

Analyzing Uni-Trap Liner Placement to Considerably Eliminate LBAM Pests

Intern: Zenaida Rodriguez

Mentor: Gregory Simmons

Opportunity: USDA-APHIS



This summer, I was an intern of Dr. Simmons, an entomologist from the USDA's APHIS department. Throughout my internship, I carried out projects geared to the larger effort to eliminate invasive pests like SWD (Spotted Wing Drosophila) and LBAM (Light Brown Apple Moth).

During my internship, my projects taught me about local and East Coast pests like the BTM (Box Tree Moth). BTM is an invasive pest in the United States and has been spreading rapidly in various East Coast states. Many farmers have combated this problem by trapping the pest with Uni-traps that contain Vaportape II kill strips, an organophosphate insecticide. However, to accommodate changed regulations surrounding this insecticide, there's an urgent need for an alternative to the Vaportape II kill strips.

I was assigned to create and test out various lined trap prototypes and their ability to capture LBAM and record the data catch. Throughout my project, my experiment consisted of nearly a dozen uni-traps. These prototypes all used an LBAM pheromone lure, *Epiphyas postvittana*. As my data

was monitored by Dr. Simmons and the rest of the APHIS department, I updated the treatments to accommodate the project as they were needed in New York. The dynamic of this project allowed me to innovate and brainstorm logical and relevant methods.

The goal of this project was to decide which trap will be the most efficient based on production time, convenience, and performance, and contribute to finding an equally successful alternative to the kill strip method to address the worry coming from some states concerning organic phosphate health hazards. My results reinforced the efficiency of Delta traps in many agricultural spaces and suggested that increasing the lures used in uni-traps can be unhelpful for certain moth species.

Zenaida Rodriguez

Major: Agriculture Business

