

# Northeastern Integrated Pest Management Delaware State Report for 2017

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## Newsletters

Weekly Crop Update weekly from April through September; monthly rest of the year

<http://extension.udel.edu/weeklycropupdate/?p=11414>

In 2017 included a series titled *Guess the Pest* included

## IPM-Related Research and Demonstrations

Part of an USDA-Areawide Project examining the effect of cereal rye termination timing on winter and summer annual weed pressure in soybeans (VanGessel- weeds)

Examining critical weed-free period of Italian ryegrass on winter wheat growth and yield (VanGessel- weeds)

## IPM-Related Reports or Factsheets

Winter Weed Identification Guide (<https://cdn.extension.udel.edu/wp-content/uploads/2012/06/20094202/winter-weeds-2017-v-2.pdf>)

Complete revisions of the Mid-Atlantic Commercial Vegetable Guide (Wyenandt lead)

Update the Delaware Insect Management Recommendations (Corn, Soybean, Small Grains, and Alfalfa)

## IPM-Related Grants Received

Integrating Cover Crops for Weed Management in Plasticulture Systems, NE-IPM Program (Vollmer and VanGessel)

Overlapping Residual Herbicides for Weed Control in Lima Bean and Pumpkins, DE Dept. of Agric Specialty Crops Research (Vollmer and VanGessel)

Control of slugs in a multi-trophic context: Using friends to manage foes, DE Soybean Board. 2018 (Hiltpold, Kunkel, Cissel)

Slug nematodes in soybean: a survey for magic bullets in slug control, Atlantic Soybean Council. 2017-2018 (Hiltpold, Kunkel, Cissel, Tooker, Hamby)

Can Plant Population Play a Role in Reducing Lodging Loss from *Dectes* Stem Borer? 2017 (Cissel, Sylvester, Whaley)

## EIP Project Activities

### Addressing New Pest Development in Small Grains IPM Systems

- A) Six on farm demonstrations were established to demonstrate the role wheat variety selection plays in fusarium head blight management (FHB). These demonstrations directly impacted 2200 acres of wheat in 2017 with an estimated value of \$60.30 per acre. The results of this project have the potential to impact 65,000 acres of wheat grown in DE. A

YouTube video was also created and posted on the IPM webpage to educate growers on how to stage wheat to time fungicide applications to reduce FHB.

<https://youtu.be/J2yEB6dH9Cc>

- B) In recent years, damage from cereal leaf beetle (CLB) has increased in small grains, especially in wheat. One possible explanation is the shift in fungicide application from flag leaf to flowering in response to fusarium head blight (FHB) management. An insecticide is often tank mixed with the fungicide application which has provided control of CLB. A degree day model was developed in VA and NC that predicts peak egg laying and hatch for CLB. Validating this model for DE can help focus scouting efforts and increase adoption of an IPM approach to manage CLB in small grains.

**Expansion of Existing Insect Trapping Program for IPM Decision Making in Processing and Fresh Market Vegetables:**

A pilot insect trapping program was initiated to complement the existing UD trapping program. Participants of the pilot trapping program were provided education on how to identify key insect pests and how to interpret trap catch data when making insect management decisions. Participants of the pilot trapping program reported that the trap catch information was used to make management decisions on 24,872 acres of lima beans, snap beans, sweet corn, peppers, and soybeans and was valued at \$25 per acre.

**Incorporating a Total Crop Management Approach into Current Soybean IPM Programs:**

- A) Soybean Vein Necrosis disease (SVNd) is a new relatively new disease affecting soybeans in DE. The virus is transmitted by at least 3 species of thrips, including soybean thrips. To determine the frequency of this disease in DE, we conducted a survey of 88 soybean fields (48 full season, 40 double crop) from 2015-2017. Results of the survey average an 11.6% incidence in full season and 22.8% incidence in double crop soybeans. This suggests that full season soybeans planted early in the growing season are less likely to have symptoms of this disease compared to double crop soybeans. Survey reports are posted on the IPM webpage and a Youtube video was created to educate growers about how to identify the disease and how the disease is vectored. <https://youtu.be/7gXDLjm5x7Q>
- B) A multi-disciplinary approach to improve weed and slug management, soil health and yields was demonstrated using of small grain cover crops. Delaying cover crop termination, often referred to as “planting green” was evaluated on six on-farm demonstrations. Ten soybean fields, 7 with and 3 without a small grain cover crop, were also sampled for slugs using shingle traps and surveyed for slug injury. A series of YouTube videos were created to demonstrate how to sample for slugs and slug eggs.
- <https://youtu.be/yJAiut5IHqY>  
<https://youtu.be/-5YD2BArGOg>  
<https://youtu.be/JM2xTfw7z-M>

**Other**

University of Delaware is hiring an Extension Plant Pathologist with responsibilities for field crops (job is being advertised)