

UPDATE ON EXPERIMENTS WITH PIX™

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The plant regulator PIX™ (Mepiquat chloride) has been evaluated in Arizona for a number of years. Application of PIX has consistently resulted in the dark green leaf color and shorter plant height of treated plants. Yield responses on the other hand have not been consistent. Significant yield increases have been reported along with no yield change or reduced yield.

In an experiment in 1983 at the Maricopa Agricultural Center, foliar and soil applications of fertilizer were used with applications of PIX. Significant yield increases were found using PIX with added nitrogen fertilizer applied to the soil before the first and/or second post plant irrigation. The best PIX treatment had a calculated lint yield of 1,505 pounds per acre which was 9% higher than the control of 1,381 pounds per acre. Testing will be continued to determine if such a response can be repeated.

Some of the conditions for best results with PIX with irrigated cotton appear to be: 1) fields prone to production of tall, rank growth; 2) fields with no plant nutrient stress; 3) management for a shorter season crop which would include narrow-row planting; and 4) to reduce insect stress.

EFFECT OF PIX ON UPLAND COTTON YIELD

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The July growth rate of new variety DPL 90 has concerned numerous growers and growth regulator PIX has been used. Since five previous tests using PIX with other varieties have not increased yield, testing this new variety seemed advisable.

Application of 20 grams active ingredient per acre was made June 25 by ground rig when flowering rate was 4 to 5 flowers per 25 feet of row. Untreated cotton reached heights ranging from 48 to 53 inches on Laveen sandyloam, while PIX-treated plants were 8 to 9 inches shorter by mid-August. Plots were harvested November 6 and December 9 without significant difference in yield.

Hayden Farms, Buckeye

Treatment	Seed Cotton, Lbs.					Lbs. Lint		Total Lint Per Acre
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>1st Pick</u> 1/	<u>2nd Pick</u>	
Check	1620	1620	1580	1680	1580	1529 a	258	1787
PIX 20 gm	1620	1580	1620	1620	1560	1515 a	252	1767

1/ Values followed by the same letter are not significantly different at p=0.05 by Duncan's Multiple Range Test.