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## Pre- and Post-Anthesis Application of Exogenous Hormones Alters Fiber Production in *Gossypium hirsutum* L. Cultivar Maxxa GTO

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In recent years, crop yield in cotton has remained constant, suggesting that some type of yield plateau has been reached within the existing cotton germplasm. This study examines the effect of exogenous application of indole-3-acetic acid (IAA) or gibberellic acid-3 (GA<sub>3</sub>) on the numbers of fibers produced per ovule. IAA or GA<sub>3</sub> was applied exogenously to either pre- or post-anthesis squares and flowers. Fiber number per ovule was determined over the first 5 d of fiber development. Both pre- and post-anthesis treatment with IAA resulted in significant increases in the number of fibers per ovule, with post-anthesis treatments resulting in the largest increase (58%) in fiber number. Pre-anthesis treatment with GA<sub>3</sub> resulted in an increase in fiber number, whereas post-anthesis treatment with GA<sub>3</sub> resulted in a significant decrease in fiber production. Hormone treatment did not affect ovule length or width, and thus increases in fiber number most likely are due to increases in the proportion of epidermal cells that develop into fibers.