

## **2002 Efficacy of transgenic cotton *Gossypium hirsutum* (L). events on fall armyworm *Spodoptera frugiperda* (J.E. Smith) based on tissue and meredic diet assays**

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The fall armyworm *Spodoptera frugiperda* is a notorious pest of corn and other field crops in the Southern United States, but has been infesting cotton more frequently in the Southern cotton belt the last five years. Cotton varieties containing the endotoxins from *Bacillus thuringiensis* (Cry1Ac = Bollgard®, Cry1Ac + Cry2Ab = Bollgard II®, Cry1F + Cry1Ac = Widestrike™) are available to help producers avoid economic losses from lepidopteran pests and reduce insecticide use, however the adoption and use of this technology in South Texas has been limited. We evaluated the susceptibility of fall armyworms to the single (Bollgard I) and the stacked (Bollgard II/Widestrike) technology using leaf-tissue assay, and found that Bollgard II® and Widestrike™ are highly effective against fall armyworm in causing mortality and rendering the insect a non-threat, but Bollgard I was not significantly different from non transgenic events in terms of mortality or feeding. Our evaluations will continue to determine what the sublethal effects of the toxicants are on the biology of the fall armyworm, and to further evaluate the efficacy.