

SPOTTED LANTERNFLY

Penn State Extension Update



Heather Leach
Spotted Lanternfly Extension Coordinator
Pennsylvania State University



PennState

SLF hire

PENN STATE | NEWS

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Leach named spotted lanternfly extension associate at Penn State

May 15, 2018

UNIVERSITY PARK, Pa. -- Heather Leach has joined [Penn State's College of Agricultural Sciences](#) as a spotted lanternfly extension associate.

In this newly created position, Leach is responsible for coordinating spotted lanternfly outreach and response efforts for the college, working in collaboration with state and federal agencies such as the state Department of Agriculture, Game Commission, Department of Conservation and Natural Resources, and the U.S. Department of Agriculture. In addition, she will help ensure that [Penn State Extension](#)

SHARE THIS STORY



Extension efforts pre-2018



Evolution of a Partnership



www.agriculture.pa.gov/spottedlanternfly



<https://extension.psu.edu/pests/spotted-lanternfly>

Many Other Partners

United States Department of Agriculture

Berks County Conservation District

Kutztown University, East Stroudsburg University

Political officials at many levels

Media partners

Community Groups: Schools, Shade Tree Commissions,

Watershed Associations, Natural Land Preservation

Organizations, Public Libraries, Commodity Associations, Local

Businesses, Churches, Senior Citizen Centers

many others...

Delivery Methods

Meetings/ live and recorded

Fact sheets and articles

Videos

Social media

Individual assistance

Master Gardeners and Master Watershed Stewards

Citizen volunteers

Posters, signs, scraper cards

Kids activity books, headbands, tattoos

Media partners

We are hiring an Extension Associate to coordinate!





PennState Extension

Educators

MG and MWS Volunteers

Front office staff in 6 counties

2017

1064 Phone calls, visits, email

Displays at events 40

33/1459 Presentations/attendees

News reports/articles 20

17,893 views On-demand 24/7 information



Challenges

Applied research answers are not available for a lot of questions.

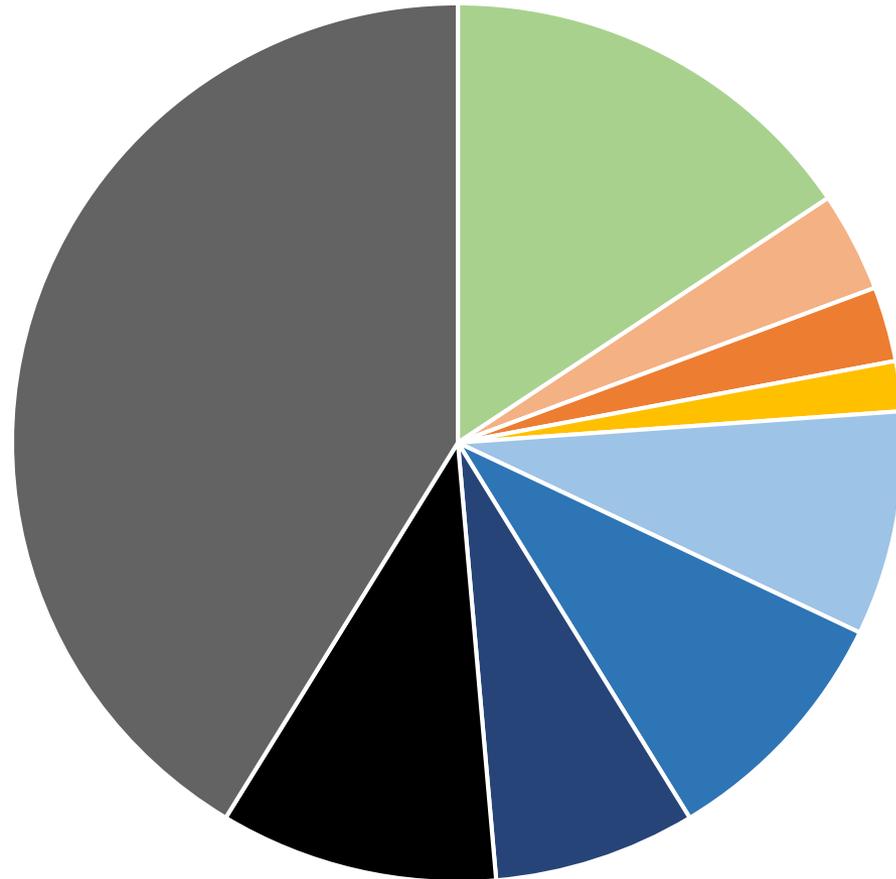
The public has questions, and many people really want to help. Be prepared for calls, offers of help and friendly people, fearful people, angry people, reactive people.

A lot of media attention requires a clear message.

Coordination of educational and research efforts.

SLF extension in 2018

- Green Industry
- Vegetable/Small Fruit
- Tree Fruit
- Grape/Wine
- Master Gardeners
- Homeowners
- Public Meeting
- Municipal Officials
- Other



89% of reported talks given by
Extension Educators

SLF extension in 2018

Lehigh
York
Adams
Forest
Lancaster
Northampton
Allegheny

SLF meetings

Spotted Lanternfly Public Meetings

Spotted lanternfly is an invasive insect that has spread throughout southeastern Pennsylvania and surrounding states. Learn how to recognize spotted lanternfly and what you can do to help stop its spread.

#WSP-G-1426 | [BE THE FIRST TO LEAVE A REVIEW](#)



WORKSHOPS

LANGUAGE:

English

WHERE AND WHEN*

Choose a selection...



FREE

REGISTER

 SAVE FOR LATER

 NOTIFY ME WHEN SESSIONS ARE ADDED

SLF Facebook live

Peak live viewers: 114
Top audience: women, 55-65
Top location: PA
Reach so far: 10,123



#BadBugLive!

Pennsylvania Department of Agriculture was live. about 3 weeks ago

✓ Following

Welcome to #BadBugLive! Post your questions in the comments below. We have the following experts here to answer your #SpottedLanternfly questions:

...
See more

89 91 Shares 7.6K Views

Like Comment Share

Comments Up next

Comments (89) Real-time comments

Current resources available

Resources by Topic

Penn State's College of Agricultural Sciences and Penn State Extension are at the forefront of education and research aimed at stopping the spread of this exotic species. Following are resources to help growers, property owners and others understand how to identify the insect, what to do if they find it and how to comply with agency regulations.

Identifying Spotted Lanternfly

- Video: [Spotted Lanternfly Identification and Concern](#)
- Photo gallery: [Spotted Lanternfly: What to Look For](#)

Spotted Lanternfly Control and Management

- Article: [Spotted Lanternfly Management for Homeowners](#)
- Article: [Placing Sticky Bands on Trees](#)
- Video: [Volunteer Banding Program](#)
- Video: [Management Options through the Seasons](#)
- Article: [Spotted Lanternfly IPM Management Calendar](#)
- Video: [Tree-of-Heaven and Some Native Look-a-Like](#)
- Article: [Spotted Lanternfly on Grapes and Tree Fruit](#)
- Article: [What To Do If You Find the Spotted Lanternfly on Your Property](#)
- Article: [How to Destroy Spotted Lanternfly Eggs and Report Your Efforts](#)
- Video: [How To Remove Spotted Lanternfly Eggs](#)

How to Comply with the State Quarantine

- Article: [How You Can Comply with the Spotted Lanternfly Quarantine Regulations](#)
- Article: [Tips for Handling Yard Waste in Quarantined Areas](#)
- Video: [Living with the Quarantine](#)

Current resources available

<https://extension.psu.edu/spotted-lanternfly>



Introduction

Spotted lanternfly (SLF), *Lycorma delicatula*, is an invasive planthopper, native to China, that was first detected in 2014 in southeastern Pennsylvania. It feeds voraciously on many plants, including economically important crops like fruit trees, grapevines, hops, hardwoods, and ornamentals. If you think you have SLF, do not panic! First, make sure the insect you are seeing is the spotted lanternfly. Second, learn about its life cycle and habits. Third, determine what plants it is infesting and what it is not. Fourth, employ management strategies at the proper time of the year.

Identification and Life Cycle

There is one generation of SLF per year. The eggs are laid in late fall and hatch in the spring. Egg masses are laid on hard surfaces (trees, decks, houses, outdoor equipment, rocks, etc.) and protected with a mud-like covering. Each egg mass contains 30–50 eggs. After hatching and before reaching adulthood, SLF goes through four nymph stages. Nymphs are small (¼ to ½ inch) and hard to find. The first three stages (instars) are all black with white spots, and the last instar is red with white

Quick Facts

- SLF is a **destructive invasive pest**, threatening agricultural, timber, and ornamental industries, and the plants in your backyard.
- SLF is currently under **quarantine** in 13 counties in Pennsylvania.
- SLF **does not bite or sting**.
- **Stop the spread** of SLF by checking your car and any outdoor equipment (grills, mowers, firewood, etc.) when going in and out of the quarantine zone.
- Manage SLF on your property by **scraping eggs, banding trees**, removing the favored host (**tree-of-heaven**), and using **chemical control** when appropriate.

dots and black stripes (Figure 1). SLF adults emerge in July and are active until winter. This is the most obvious and easily detectable stage because they are large (~1 inch) and highly mobile. Adults have black bodies with brightly colored wings. Only the adults can fly. Because SLF adults jump more than fly, their wings often remain closed. SLF wings are gray with black spots, and the tips of the wings are black with gray veins.

Best Time to Use Management Practices

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Destroy egg masses												
Use sticky bands to capture spotted lanternfly												
Registered insecticides can be effective ¹												
Avoid moving gravid (fertilized) females ²												
Avoid moving viable egg masses ²												
Treat most tree-of-heaven (<i>Allanthus altissima</i>) trees with herbicide ^{1,3}												
Treat tree-of-heaven "trap" trees with systemic insecticides ^{1,4}												

¹ ALWAYS READ PESTICIDE LABELS AND FOLLOW THE DIRECTIONS.

² Before you move outdoor items from the quarantine area, check for spotted lanternfly egg masses, nymphs, and adults and destroy them. To be in compliance with the quarantine order, use the checklist at www.agriculture.pa.gov/Plants_Land_Water/PlantIndustry/Entomology/spotted_lanternfly/Documents/SLF%20Checklist%202011-12-2014.pdf when you have to move items from inside the quarantine to outside.

³ Tree-of-heaven is an exotic invasive tree introduced from China. It is dioecious, meaning a tree is either male or female. It grows in colonies that consist of groups of stems all growing from one root system. All of the trees growing from one root system are the same sex. It is best to use male trees as "trap" trees because they do not produce seed. Tree-of-heaven trees will resprout vigorously from their roots after cutting, even if stumps are treated with an herbicide. To control tree-of-heaven trees, treat using foliar, basal bark, or hack-and-squirt herbicide applications from July through September. If tree-of-heaven stems need to be removed, wait 30 days after treatment to cut the trees down. Repeat herbicide applications may be necessary to completely control tree-of-heaven roots. Killing all tree-of-heaven trees may result in spotted lanternflies moving to surrounding plants, increasing pest damage on them.

⁴ About 15 percent of tree-of-heaven trees should be left alive to serve as trap trees to attract spotted lanternflies. Leave only male, non-seed-bearing trees if possible to limit seed production.

Reporting SLF



Have you seen a spotted lanternfly? **REPORT IT.**

<https://extension.psu.edu/spotted-lanternfly>

Or call 1-888-4BAD-FLY



Pennsylvania Spotted Lanternfly Reporting

The Entomology Program at the Pennsylvania Department of Agriculture can provide identification of arthropod specimens.

If you have a specimen, please preserve it as follows: All specimens should be dead and should be placed in a freezer or in 70-80% Ethyl or Isopropyl Alcohol in a leak proof vial. Specimens from different locations (if applicable) should be placed in different vials.

1. Enter Information

First name of the person to contact about this submission: (required)

ex. John

Last name of the person to contact about this submission: (required)

ex. Doe

Daytime Phone Number: (required)

ex. 7175551212

Email:

ex.: contactname@mail.com

Street address where the bug was sighted:

ex. 1313 Mockingbird Lane

City where the bug was sighted: (required)

ex. Bugton

Zip Code where the bug was sighted:

ex. 12345

SLF permitting course



Social media and newsletters



StopSLF @StopSLF · Jul 9

Have you seen the red nymphs of spotted lanternfly yet? They are emerging! If you see a spotted lanternfly, report it here: extension.psu.edu/have-you-seen-... #destroyit #reportit



7 6



PennState Extension

Spotted Lanternfly News



Spotted Lanternfly Management for Homeowners

Do you know how to identify, manage, and prevent the spread of spotted lanternfly on your property? Penn State Extension can help. We've



PennState

SLF extension for grape growers



Identification

The spotted lanternfly (SLF) is an invasive sap-feeding planthopper found in southern Pennsylvania. It is native to China and was found in Pennsylvania in 2014. Tree-of-heaven, an invasive plant, is the preferred host for SLF, but SLF also feeds voraciously on grapevines (wild and cultivated), tree fruit, and various hardwoods. Eggs are laid in masses on any solid surface (trees, posts, stones, buildings, etc.) in the fall. They hatch in the spring and go through four nymphal instars. Adults emerge in mid- to late July and die with the onset of winter. Both nymphs and adults have been observed feeding on grapevine.

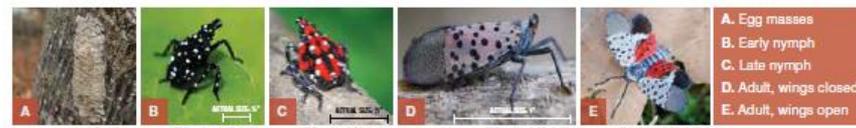
Damage

SLF is a phloem feeder, similar to leafhoppers, aphids, and other pests with piercing-sucking mouthparts. SLF feeds on the vine trunk, shoots, and leaves and can feed through bird netting. SLF excretes large amounts of honeydew, which can cause sooty mold outbreaks on the leaves and fruit. This honeydew may also exacerbate yellow jacket problems. We are still learning about this new invasive pest and don't yet

have economic loss estimates for grape. Research is ongoing to develop control measures for this pest and to determine implications for both juice and wine production.

Quarantine

SLF is currently under quarantine in 13 counties in southeastern Pennsylvania (see map). Additional counties may be added to this map. Please check the Pennsylvania Department of Agriculture (PDA) website for the most up-to-date information. If your farm is not within the quarantine zone and you have found SLF, collect or photograph the specimen and report it immediately using our online reporting form at extension.psu.edu/spotted-lanternfly or by calling 1-888-4BAD-FLY. Permits are required for businesses that transport materials within the quarantine area. The permits are designed to indicate that you are aware of SLF and are following procedures to prevent spreading the pest from one location to another. For more information on permitting, see the PDA spotted lanternfly webpage. If you are traveling to or from the quarantine zone, check your farm equipment or any other item that has been stored outside for egg masses, nymphs, and adults.



The life stages of SLF, including an egg mass on a tree, early nymphs, late nymphs, and the adults. Adults with both closed and open wings are shown, though adults with closed wings are more common.

SLF extension for grape growers

Steps of Spotted Lanternfly Management

- 1** Scout your vineyard
- 2** Scrape eggs
- 3** Band trees to catch nymphs
- 4** Remove tree-of-heaven
- 5** Apply insecticides



SLF extension for grape growers



Measuring the impacts of the new invasive, spotted lanternfly in grape - your help is needed!

Welcome

Spotted lanternfly (SLF) is a new invasive planthopper currently found in southeastern Pennsylvania. It is similar to leafhoppers, scales, and aphids, which feed on the grapevine trunk, shoots, and leaves. Honeydew excretions from SLF have also caused sooty mold issues in vineyards. We are conducting a grower-focused impact assessment to help us develop research, extension, and education activities. These responses may also be used to support grant proposals for future spotted lanternfly activities. **If you are a grape grower or work in the grape industry in Pennsylvania, please complete the survey below.** This survey is anonymous and should take 10-15 minutes to complete.



PennState

SLF extension for grape growers

46 respondents

82% are the **vineyard owner**

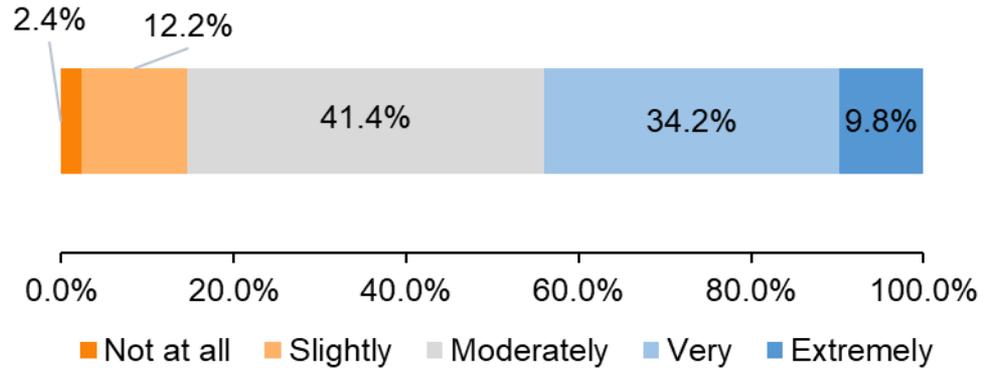
47% have **1-5 acres**

Reports are from **22/67** counties

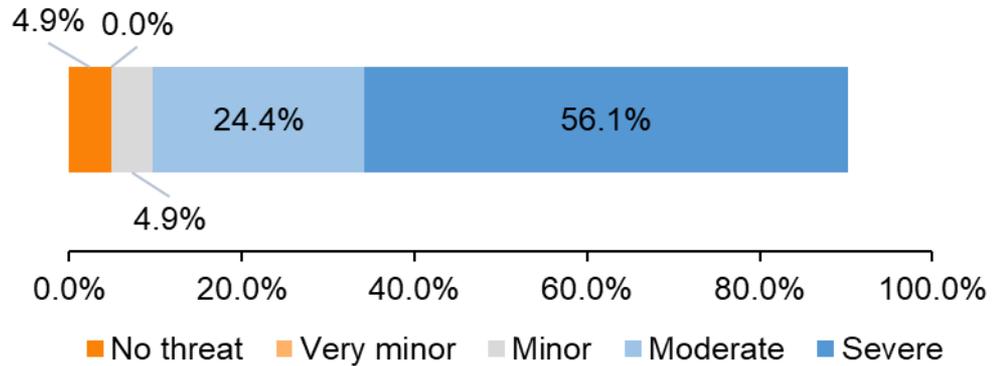
75% haven't had SLF detected in vineyard

Primary insect concerns are Japanese beetle, GBM, and BMSB

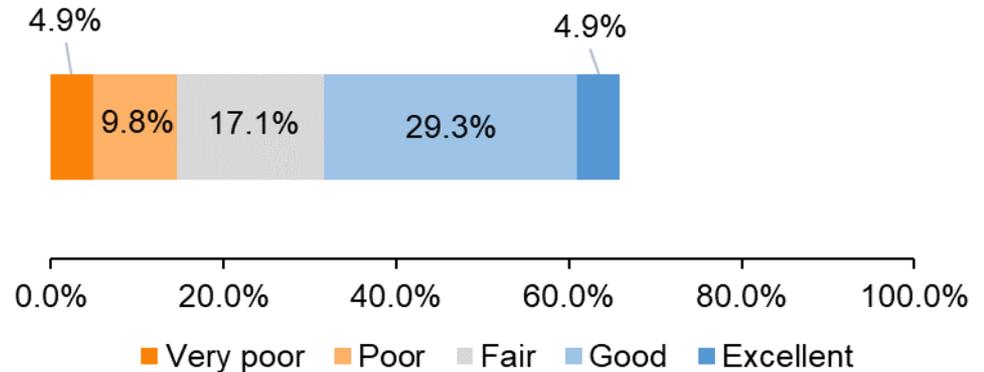
How confident are you in the identification and life cycle of SLF?



Do you consider SLF a threat?



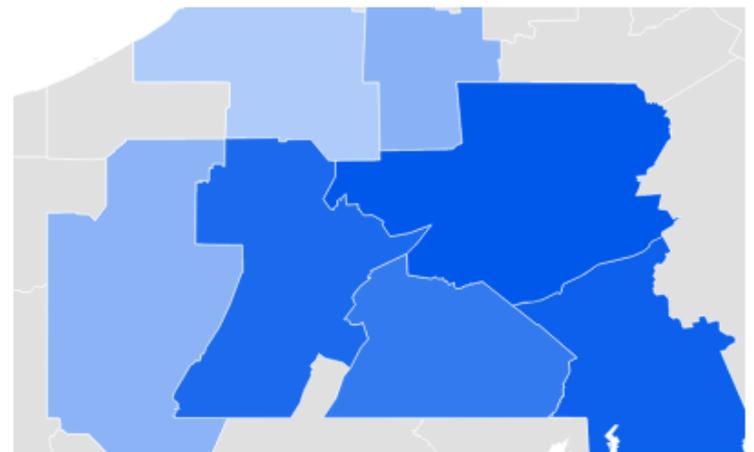
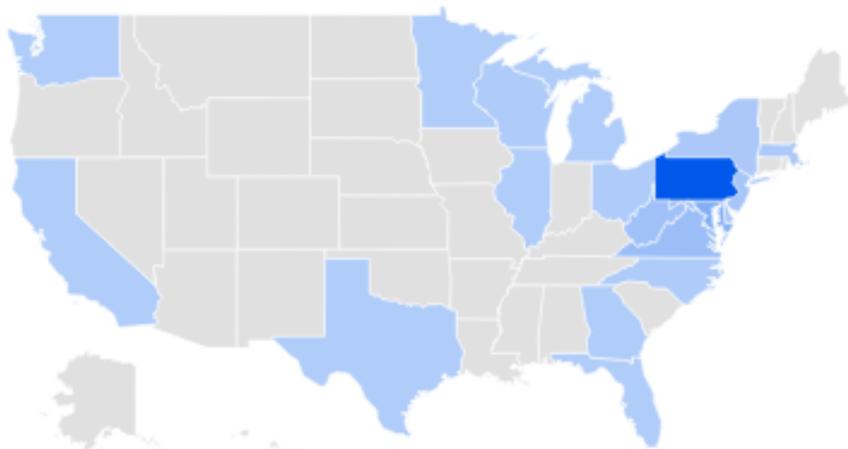
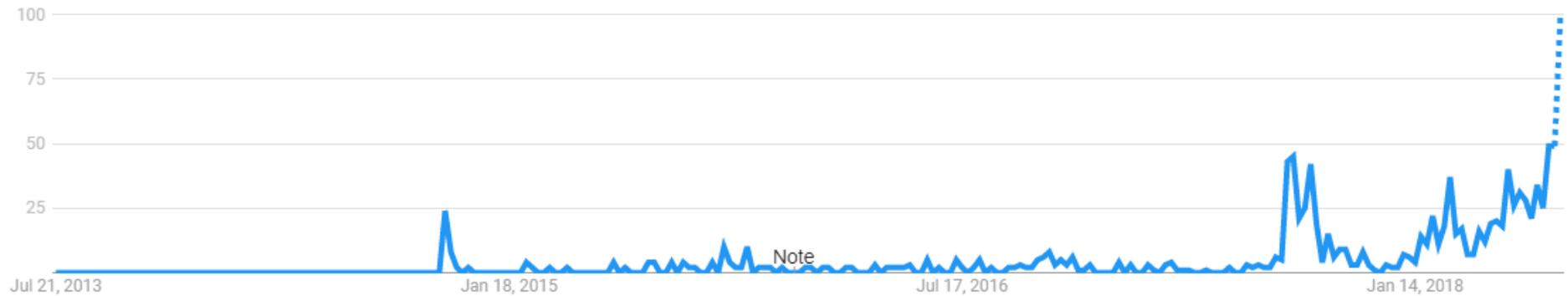
How would you rate the tools available to control SLF?



SLF on Google

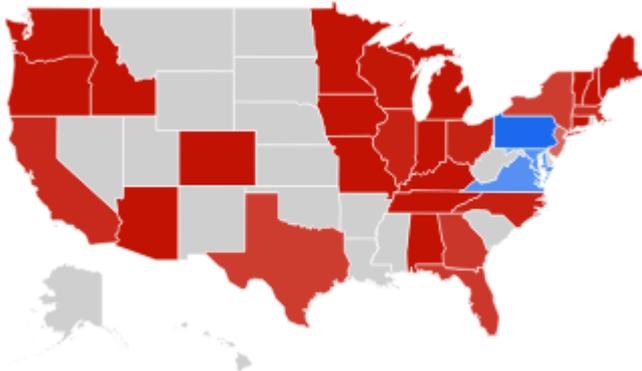
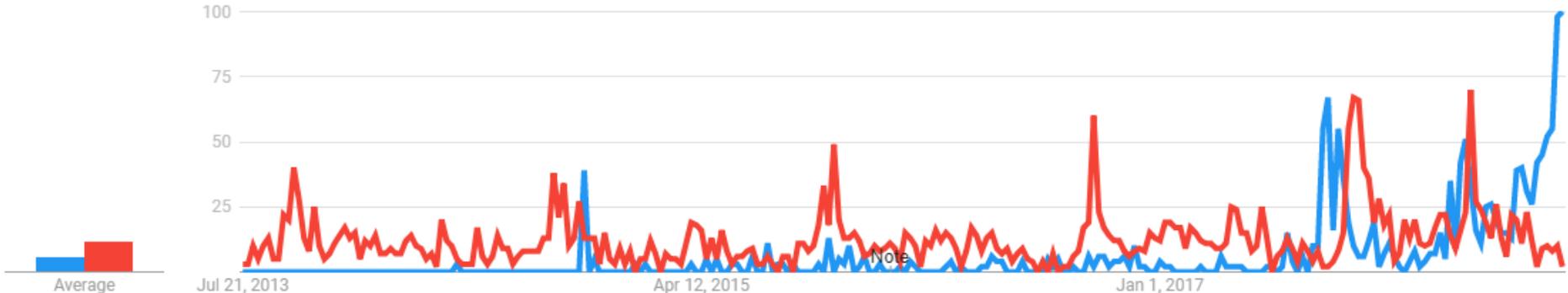
Interest over time 

Google searches "spotted lanternfly"



How does SLF compare to BMSB?

Interest over time 



What resources are needed?

Management guides for all affected industries (immediate need for grape, ornamentals)

Increased awareness for permitting and quarantine

Applied research! Particularly for insecticide recommendations, monitoring/attractants, host requirements, evaluating damage, and establishing thresholds

A consistent and clear message

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Master Gardeners

Extension Educators

...and many others!



Northeastern
IPM
Center



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