AN EVALUATION OF PECTINOPHORA GOSSYPIELLA (LEPIDOPTERA: GELECHIIDAE) PERFORMANCE IN THE FIELD: DOES MOTH SIZE AFFECT RECAPTURE RATE AND MOTH LONGEVITY?

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Abstract

California Department of Food and Agriculture has released sterile pink bollworm, *Pectinophoa gossypiella* (Saunders) (Lepidoptera: Gelechiidae), moths to successfully protect California cotton for over 30 years. Initiation of the Pink Bollworm Eradication Program has resulted in sterile pink bollworm moth releases in Arizona, Mexico, New Mexico, and Texas with similar success. However, increased pink bollworm moth production has resulted in lower moth weight. Reduced moth weight has raised concerns with moth quality and performance. In this study, we evaluated the effects of moth weight on recapture rates and moth longevity in 2 fields near Laveen, AZ. Pink bollworm were reared on artificial diet at 2000 and 4000 eggs per rearing cell to obtain differences in moth weight, for this study. Resulting moths were marked with different colored external dyes and released in the early evening. Moths were released weekly for 5 weeks and moth recapture rate and longevity were recorded. This study suggests moth weight does not affect recapture rates or moth longevity in the field.