





Can You Spot the Spot?

Spotted Lanternfly (SLF) Update and What You Can Do To Help



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OSU Extension, Lucas County

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Another Invasive Species on the Radar



Awareness and Engagement

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Can Feed in Swarms

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**Native to China, India, and Indochina
(Vietnam, Cambodia, Laos, Myanmar,
Thailand)**

**In 2006 it was discovered in Korea –
outside its native range**

**In 2014 it was discovered in North
America in Pennsylvania**

**It is continuing to spread naturally,
and through artificial movement**

**In 2020 it was discovered in Ohio –
individual detections and a
reproducing population – and the
story continues . . .**



Photo by Mike Friel

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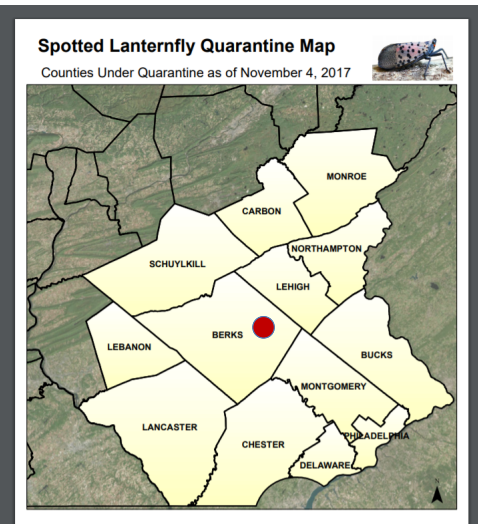


Joe Boggs, OSU Extension©

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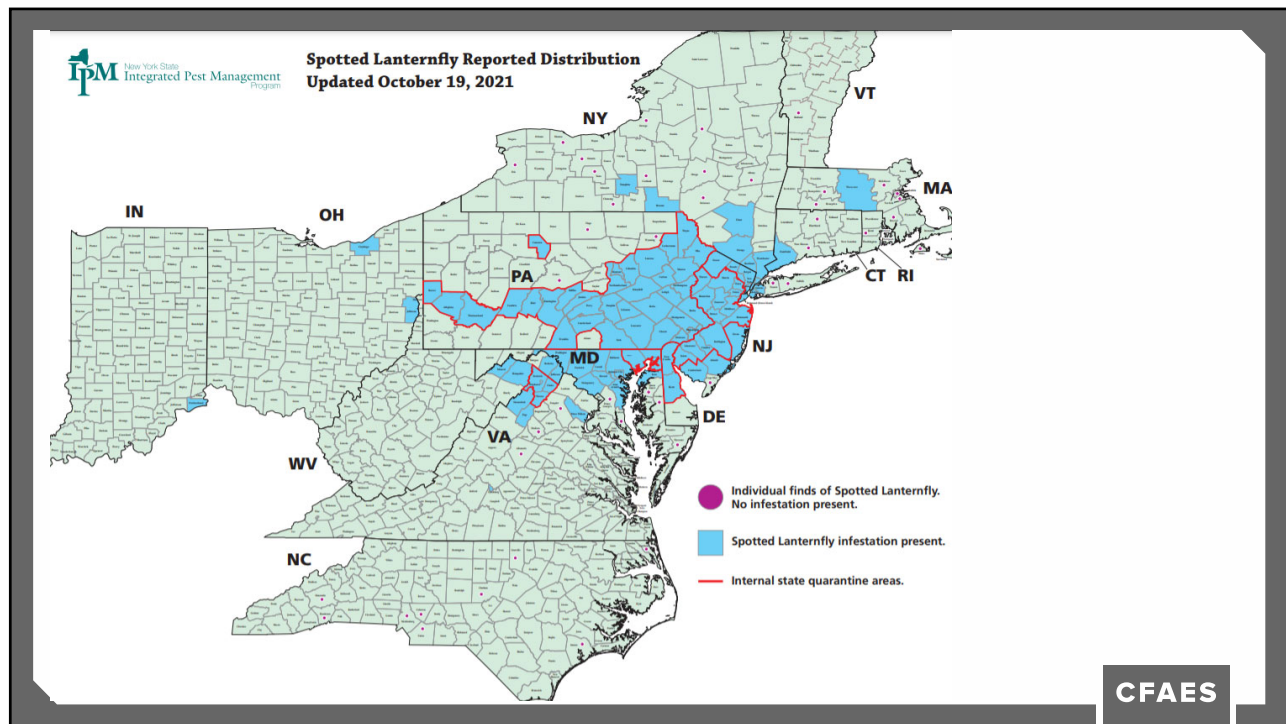


**Eastern PA –
*three years into
the infestation***

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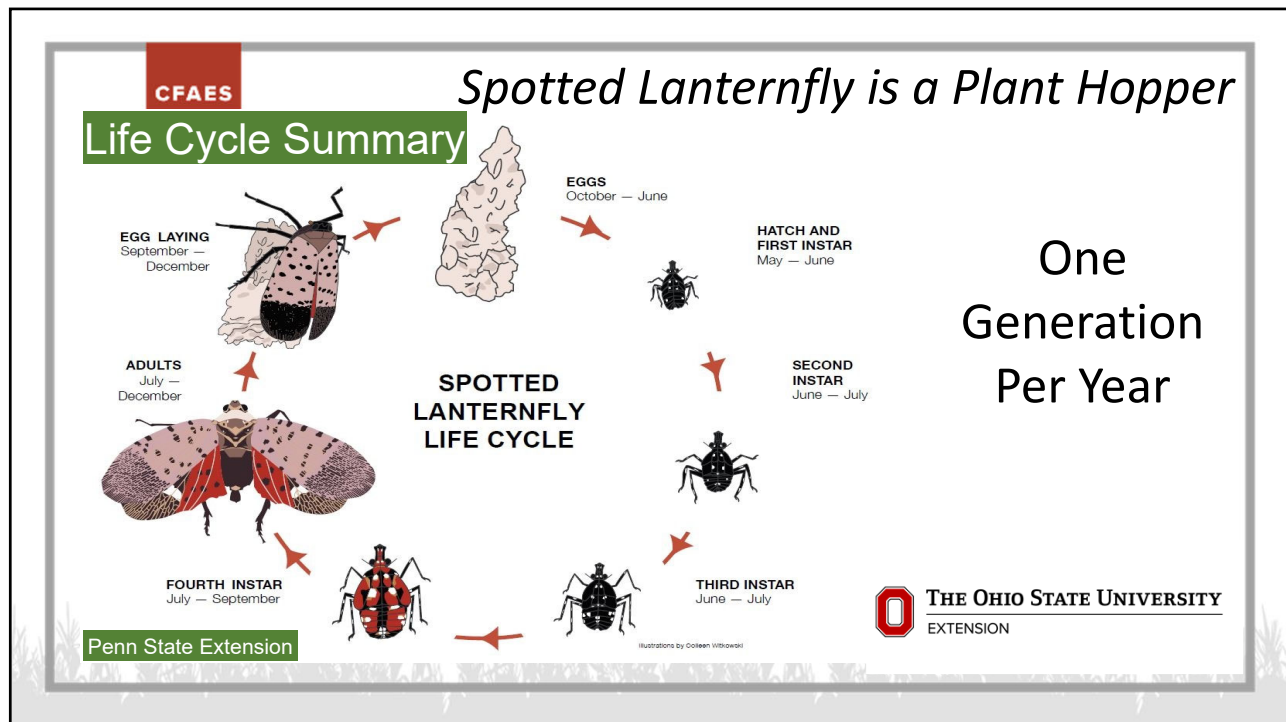
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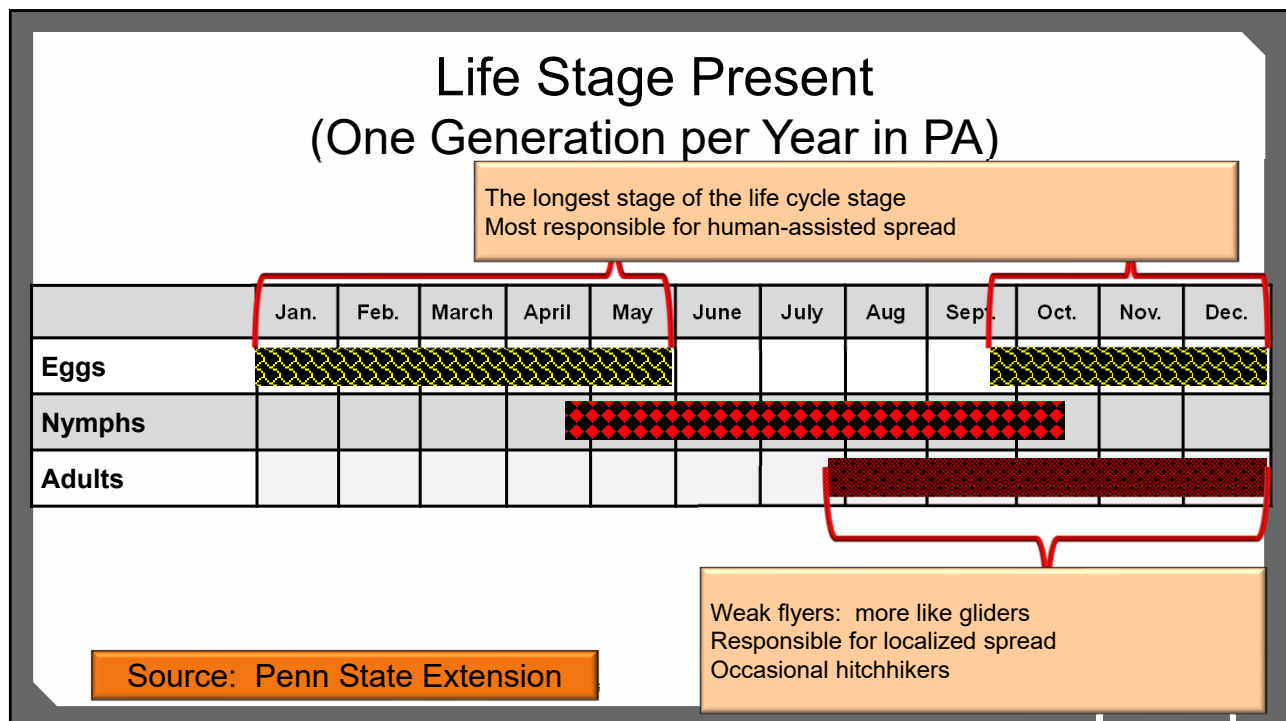
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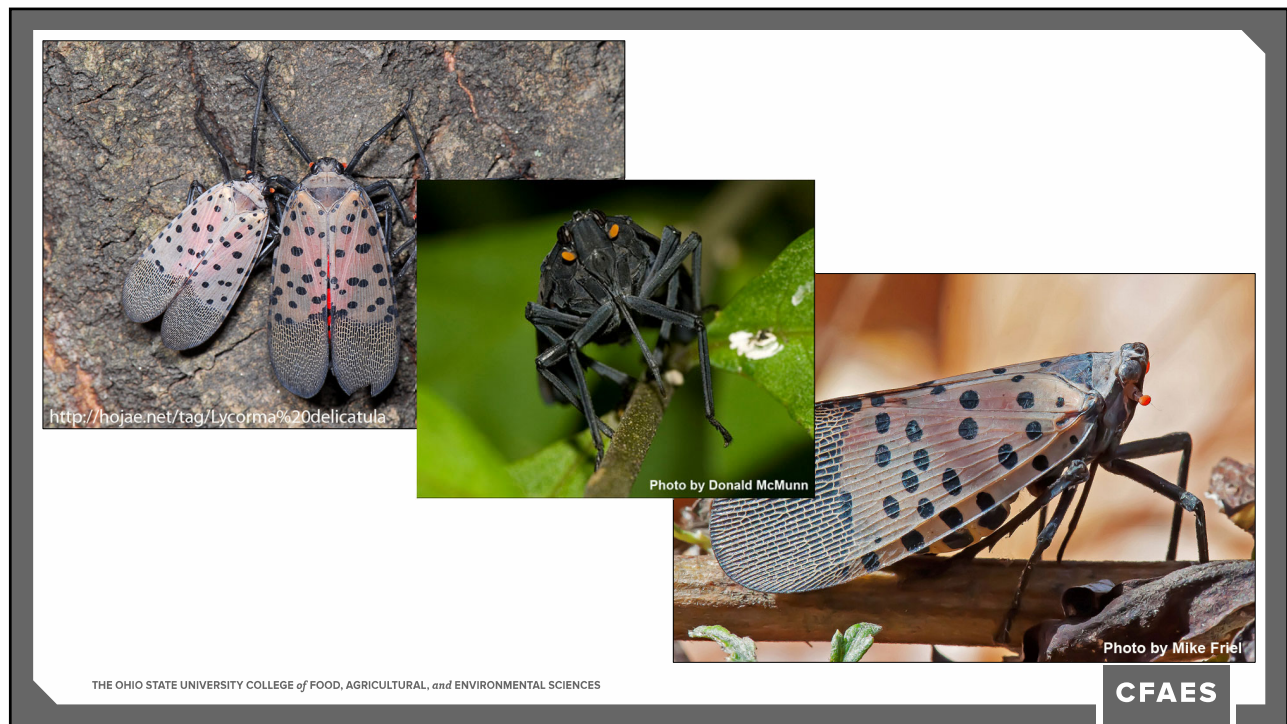
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- Adults are large
 - 1 inch long
 - 1/2 inch wide
- Females are typically larger than the males



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– Adults:

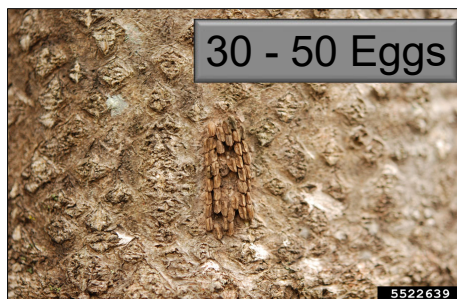
- Appear in late summer
- Feed, mate, and lay eggs



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30 - 50 Eggs

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Possible Spotted Lanternfly Adult Look-alikes in Virginia
Theresa Dellinger and Eric Day, Department of Entomology, Virginia Tech


The adult spotted lanternfly, *Lycorma delicatula* (White), has a very distinctive appearance with black spots and bars on the upper wings and red, black, and white on the hindwings. Adults measure about 1" long and 0.5" wide. A few other insects in Virginia have similar color patterns, but a close look will show that spotted lanternfly is easily recognizable. Sizes not to scale. Upper left photo: Eric Day. All others: Bugwood.org




Spotted lanternfly, wings extended
Lawrence Barringer, Pennsylvania Department of Agriculture




Ornate bella moth
Lesley Ingram, Bugwood.org




Ailanthus webworm
David Cappaert, Bugwood.org




Tiger moth
Mark Drelling, Bugwood.org



Oak treehopper
Larry R. Barber, USDA Forest Service, Bugwood.org



Buck moth
Geneti J. Leland, Louisiana State University, Bugwood.org



Leopard moth
Najin Almassi, Forest Preserves of Cook County, Bugwood.org

2018 ENTO-278NP

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- **Eggs:**
 - Laid then commonly covered with waxy coating
 - Overwintering stage

Egg Mass:
1 – 1 1/2" long
1/2 – 3/4" wide






Image by Greg Hoover

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Covered and Uncovered Egg Masses

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Egg Mass Covering



Dries and cracks over time.



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Possible Spotted Lanternfly Egg Mass Look-alikes in Virginia

Theresa Dellinger and Eric Day, Dept. of Entomology, Virginia Tech

Egg masses of the spotted lantern fly, *Lycorma delicatula* (White), are usually covered with a smooth tan to gray colored coating when fresh. This coating may crack and fall off with age, exposing eggs laid in vertical rows underneath. Some egg masses are laid with only some or no covering at all. Here are a few other insect egg masses found in Virginia to help you recognize those of the spotted lantern fly. Sizes not to scale.



Spotted lanternfly egg mass
Kenneth R. Law, USDA APHIS PPO,
Bugwood.org



Spotted lanternfly eggs
without covering. Kenneth R. Law,
USDA APHIS PPO, Bugwood.org



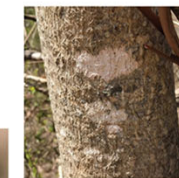
Gypsy moth egg masses
covered with brown hairs.
Karla Salp, WA State Dept. of Ag,
Bugwood.org



Chinese mantis egg case Whitney
Cranshaw, CO State Univ., Bugwood.org



Cankerworm eggs PA Dept. of
Conservation and Natural Resources -
Forestry, Bugwood.org



Lichen on bark
Eric Day, Virginia Tech

Eastern tent caterpillar eggs Whitney
Cranshaw, CO State Univ., Bugwood.org

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Nymphs:

- Eggs hatch in Spring
- 4 Instar Stages
- Instars 1 – 3
- 4th Instar



Photo by Lonmelo



Photo by Mike Frier



Photo by John Horstman

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Possible Spotted Lanternfly Immature Look-alikes in Virginia

Theresa Dellinger and Eric Day, Department of Entomology, Virginia Tech

Immature spotted lanternfly, *Lycorma delicatula* (White), are black with white spots when young. They turn red and black with white spots when older. A few other insects in Virginia have similar color patterns, but a close look will show that immature spotted lanternflies are easily recognizable. Sizes not to scale.



Young spotted lanternfly nymph
Berk Co. Conservation Dist.



Older spotted lanternfly nymphs
Eric Day, Virginia Tech



Wheel bug nymph
Susan Ellis, Bugwood.org



Oak treehopper nymphs
Southern Forest Insect Work Conf.,
Bugwood.org



Assassin bug nymph
Susan Ellis, Bugwood.org



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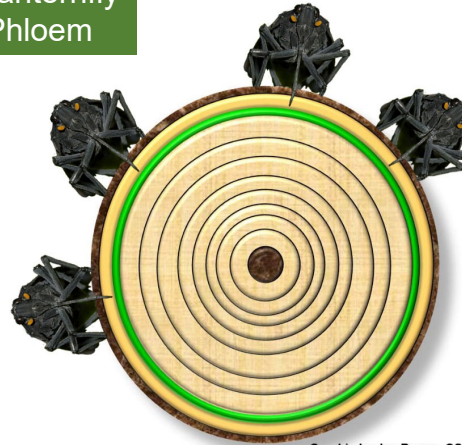
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Spotted Lanternfly (SLF) Impact

- Adults and nymphs:
 - Piercing / sucking mouthparts
- Stem feeders:
 - Mouthparts pierce the bark and are inserted into phloem vessels

Spotted Lanternfly
Piercing Phloem



Graphic by Joe Boggs, OSU Extension

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Spotted Lanternfly (SLF) Impact



Infested trees / shrubs
“bleed” sap

Joe Boggs, OSU Extension

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From One to One
Thousand – they can
become a nuisance in
their numbers



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- Preferred Hosts:
 - Tree of Heaven (*Ailanthus altissima*)
 - Grapes (*Vitis* spp.)



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HOST	NYMPHS MAY	NYMPHS JUNE	NYMPHS JULY	ADULTS AUGUST	ADULTS SEPTEMBER	ADULTS OCTOBER
<i>Roses</i>						
<i>Grape</i>						
<i>Tree of Heaven</i>						
<i>Black Walnut</i>						
<i>Sumac</i>						
<i>Willow</i>						
<i>Red and Silver Maples</i>						

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Tree of Heaven in Leaf



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Leaflet of Ailanthus

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Tree of Heaven – Seed Head

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Sumac

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Sumac Leaf

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Sumac Leaflet

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Sumac in Foreground- Tree of Heaven in Background



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Black Walnut



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Black Walnut



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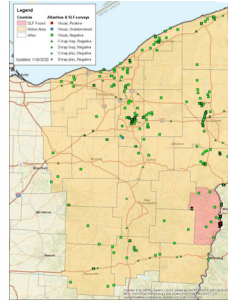
What Can You Do? *Spread the Word*


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Efforts in the Buckeye State

- GLEDN App – Scouting for both for host plant and SLF
- Monitoring with Traps – Circle Traps
- Outreach, Education and Engagement
- Treatments in Quarantined Counties



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Quarantine Information



Each state with SLF has quarantines, or will have quarantines in place.

What is the purpose of the quarantine?

What is Ohio's quarantine?

There are other quarantines too!



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What Can You Do?

Monitor and Report



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Reporting

- Great Lakes Early Detection Network App
- OSU Extension
- Ohio Department of Agriculture (ODA)
 - GLEDN App Reports
 - ODA-Online Reporting
 - ODA-Telephone
 - ODA-Email

Exact location, photo / sample, contact info

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What Can You Do? *Integrated Pest Management Approach*


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Management Options	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Do not move any life stage of SLF												
Scrape and destroy eggs												
Spray eggs with dormant rate of horticultural spray oil*												
Traps (circle traps or protected sticky bands)												
Contact insecticide applications (after hatch and avoid bloom)												
Application of imidacloprid (systemic insecticide), after bloom												
Application of dinotefuran (systemic insecticide), after bloom												

*Some trees are sensitive to horticultural spray oil.

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In – Ohio Report First



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Thank You

**JOIN THE BATTLE.
BEAT THE BUG.**



Amy Stone, OSU Extension – Lucas County, stone.91@osu.edu

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