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CHAPERONE EFFECTS ON BOLLWORM SURVIVAL AND CRY1AC LEVELS IN BT COTTON FLOWERS AND SQUARES

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Abstract

Effects of the cotton growth regulator, Chaperone, on Cry1Ac levels in *Bacillus thuringiensis*-transgenic cotton and subsequent effects on cotton bollworm, *Helicoverpa zea*, survival were examined. To test these effects, 4 replicate blocks of a Bt cotton hybrid were divided into 2, with one randomly selected plot an untreated control and the second plot treated with Chaperone at a rate of 5.0 oz during flowering. At 5 days and 10 days after treatment, 20 2nd instar bollworm larvae were placed singly on caged flowers and 20 were placed singly on caged squares. At the same time, 10 flowers and 10 medium sized squares were collected from each plot for ELISA analyses of Cry1Ac protein content. At 5 days and 10 days after treatment Chaperone did not significantly effect either Cry1Ac levels or bollworm survival (48 hours after placement on plants) or Cry1Ac levels in either flowers or squares. However, bollworm survival was lower and Cry1Ac levels slightly higher on Chaperone treated flowers.