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Impact of Bollworms [*Helicoverpa zea* (Boddie)] on Maturity and Yield of Bollgard Cotton

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A large percentage of Bollgard cotton is treated for bollworms [*Helicoverpa zea* (Boddie)] with little information about economic losses from these infestations. The impact of bollworm infestations on maturity and yield of Bollgard cotton was determined. Infestations of 1-d-old bollworm larvae were established on non-Bollgard and Bollgard cottons in large field cages. Treatments included three and five levels of infestation for 1 to 4 wk in 2002 and 2003, respectively. Bollworms significantly delayed maturity of Bollgard cotton when 100% of white flowers were infested for 1 to 4 wk or when 50% of white flowers were infested for 2 to 4 wk in 2002. When averaged across weeks, bollworms delayed maturity of Bollgard cotton when 100% of white flowers were infested in 2003. Yield responses of Bollgard cotton varied between years, but yields tended to decline as the level of infestation increased each year. There was a significant negative relationship between the cumulative numbers of white flowers infested and seedcotton yields in Bollgard cottons. The resulting regression equation from this relationship had a slope of -1.69, indicating a 1.69 g reduction in yield for every white flower infested. Results of this study will be important for refining action thresholds for bollworms on Bollgard cotton and suggested controls should be initiated before infestation levels reach greater than 25% of white flowers. These data also provide a base of information for predicting yield reductions caused by bollworm infestations in white flowers of Bollgard cotton.