

# **Delayed Roundup Application Affects Maturity and Yield of Bt/RR Cotton. (C03-bishnoi151940-Poster)**

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## **Abstract:**

Use of Roundup at the 4-leaf stage or 4-weeks after planting in transgenic cotton is standard practice but to control more weeds or for other reasons, delays in herbicide application are common. However, the effects of this delayed application on maturity and yield in Bt/RR cotton is not well established. Therefore, the response of Roundup applied after 4,5,6,7, and 8 weeks in ultra-narrow rows (7.5 inch) and conventional rows (38 inch) planted with transgenic cotton was studied. Two years research data showed that Roundup application at 5 or 6 weeks after planting had no significant effect on seed cotton yield and number of opened bolls in comparison to the recommended 4-weeks after planting. Delayed Roundup applications until 7 and 8 weeks after planting decreased seed-cotton yield. Different plant populations between the two plantings of row width caused variation in total open-bolls and in the yield of seed cotton. Plants in conventional row spacing produced more than five bolls/plant and yielded 2,117 lbs. per acre seed cotton, compared to less than 2-bolls/plant with an average yield of 2,035 lbs. per acre in ultra-narrow row cotton. The increased number of plants in the ultra-narrow row system compensated for the low number of bolls per plant. At the 4-leaf stage, an additional spraying at 7 and 8-weeks after planting decreased seed cotton yield. The additional spraying caused greater vegetative growth, higher flower abortion and decreased the yield due to delayed or less boll opening.

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