

A circular, high-magnification microscopic view of numerous pepper weevils. The insects are densely packed and appear as small, brownish, textured organisms with distinct legs and antennae. The lighting is bright, highlighting the intricate details of their bodies.

Managing(?) Pepper Weevil in New Jersey

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New Jersey history with PW

A satellite-style map of the Philadelphia-Wilmington region. A red circle is drawn around the area between Philadelphia and Wilmington. Labels for Philadelphia, Wilmington, Dover, Delaware Bay, Delaware, and New Jersey are visible. Highway markers for 360 and 355 are also present.

- Serious infestations have occurred in New Jersey in the past
 - 1957, 1967, 1985, 1988 and 1989 (Ghidlu and Rabin – ‘The Grower’, 1991)
- 2004 infestation begins ‘modern era’ with nearly annual infestations

Not endemic to New Jersey

- An invasive pest each year
- PW cannot overwinter in New Jersey
 - There are annual hot spots but otherwise PW can show up anywhere
- Vegetable processing plants are our main source of PW
 - Other sources: terminal markets and migrant workers(?)

Our situation

- Early pepper plantings from end of April thru May
 - Later plantings mid to late June
 - Both early and late plantings expected to go season long
 - About 3300 acres @ \$33 million
- Our farmers expect 5 or more pickings
- As the 'Garden State', we have many vegetable processing facilities

How to manage

- Insecticides only suppress populations
- Must avoid infestations
 - Distance of fields from processor – 1 ½ mile
 - Be aware of field geography
 - First detection



PW still a problem

- 2014 – 2016 no significant infestations
- 2017 – one farm estimated loss of \$100,000
 - Another small pepper farmer – no harvested peppers
- 2018 – only one farm known to have an infestation with yield loss
- Still a concern – open dumpsters and residue piles in the field

Processor issues

- What about pepper waste and pick-out?
 - Covered dumpsters?
 - Heated waste?



New strategies

- Traps in high traffic areas
- Traps in farm markets
- Flooding the zone in the field
 - Sticky cards around area of detection
- Removal of aborted fruit
 - Demands good weed control

At the farm market

Farm markets and areas around the packing shed are high traffic areas where PW will likely first come to the farm.



Flooding the zone





Our most prolific trap site



Questions?