

**THE EFFECTS OF IAA AND GA₃ ON FIBER
INITIATION IN GOSSYPIUM HIRSUTUM,
VARIETY MAXXA GTO**

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Abstract

The effects of IAA and GA₃ on fiber initiation in *Gossypium hirsutum*, variety Maxxa GTO were studied in plant grown ovules. Ovules treated after anthesis with .1mg/L IAA produced a greater number of fibers than ovules treated with 1.0mg/L GA₃ or H₂O. Treatment with .1mg/L IAA before anthesis resulted in an increase in fiber production, when compared to treatments with GA₃ and H₂O. The number of fiber initials was much higher for treatment with IAA after anthesis, than any other method tried in this study. Both hormones (depending of treatment) induce an increase in fiber production as compared to controls. Manipulations of the hormonal levels might be causing the ovules to produce more fibers on the original number of epidermal cells. On the other hand, they might be inducing cell division leading to more epidermal cells therefore greater amount of fiber initiation. These observations indicate that given an appropriate stimulus, ovules from a high fiber producing variety, such as Maxxa can produce a greater number of fibers.