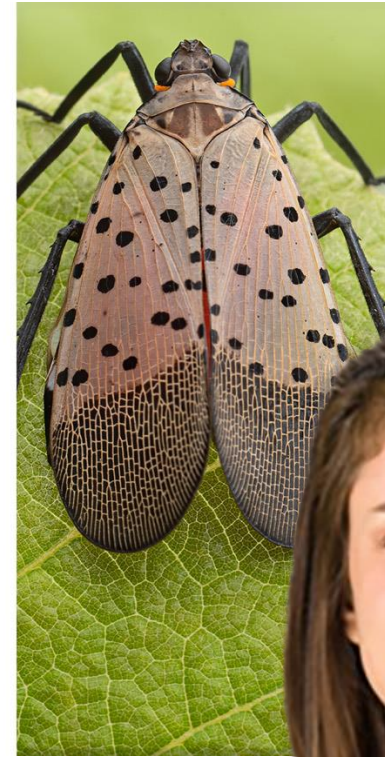
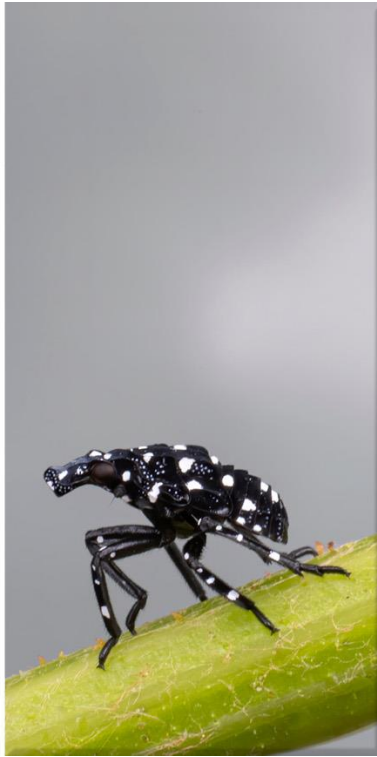


The Arrival of Spotted Lanternfly

Tips for Illinois Farmers



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UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

Kacie J Athey
Specialty Crops Entomologist



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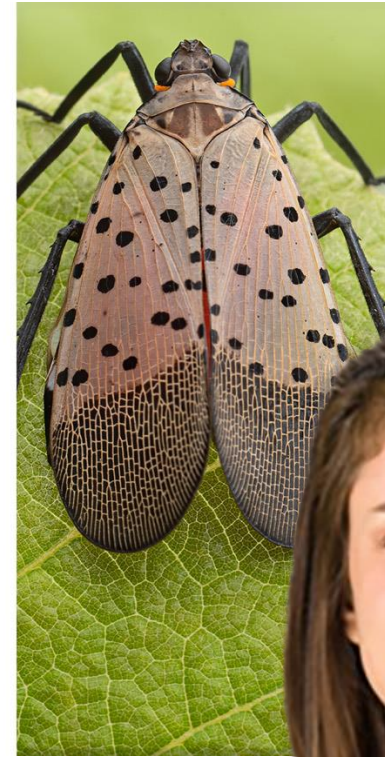
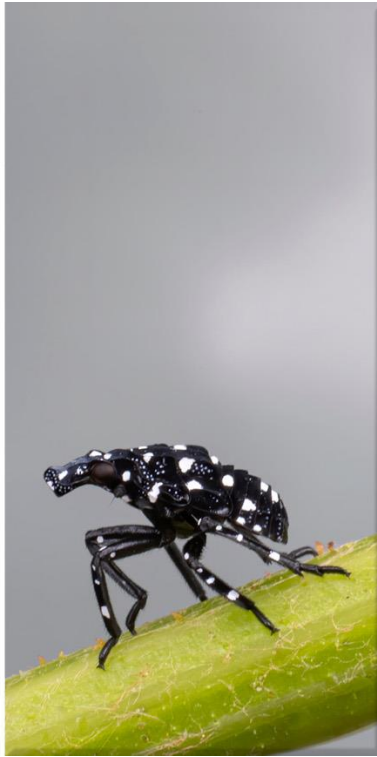
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Invasive Species

Species that establish and spread in new, non-native environments and cause harm

- Harm or elimination of native species
- Crop damage
- Disease transmission
- Damage to structures
- Infestation of stored goods
- Attacks to forests

Examples of invasive species that are significant in Illinois

- Emerald Ash Borer
- Brown marmorated stink bug
- Spongy Moth
- Spotted Wing Drosophila
- Asian Carp
- Zebra Mussels
- Rusty Crayfish
- European Starling
- House Sparrow
- Eurasian Collared-Dove
- Tree-of-heaven
- Common Buckthorn
- Purple Loosestrife
- Japanese Knotweed
- Bush Honeysuckles
- Multiflora Rose
- Autumn Olive
- Crown Vetch
- English Ivy

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“Kill it!” US officials advise no mercy for

Is New York City's Lanternfly Killing Spree Working?

The infestation of invasive spotted lanternflies is leveling off in some parts of the city, and growing in others. Officials are urging New Yorkers to keep killing them.



smash it ... just get rid of it!”

Spotted lanternfly

- Native to China, Bangladesh, Vietnam
- 2014 Pennsylvania
- 2023 Illinois, Cook Co.
- Feeds on plant sap, depletes phloem, weakens trees
- Honeydew

Photos: Lawrence Barringer,
Pennsylvania Department of Agriculture

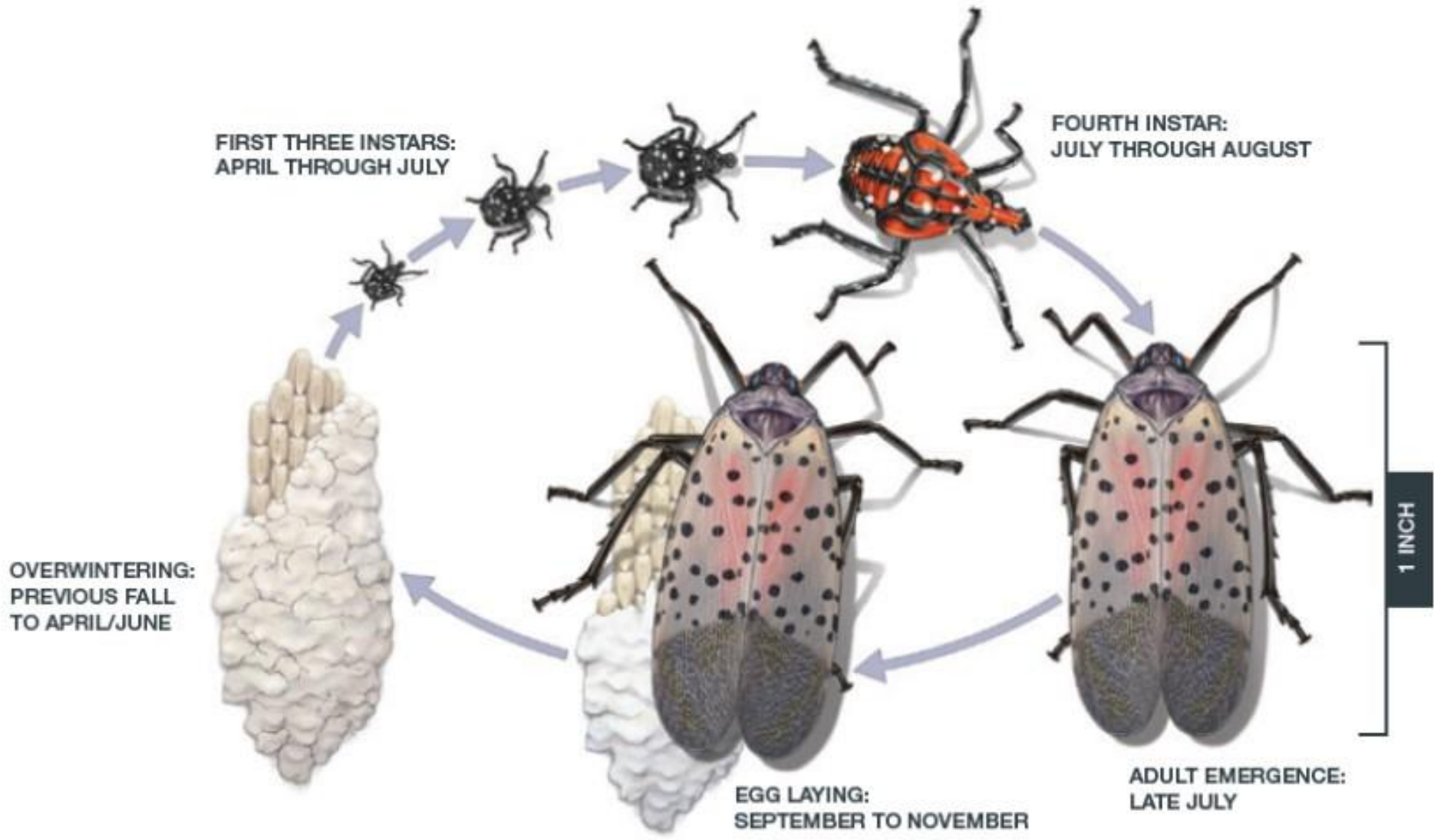


Spotted lanternfly honeydew

SLF feeding on sap and excreting honeydew, attracting sugar-loving insects, and sooty mold growing on leaves.



Spotted lanternfly life cycle

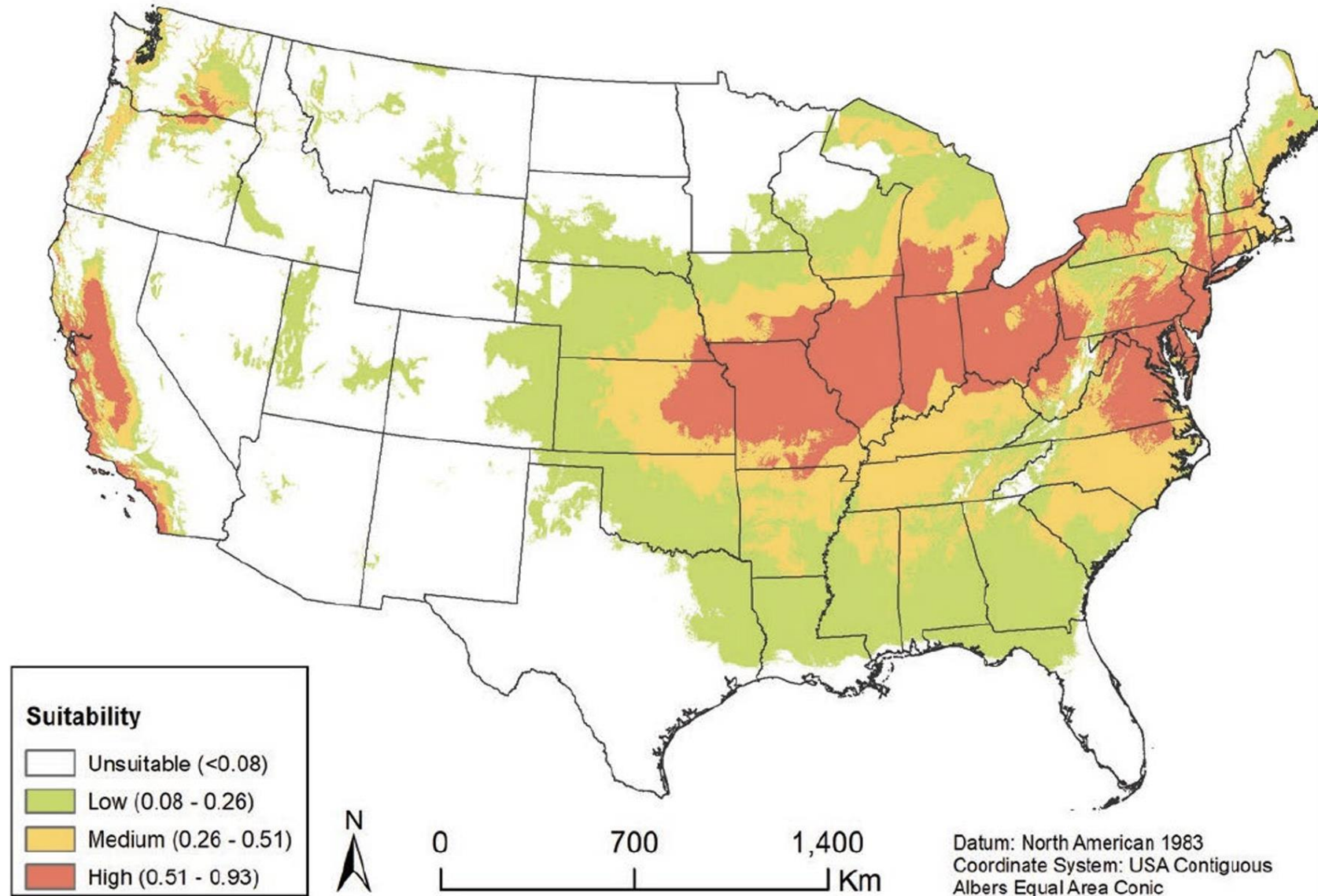


Tree of Heaven (*Ailanthus altissima*)

- Stinking sumac, varnish tree, stink tree
- Aggressive root system



Areas suitable for the Spotted Lanternfly



USDA Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

Expanded Spotted Lanternfly Control Program in Select States in the Midwest, Northeast, and Mid-Atlantic Regions of the United States

Final Environmental Assessment,
April 2023

Agency Contact:

Matthew Travis
National Policy Manager
Plant Protection and Quarantine-Emergency Domestic Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
4700 River Road, Unit 134
Riverdale, MD 20737
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Most common host plants

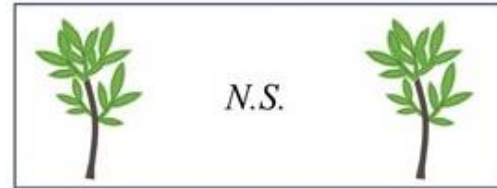
observations from eastern Pennsylvania

HOST	NYMPHS			ADULTS		
	May	June	July	August	September	October
Rose (cultivated, multiflora, etc.)						
Perennials						
Grape (wild and cultivated)						
Tree-of-heaven						
Black walnut, butternut						
River birch						
Willow						
Staghorn sumac						
Red/silver maple						

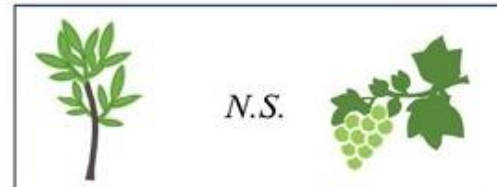
Retention of lanternfly per plant



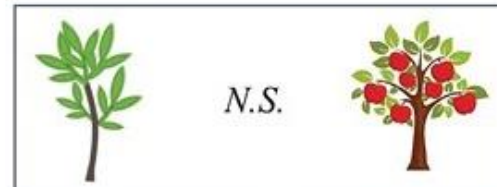
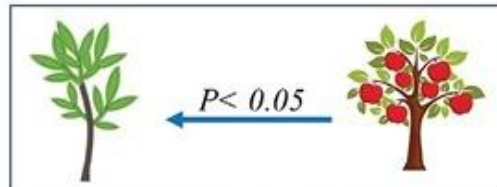
Tree of Heaven



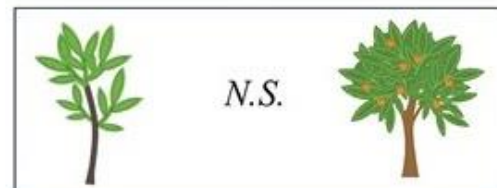
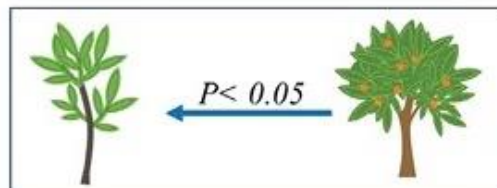
Grape vines



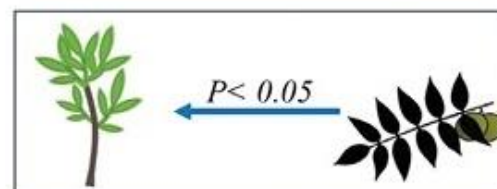
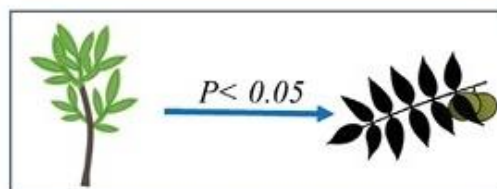
Apples



Peaches

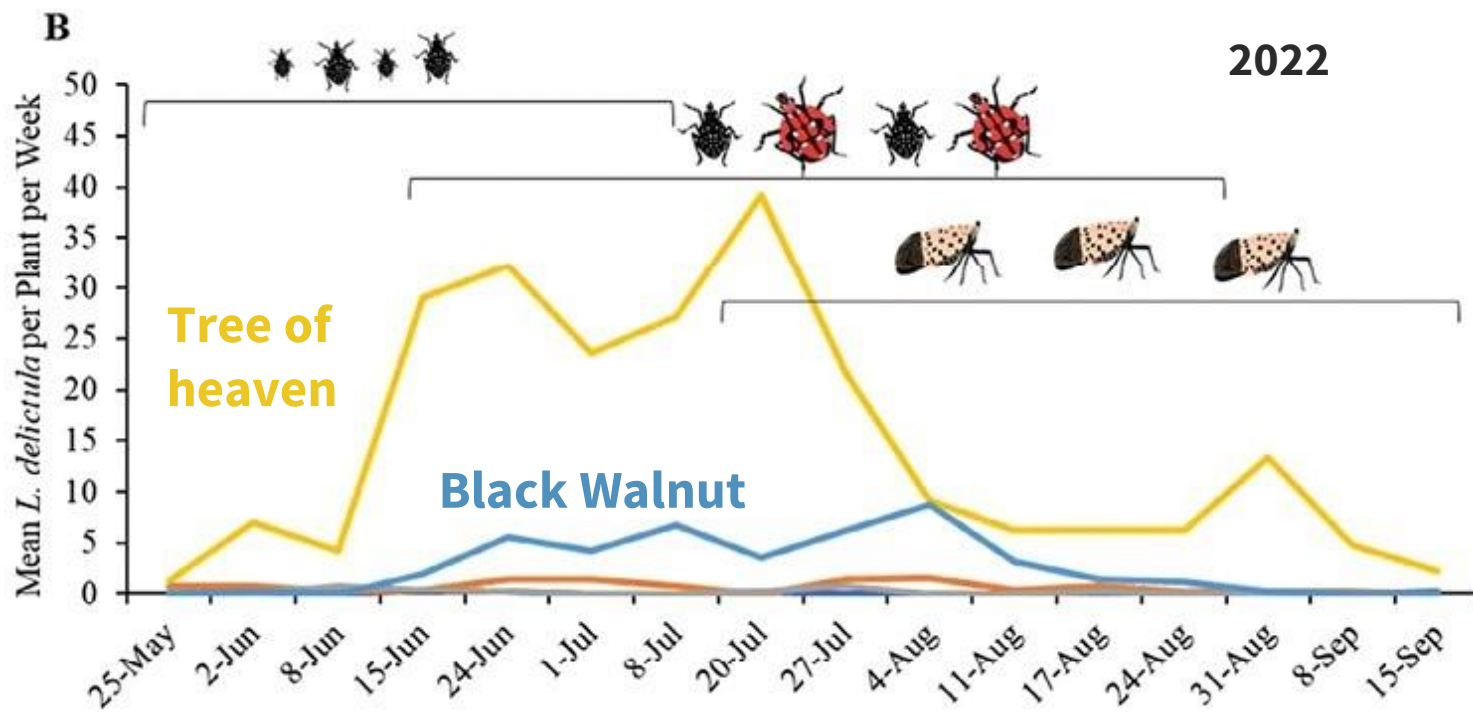
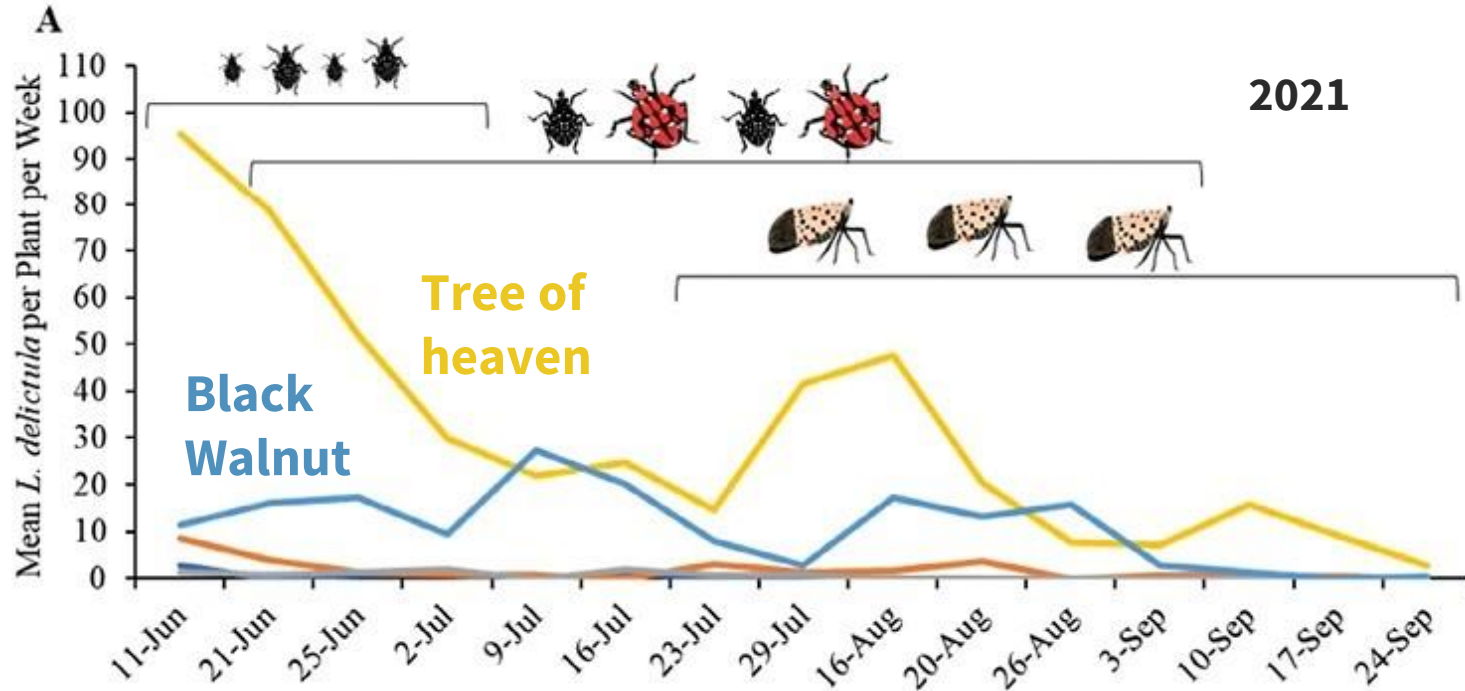


Black Walnut



- Spotted lanternflies released under shade cloth
- Marked nymphs
- Marked adults
- Arrows represent greater movement from one plant to the other.

Grape
Apple
Peach



Sentinel plants
in sites with
spotted
lanternfly
populations

Insect illustration credit:
Dr. Johanna E.
Elsensohn
Nixon et al 2023



© Eric R Day

5573205



© Lawrence Barringer

5563434

Spotted lanternfly control



Spotted lanternfly control

- Manual removal!
 - Tree of heaven
- Row covers
- Insecticides

Follow
label
instructions



Trapping/manual removal

Squishing



Photo: NYTimes

SPOTTED LANTERNFLY (SLF) TRAP, REUSABLE FULL SEASON RESERVOIR

GL/GL-4011-01

A physical trap designed to attach directly to a tree trunk. The tree circumference should be greater than 15". It is designed to funnel Spotted Lanternfly (SLF) into the reusable reservoir at the top. This trap measures 24" tall and 30" Wide.



extension.psu.edu/how-to-build-a-spotted-lanternfly-circle-trap

The screenshot shows the top of a web browser displaying the Penn State Extension website. The page title is "How to Build a Spotted Lanternfly Circle Trap". Below the title, there is a sub-header "ARTICLES" and a list of social media sharing options (Download, Save for later, Print, Share). The main content area features a photograph of the trap attached to a tree trunk. To the right of the photo, there is a short introductory paragraph about the spotted lanternfly (SLF) and its management. Further right, there is a section titled "You may also be interested in" with three recommended articles: "Wood-destroying Pests", "La Araña Saltadora Audaz", and "Spotted Lanternfly Management for Landscape Professionals".

Row Covers

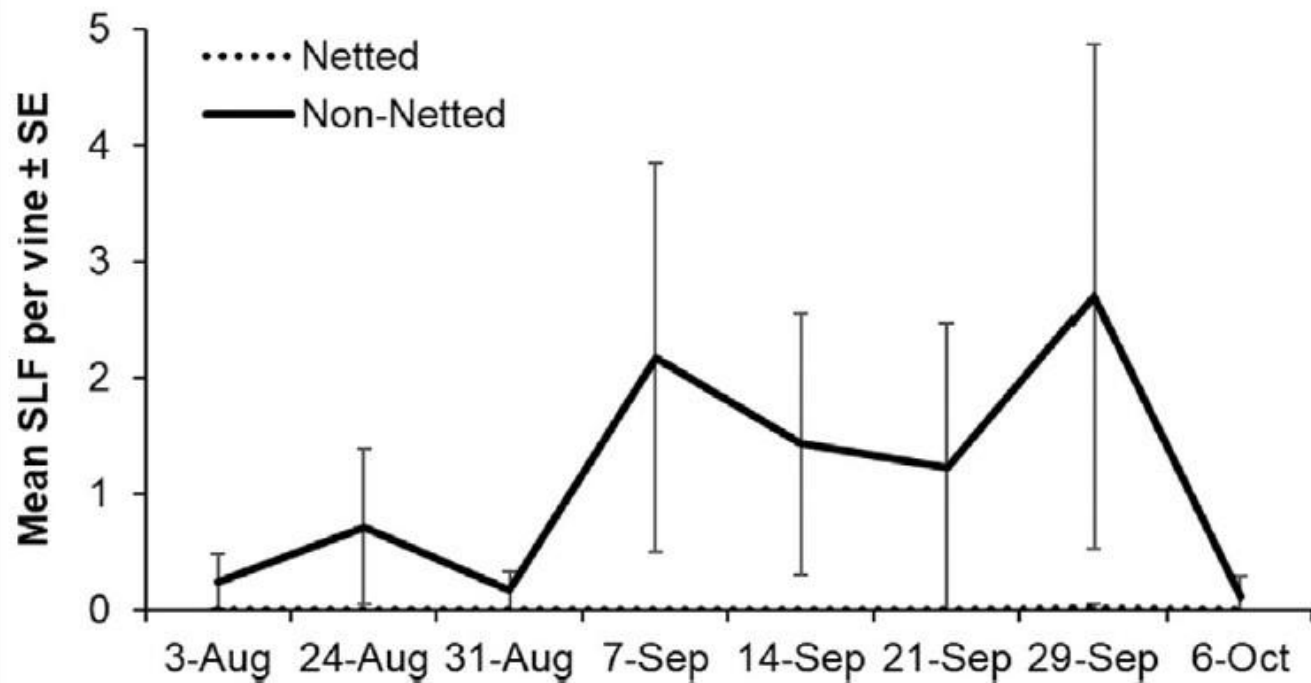


Figure 2. Weekly mean abundance of SLF per vine \pm SE observed on the netted (dotted) and non-netted (solid) vines across all five vineyards.

Insecticides for eggs in field

45%



Mean % mortality

25%



13%




6%



Treatment	paraffinic oil	dinotefuran	acetamiprid	soybean oil
Trade name	JMS Stylet Oil	Venom	Assail 35SG	Golden oil

Insecticides for nymphs in field

Treatment	Trade name	Mean % mortality 48h
malathion	Malathion SF	100%
thiamethoxam	Actara 25 WDG	100%
dinotefuran	Venom	97.9%
carbaryl	Sevin 4F	95.8%
bifenthrin	Brigade 10WSB	98.0%
phosmet	Imidan 70WP	100%
acetamiprid	Assail 30SG	83.3%



Cut grape foliage sprayed with insecticides

Insecticides for nymphs/adults in lab

Treatment	Trade name	Mean % mortality 0 hr nymphs/adults
bifenthrin	Brigade 10WSB	100 / 100
thiamethoxam	Actara 25 WDG	100 / 100
dinotefuran	Venom	100 / 100
carbaryl	Sevin 4F	100 / 97.5
oxamyl	Vydate 2L	100 / NA
phosmet	Imidan 70WP	100 / 0
indoxacarb	Avaunt 30DG	98 / 0



Potted grape plants sprayed with insecticides

MANAGEMENT OPTIONS	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Don't move any life stage of SLF												
Scrape and destroy eggs												
Spray eggs with dormant rate of horticultural spray oil												
Use circle traps												
Contact insecticide applications (after hatch and avoid bloom)												
Systemic application of insecticide (after bloom, varies by method)												
Systemic application of different insecticide (after bloom)												



Take-homes

- Spotted lanternfly in Illinois
- Nuisance pest
- Pest in grapes
 - Effective insecticides
 - Cultural control



If you see spotted lanternfly

Take picture and email to lanternfly@illinois.edu

I am writing to report that I have seen a Spotted Lanternfly at [LOCATION]. I spotted the insect on [DATE] at approximately [TIME].

It was located on [DESCRIBE LOCATION, PLANT/TREE, ETC].

I have attached a photo of the Spotted Lanternfly I saw.



Strategic Goal

Over the next 5 years, Federal and State partners will work to limit the advancement of spotted lanternfly (SLF) as we further scientific research towards the development of tools and pest management options.

USDA Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE



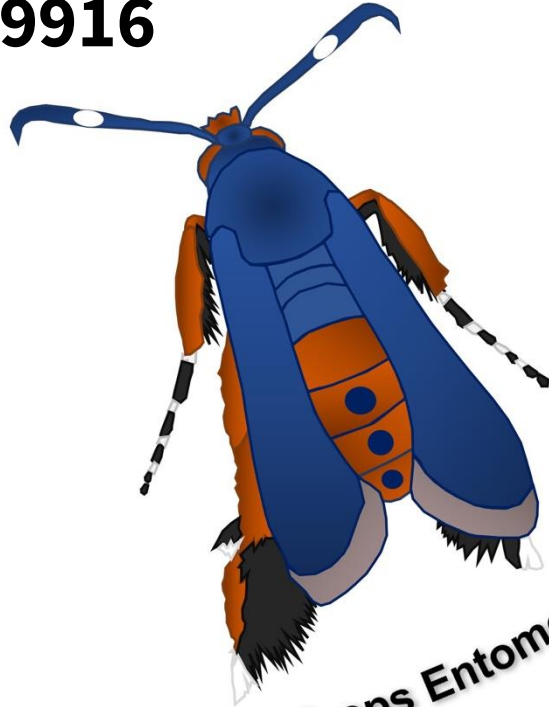
Spotted Lanternfly
Fiscal Years 2024–2028
5-Year Strategy

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Specialty Crops Entomology Lab



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Check out Dr. Athey's latest extension publication on the invasive pest spotted lanternfly, which has now been found in Illinois.

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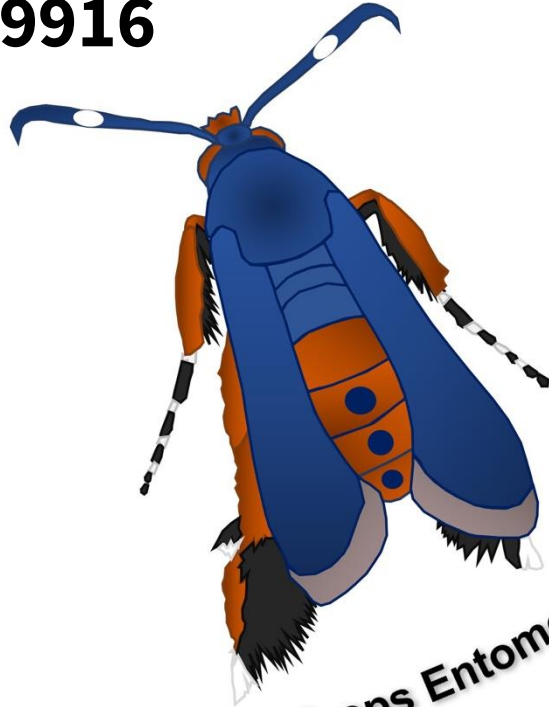


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