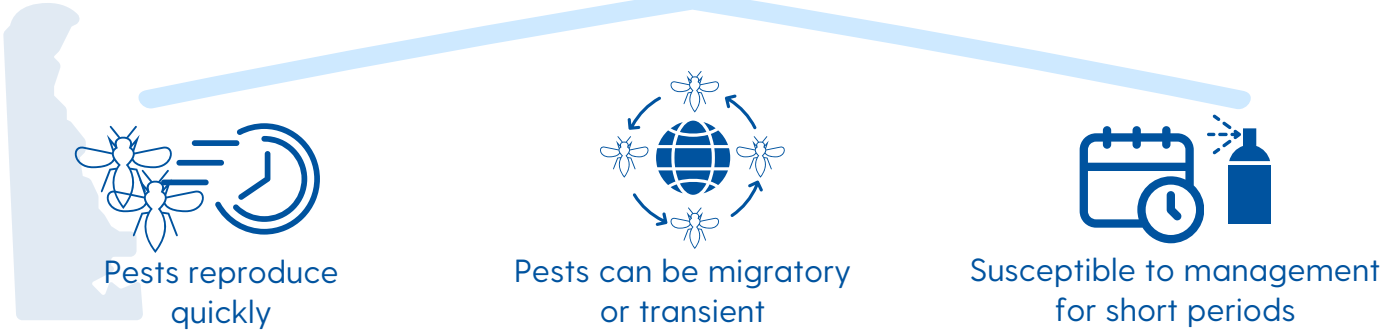
Pest Monitoring & Decision Support in Delaware.

UNIVERSITY OF DELAWARE
COOPERATIVE EXTENSION

RELEVANCE

Without monitoring, producers would be at great risk of losing yield or wasting money applying pesticides at inappropriate times.



Pests reproduce quickly

Pests can be migratory or transient

Susceptible to management for short periods

RESPONSE

In 2023, the Extension Entomology Laboratory maintained traps for:

- Corn Earworm
- European Corn Borer
- Brown Marmorated Stink Bug
- Green Stink Bug

- San Jose Scale
- Brown Stink Bug
- Spotted Wing Drosophila
- Grape Berry Moth

- Beet Armyworm
- True Armyworm
- Black Cutworm
- Seedcorn Maggot

Producers and stakeholders were informed of trap capture and management recommendations as needed through phone calls, text messages, and Weekly Crop Update.

RESULTS

Recommendations given to the producers:

San Jose Scale - (Monitored) Optimal treatment timing based on trap capture and degree day model was relayed on three orchards.

Brown Marmorated Stink Bug - (Activity) Treated accordingly on two orchards.

True Armyworm - Include an insecticide with fungicide applications to small grains.

Corn Earworm - Twenty-three traps were deployed for sweet corn producers and checked twice weekly.

Spotted Wing Drosophila - Begin treatment regimes in small fruit.

Test Findings: → Value of Insect Trapping Activity → $1 $12 Per Acre

RELEVANCE

There are several key insect pests of various Delaware commodities. Insect pests reproduce quickly. Some of them are migratory or are transient. Others are susceptible to management for only a very short period of time. Without an intensive monitoring effort, producers would be at great risk of either losing yield or wasting money applying pesticides at inappropriate times.

RESPONSE

In 2023, the extension entomology laboratory maintained traps for corn earworm, European corn borer, brown marmorated stink bug, green stink bug, San Jose scale, brown stink bug, spotted wing drosophila, grape berry moth, beet armyworm, true armyworm, black cutworm, and seedcorn maggot. Producers and stakeholders were informed of trap capture and management recommendations as needed through phone calls, text messages, and Weekly Crop Update.

RESULTS

Recommendations were delivered to two separate orchards advising them of potentially damaging brown marmorated stink bug activity. Orchards were treated accordingly. San Jose scale was monitored in three orchards. Optimal treatment timing based on trap capture and degree day model was relayed to affected stakeholders (orchard managers and crop consultants) as well as through the Weekly Crop Update for those with a history of damaging populations to make crop-saving management decisions effectively and efficiently.

Spotted wing drosophila trap captures were relayed in the Weekly Crop Update to advise producers to begin treatment regimes in small fruit. Producers in the Smyrna area were advised to include an insecticide with fungicide applications to small grains due to extremely high true armyworm trap captures. Black cutworm traps were used to identify key scouting windows for cutworm damage for producers and consultants. Twenty-three traps were deployed to monitor corn earworm activity for sweet corn producers throughout the state. Traps were checked twice weekly from June through mid-September. Recommendations on appropriate treatment timing were regularly given to 10 producers and consultants.

A survey was sent to several crop consultants to assess the value of the insect trapping activity to their growers. Estimates range from $1-12 per acre over several thousand acres. One consultant did not provide an estimate but wrote that the value of the trapping program over the years for his company's clients was “several thousands of dollars.”

RECOGNITION

Insect pest trapping was supported by the Delaware Department of Agriculture, USDA-NIFA, and Sussex County Council. Key personnel involved in pest monitoring were Richard Monaco, Morgan Malone, Danielle Watkins, and Calista Turman.

Favorite Quote: One sweet corn producer in Concord called on September 13 to thank the efforts of the entomology lab for providing sweet corn recommendations and to say that because of our work, he did not see a single corn earworm in his August or September sweet corn.

PUBLIC VALUE STATEMENT

Intensive monitoring efforts help producers prevent losing yield and wasting money applying pesticides at inappropriate times.