IRRIGATION TIMING STUDY

J. F. Armstrong

The immediate goal of short season cotton is to reduce the cost of production. The increasing cost of energy has substantially increased the value of water. Tests were conducted to determine the effect of reducing the amount of water used during the season on yield.

Results indicate that there was no significant difference in yield when the first irrigation was delayed. In effect this shows that the irrigation season could be shortened and the number of irrigations reduced. The delayed irrigation treatment received one less water application due to the late date of the first post emergence water application. Also, the delayed irrigation treatment received 6 inches less water.

Similar tests conducted at the Cotton Research Center in Phoenix suggest a delay of two weeks, in applying the first post emergence irrigation, will not reduce yields. The test in Phoenix was conducted for two years on a clay loam soil.

IRRIGATION TIMING STUDY

Tom Clark - Marana — Agent-in-Charge - J. Armstrong

Irrigation Regime	Lint lbs/Acre 1979	Lint lbs/Acre 1980
Delayed	970 a[1/]	1005 a[1/]
Normal	947 a	942 a

1/ Values followed by the same letter are not significantly different at the .05 level by the Student-Newman-Keul's Test.

* Ginned at a commercial gin.

* Planted with ST-825.

C.V.: 1979 Yield = 11.31%; 1980 Yield = 5.07%.

EFFECT OF FINAL IRRIGATION ON UPLAND COTTON YIELD

C. R. Farr

The effect of irrigation termination on yield has received continued evaluation since seasonal variations after responses with Arizona's long seasons. In seventeen tests over a 14-year period early September irrigation increased yield about 50 pounds of lint per acre more than August 15 to August 25 irrigation. In 1979, September mean temperature at Phoenix was 6.4 degrees above normal and September irrigation in ten trials increased yield an average of 102 pounds of lint per acre.

In 1980, record July heat reduced early mid-season sets until late August and September mean temperature at 3.4 degrees above normal aided the late set of cotton for most growers. September irrigation in the Eastman trial on Laveen loam resulted in a 226 pound increase and September 14 irrigation on Laveen sandy loam in the Hayden trials increased yield 214 pounds of lint per acre.