EVALUATION OF THE RAINFASTNESS OF SELECTED INSECTICIDES IN COTTON

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Abstract

Insect pest management is a critical component of cotton, *Gossypium hirsutum* L., production in the midsouthern U.S. Foliar insecticides remain an important component of integrated pest management in this region and multiple factors can impact their efficacy. Little information is available about the impact of rainfall on the efficacy of foliar insecticides. This is an important aspect of pest management given the unpredictable nature of rainfall during the growing season. To determine the impact of rainfall on insecticide performance, a preliminary experiment was conducted in 2018. Plots were sprayed with chlorantraniliprole and leaves were removed from plants at different time intervals and rinsed with water to simulate rainfall. Each leaf was infested with a second instar fall armyworm, *Spodoptera frujiperda* (J.E. Smith), larva and mortality was rated at 72 hours. Results were highly variable and no definitive conclusions could be determined. As a result, multiple experiments will be conducted over the next two years as a graduate student project to determine the impact of rainfall on the efficacy of selected insecticides. Target pest species will include bollworm, *Helicoverpa zea* (Boddie), and tarnished plant bug, *Lygus lineolaris* (Palisot de Beauvois) with recommended insecticides. Further research is needed to determine the impact of rainfall on the eeicacy of insecticides commonly used for key pests.