

**EFFECTS OF PIX, BAS130W, PIX PLUS, AND PIX ULTRA ON COTTON GROWTH AND LINT YIELD IN THE SOUTH TEXAS COASTAL PLAINS**

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**Abstract**

The objective of this experiment was to compare the effects of multiple applications of four formulations of mepiquat chloride on plant growth and yield. The formulations were: Pix, Pix-Plus, Pix-Ultra, and BASF experimental chemical 130W applied at match-head square and then as needed based on height to node ratio in the plant. The rates were determined using the MEPRT program that uses plant height and number of nodes as inputs. The experiment was planted on 38" rows with DP 33B in a randomized complete block design. The experiment was irrigated according to calculated evapotranspiration. All formulations were applied at the same rates and times. The first application was at match-head square at a rate of 3.0 oz./acre. The second application was a month later at a rate of 9.4 oz./acre. A plant mapping was performed at harvest to determine differences in vegetative and reproductive development.

All four formulations of mepiquat chloride reduced vegetative growth. While all formulations significantly decreased plant height, only Pix and Pix-Ultra showed significant decreases in number of main stem nodes. All formulations increased yield by 3 to 9% compared to the untreated check, but the increases were not statistically significant (figure 1). All formulations increased boll weight versus the check with differences ranging from 4 to 12%, and all differences except the Pix formulation were significant. All four treatments increased the number of open bolls in branches 1-5 and 6-10 through increased fruit retention, but many of the increases were not significant. Fiber micronaire was increased in all formulations, although none of the increases were statistically significant. Pix-Plus significantly increased fiber strength.

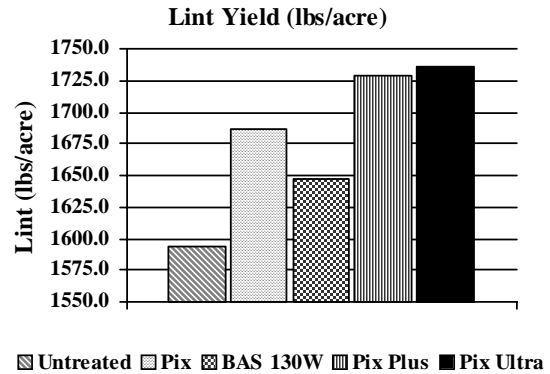


Figure 1. Effects of mepiquat chloride formulations on lint yield.