location. Plant populations were planned as unthinned, and 6, 12, and 18-inch spacing. All picking was by machine.