

Effect of PIX[®] and BALANCE[®] on Upland Cotton, 1984.

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The plant regulator, PIX[®], is a commercially available chemical for use on cotton. It modifies the plant architecture and there have been inconsistent yield responses. BALANCE[®] is a liquid fertilizer with an analysis of 1-18-18 manufactured by NA-CHURS Plant food Company.

Experiments were conducted in 1984 at the Maricopa and Marana Agricultural Centers using treatments involving PIX[®] and BALANCE[®]. The variety was Deltapine 62 at Maricopa and Deltapine 55 at Marana. PIX[®] was applied on July 2, 1984 at the rate of one pint/acre at early bloom at both locations when the cotton was 18 to 21 inches tall. Balance was applied at 2 and 3 gallons per acre (gpa) at three dates in mid June, late June and mid July. The plots were four rows wide and 30 feet long with six replications. Plant population was 45,000 and 28,000 plants/acre at Maricopa and Marana respectively.

Beginning in September 1984, open cotton in sub plots 1/1000 acre in size was hand harvested from four replications for a total of six harvests at Marana and seven harvests at Maricopa. Cumulative lint yields of four of the treatments at the Maricopa Agricultural Center are shown in Figure 1.

The treatments with PIX[®] had the highest yields which were statistically greater than the untreated check and the 2 gpa BALANCE[®] treatment beginning with the cumulative lint yields on October 5, 1984 and continuing until the end of the season. The 3 gpa rate of BALANCE[®] with or without PIX[®] were not significantly different than comparable treatments with 2 gpa BALANCE[®] and these data are not included in the figure. The untreated check was not significantly different than the 2 or 3 gpa BALANCE[®] treatments. The PIX[®] treatment was not significantly different than the treatments using 2 or 3 gpa BALANCE[®] plus PIX[®].

With these results in the Maricopa test, one can say that the yield increase was a response to the PIX[®] application with no significant yield change due to BALANCE[®] under the conditions of this experiment. The increased yield of 319 pounds of lint per acre is an impressive increase when the check yielded about 3.75 bales lint per acre.

In the Marana experiment there were no significantly different treatments either during the period of sequential harvest or total harvest. This experiment, however, did have an infestation of root rot which affected growth and final production.

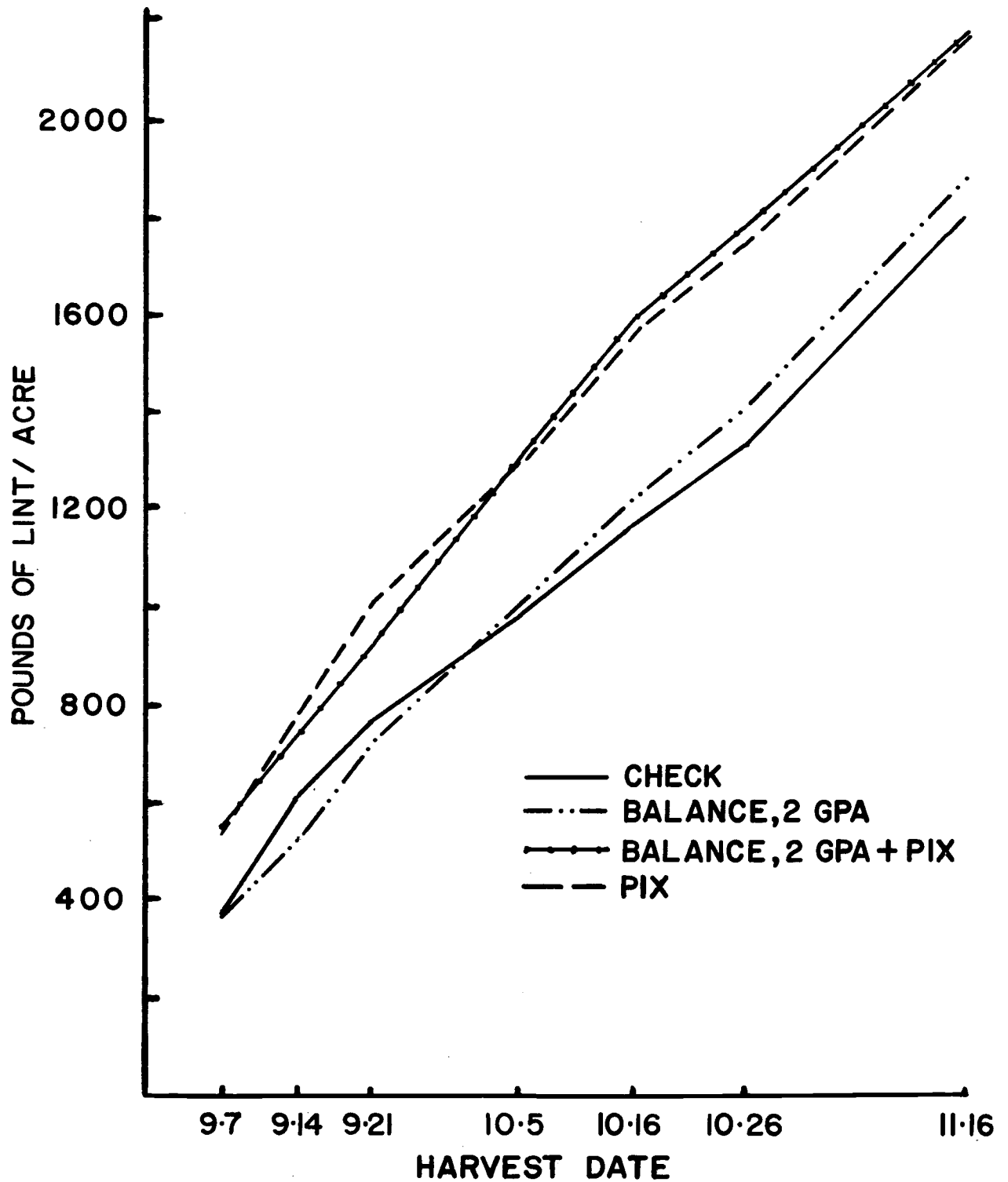


Figure 1. Sequential harvest of cotton treated with BALANCE[®] and PIX[®], Maricopa 1984.