# FIELD EVALUATION OF PLANT GROWTH REGULATORS FOR EFFECT ON THE GROWTH AND YIELD OF COTTON

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Plant growth regulators (PGRs) have been used to control growth and enhance yield in commercial cotton (*Gossypium hirsutum* L.) production. Studies have been conducted over a four-year period as a continued evaluation of new and existing PGRs for their effect on plant growth, maturity, and yield in Arkansas. Treatments consisted of an untreated control and the following PGRs: Atonik, Crop$^{+2}$, Cytokin, Early Harvest, Maxon, PGR-IV, PHCA, and Pix. Lint yield averaged over a four-year period was increased numerically over the control by all the PGRs tested. In 1996, only Pix and PGR-IV had significantly higher yields than the untreated control. PGRs have been shown in previous years to increase petiole nutrient concentrations. However, in 1996, there were no clear trends. Pix-treated plants reached physiological cutout (NAWF=5) eight days earlier than the untreated control. The remaining PGRs had no clear affect on maturity. This study supplies additional data to further support the use of PGRs in cotton as a useful production practice for controlling plant growth and enhancing yield. The study also emphasizes the need for continued field comparisons under different geographical locations supported by basic studies on mode of action.

Reprinted from the *Proceedings of the Beltwide Cotton Conference*
Volume 2:1476-1476 (1997)
National Cotton Council, Memphis TN