

Final Irrigation Timing of Upland and Pima Cotton

C. Farr

ABSTRACT

Irrigation termination trials were continued in 1988 to evaluate a newer, popular upland variety and pima S-6. Irrigation in the first week of September increased the yield of a May planting of DP 77, but not of two trials in 1988 with early April planting dates. A March planting of pima S-6 failed to respond to a 10 September irrigation on Coolidge sandy loam.

INTRODUCTION

Boll weevil infestations have increased to a level requiring a statewide eradication program, which points to a need for better cultural controls. Efficient irrigation termination, which promotes more effective defoliation and earlier harvest without yield losses, is of vital importance. For several years, trials have shown that late August or early September irrigation will often produce maximum yields. Mid to late September irrigation has almost always either failed to increase yields or reduced yields and delayed harvest. There is a need to develop more data on pima S-6 and the new upland varieties because they may occupy major acreages in the near future.

METHODS AND DISCUSSION

Final irrigation dates were compared from a delayed upland cotton planting and an early pima S-6 planting on Coolidge sandy loam. Four replications were harvested at the same time for all dates rather than picking each date as it was open. The pima cotton was first picked 19 October and second picked 6 December; DP 77 was single picked 3 November 1988.

In 1987, irrigation of pima S-6 on 20 August produced as much cotton as an 18 September irrigation on Gilman loam at Laveen. In 1988 a 20 August irrigation was as effective as a 2 September irrigation on Coolidge sandy loam.

In 1987, irrigation 8 September on two sandy loams failed to increase the yield of DP 77. In 1988 there were many replantings and delayed plantings because of cool, wet weather in mid-April. Irrigation of May-planted DP 77 on 8 September 1988 resulted in an additional 43 pounds of upland lint per acre.

Table 1. Irrigation Termination of Pima S-6
Field L-5 on Sandy Loam. Saylor Bros., Buckeye, AZ

Irrigation Final Date	Harvest Date	Lint Turnout	1st Pick Lint/Acre	Total Lint/Acre	Grade
2 Sept	10/19, 11/6	32.45%	1260	1389	2
20 Aug	10/19, 11/6	32.88%	1257	1374	2
14 Sept	10/19, 11/6	32.01%	1231	1345	2
Crop History -- c. c. Soil-Coolidge sandy loam; Irrigation 3/25, 4/6, rain 4/15, 4/23, 5/5, 5/31, 6/1, 6/29, 7/1					

Table 2. Irrigation Termination of DP 77
Field L-9. on Sandy Loam. Saylor Bros., Buckeye, AZ

Irrigation Final Date	Harvest Date	Lint Turnout	Total Lint/Acre	Quality
8 Sept	11/3	32.84%	1399	31-36-40
22 Aug	11/3	33.58%	1356	21-36-39
31 Aug	11/3	33.54%	1332	21-36-39
Crop History: c, c,; Soil-Coolidge sandy loam. Ir- rigation: 5/2, 5/8, 6/3, 6/16, 6/23, 7/1, 7/7, 7/16, 7/24, 7/31, 8/8, Rain: 8/8, 8/22, 8/31, (9/8 trial).				