

Joint House and Senate Agriculture & Rural Affairs Committee

Informational Meeting on Spotted Lanternfly

Spotted Lanternfly in Pennsylvania



On September 22, 2014, the Entomology Program of the Pennsylvania Department of Agriculture received a report from an educator from the Pennsylvania Game Commission

The report detailed damage to *Ailanthus altissima* (Tree of Heaven) on private property in Eastern Berks County, PA being caused by an unknown insect

***Lycorma delicatula* (WHITE):**

- **A Planthopper in the Family Fulgoridae**
- **696 Species of Lanternflies in the world**
- **Only 17 species in North America**
- **Like most planthoppers, *Lycorma* pierce the stems of plants, trees, and vines and feed on phloem.**



The spotted lanternfly is native to Asia and is found in China, Bangladesh, Vietnam

It was introduced to Japan, South Korea and Pennsylvania

In South Korea, it is considered an invasive pest and impacts grapes and peaches



Follow FLOW:

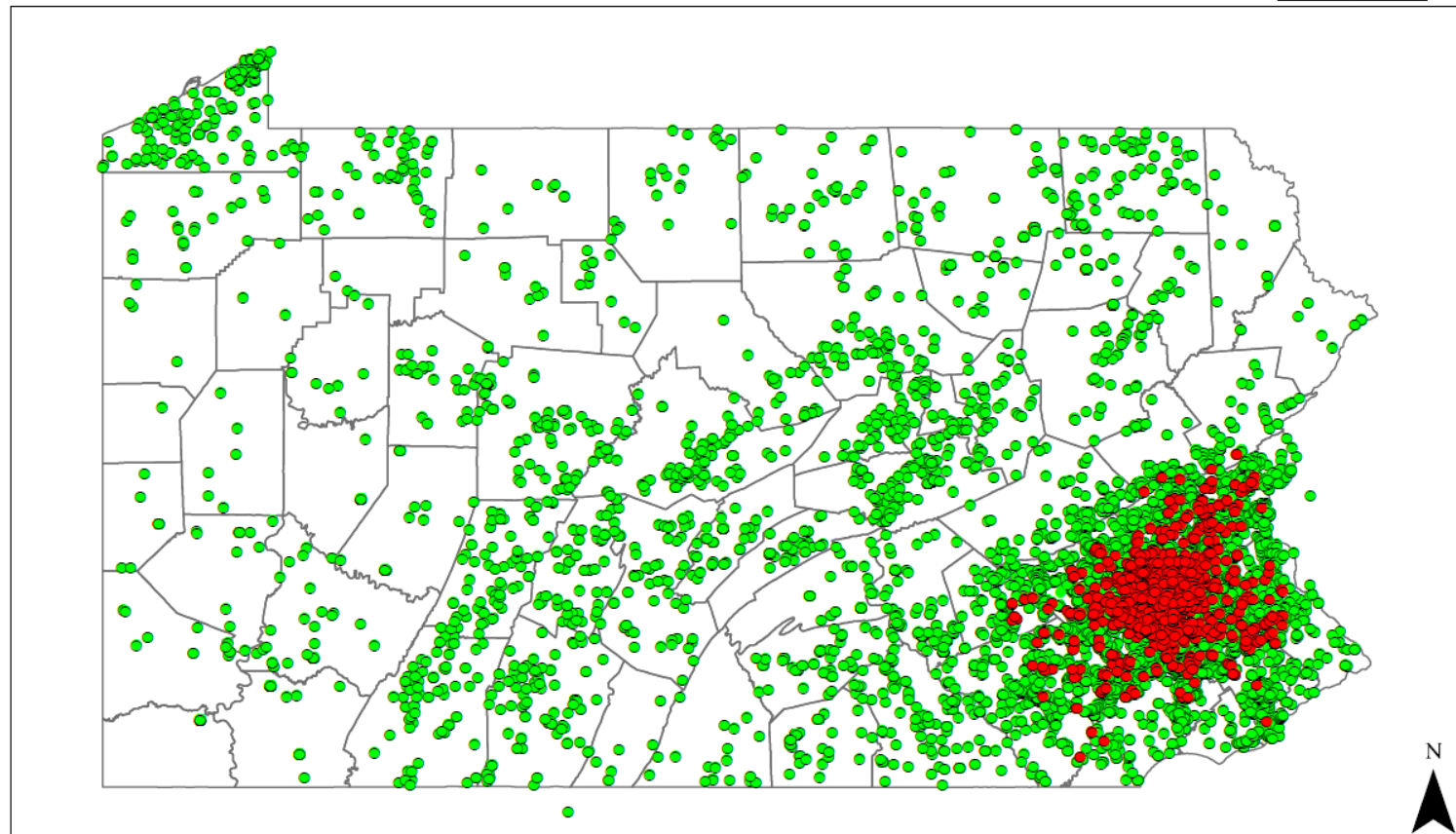


Spotted Lanternfly in Pennsylvania



Current Distribution

2014 -- 2017 *Lycorma* Detection Survey
Results through 12 October 2017

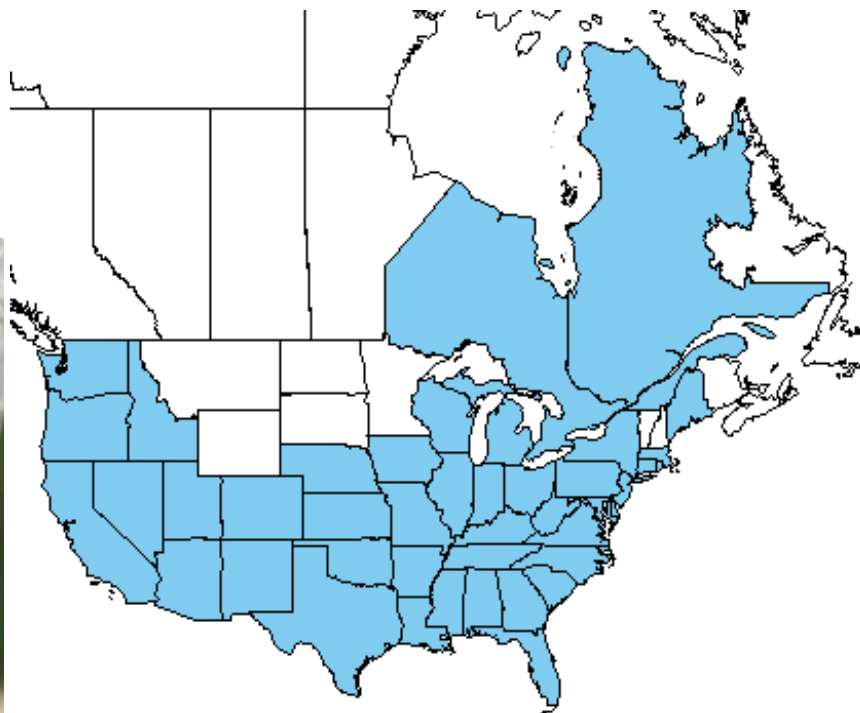


Spotted Lanternfly Presence

- Positive
- Negative



Spotted Lanternfly makes use of over 70 different plant species, but strongly prefers the invasive “Tree of Heaven”



Tree of Heaven Distribution-USDA PLANTS Database



Spotted Lanternfly in Pennsylvania



Impact:

Damage grape, hops, orchards, hardwood, and nursery industries



Damage comes from feeding waste (honeydew) Which turns into sooty mold



Spotted Lanternfly in Pennsylvania



Spotted Lanternfly in Pennsylvania



Impact:

Damage reported on basil, blueberry, cucumber and horseradish in 2017



Spotted Lanternfly in Pennsylvania



Impact:

Presence on other crops, alfalfa, soy, corn with reports of reduced yield on alfalfa.

No feeding documented.



Spotted Lanternfly in Pennsylvania



Impact:

Heavy Feeding on Walnut, Red Oak, Maple, and Hickory resulted in flagging and dieback

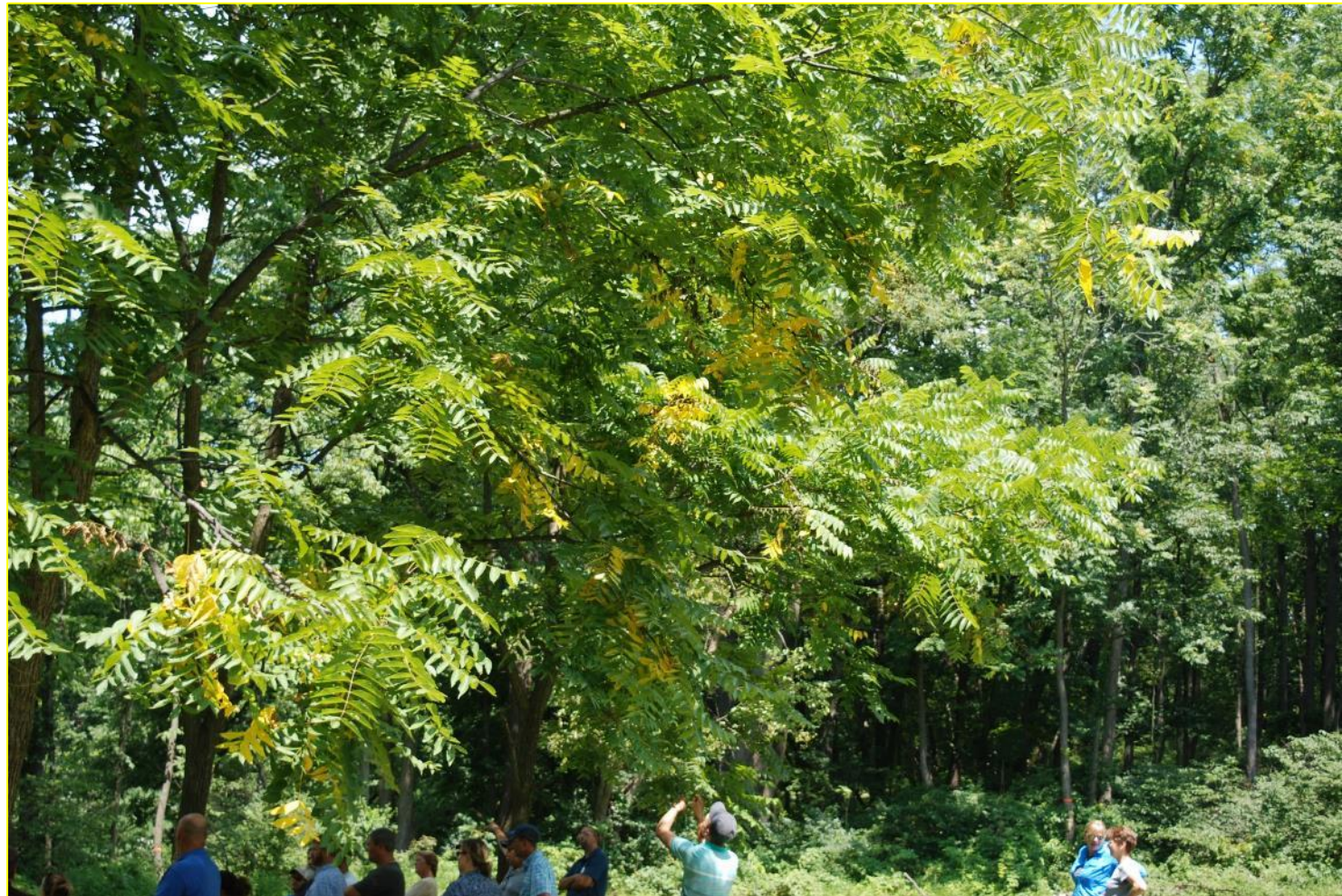


Spotted Lanternfly in Pennsylvania



Impact:

**Flagged
branches
had
several
spotted
lanternflies
feeding**



Spotted Lanternfly in Pennsylvania



Impact:

Adult clustering, swarming and Honeydew accumulation can impact quality of life.



Spotted Lanternfly in Pennsylvania



Adults: July - December



**Egg Laying:
September -
November**



Eggs: October - June

One Generation Per Year



**Fourth Instar:
July - September**



Third Instar: June - July Second Instar: June - July



**Hatch and 1st
Instar:
May - June**

Spotted Lanternfly in Pennsylvania



Egg masses contain between 30-50 eggs, are laid on many different objects, and are often well hidden



Egg masses that can be seen or reached are easily controlled by scraping



Spotted Lanternfly in Pennsylvania



Immature stages migrate up trees/plants each day and are easily caught on sticky tree bands



Spotted Lanternfly in Pennsylvania



Adults begin to appear in late summer, feed preferentially on Ailanthus, mate, and lay eggs

Males and females mate multiple times



Spotted Lanternfly in Pennsylvania



All life stages can hitchhike to new areas, but eggs and adults pose the greatest risk for movement



Spotted Lanternfly in Pennsylvania



**Swarming
adults
present a
biosecurity
challenge,
and can
impact trade**



The Spotted lanternfly program relies on cooperation.

Local officials, state agencies, lead the organizational charge.

Extension, Universities, and the USDA research new methods to deal with this pest.

PDA crews, USDA crews, volunteers, property owners, local municipalities and businesses work in concert



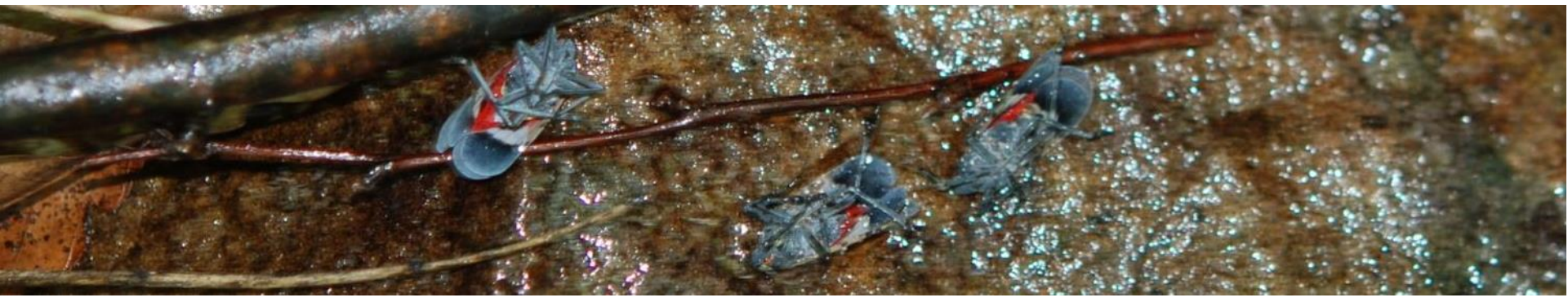
Spotted Lanternfly Numbers through 2017

10,589 Trees Banded, Killing 1,010,751 Lycorma

Egg mass scraping killed 1,667,960 Lycorma

18,000 Public reports investigated, 98% accurate

Ailanthus removal/trap tree setup underway

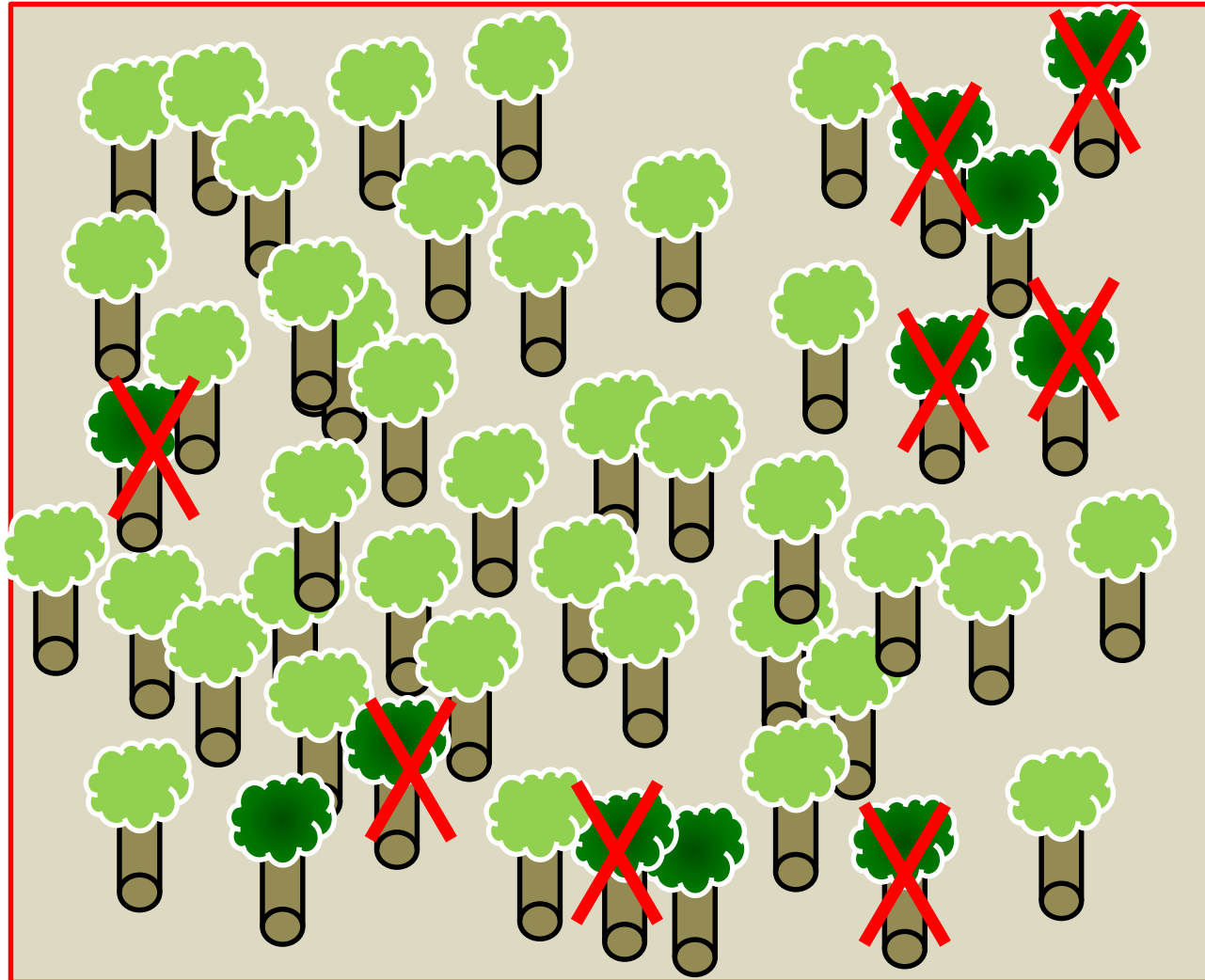


Removal-Trap Tree Method

Most Ailanthus are removed or killed with herbicide



Spotted Lanternfly in Pennsylvania

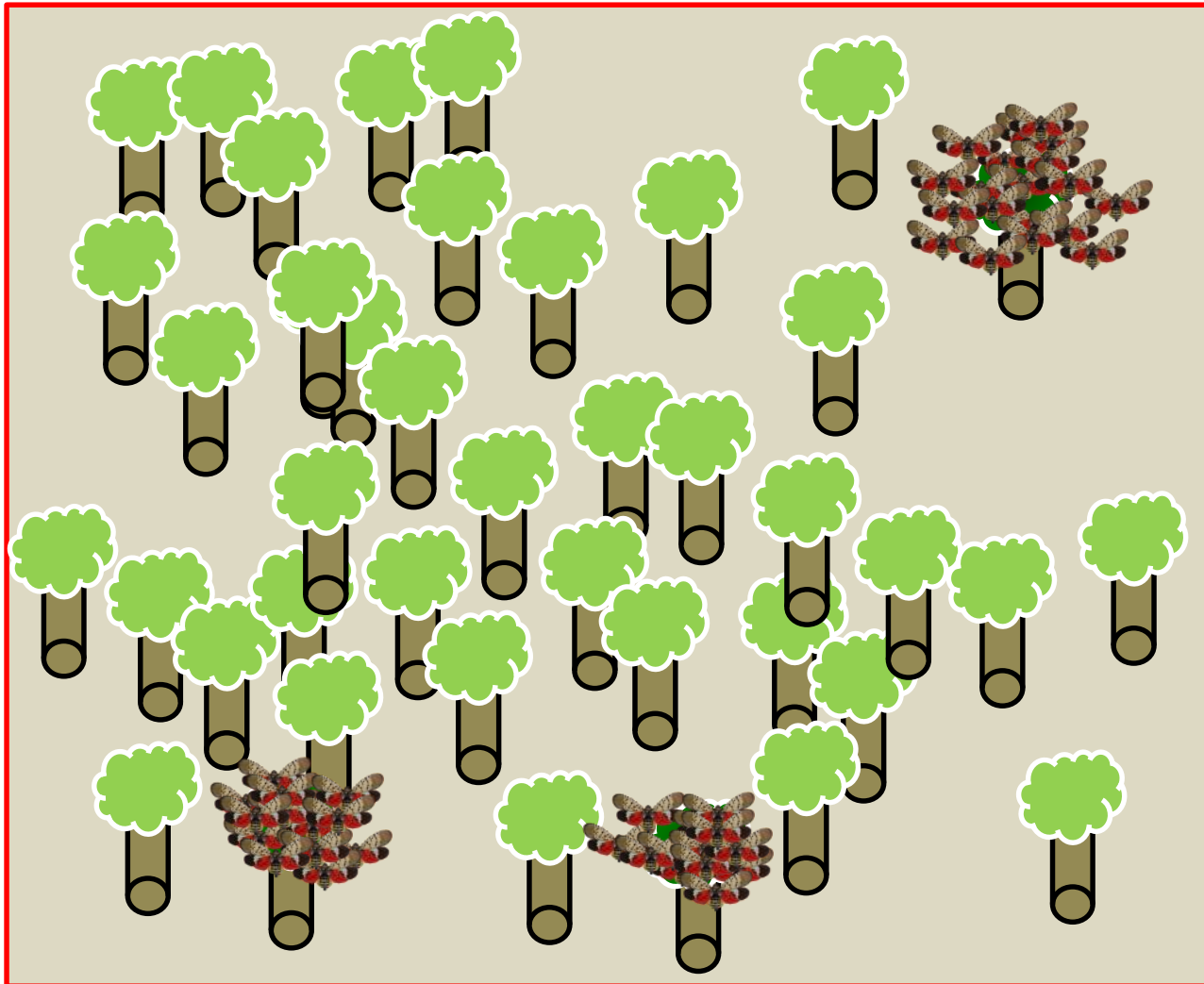


Host Reduction

**Remove Most
Ailanthus**

**Leave a few male
trees and treat
with systemic
insecticide**

Spotted Lanternfly in Pennsylvania



Trap trees

**July-September
4th Instar and
Adults**

**SLFs
concentrate to
feed on Tree of
Heaven with
insecticide and
die**

Spotted Lanternfly in Pennsylvania



Removal-Trap Tree Method

**The trap trees
attract
and the
insecticide
kills**



Impact on Adults is Dramatic



Impact on Adults is Dramatic



Impact on Adults is Dramatic



Spotted Lanternfly in Pennsylvania



Lycorma Delimitation Survey

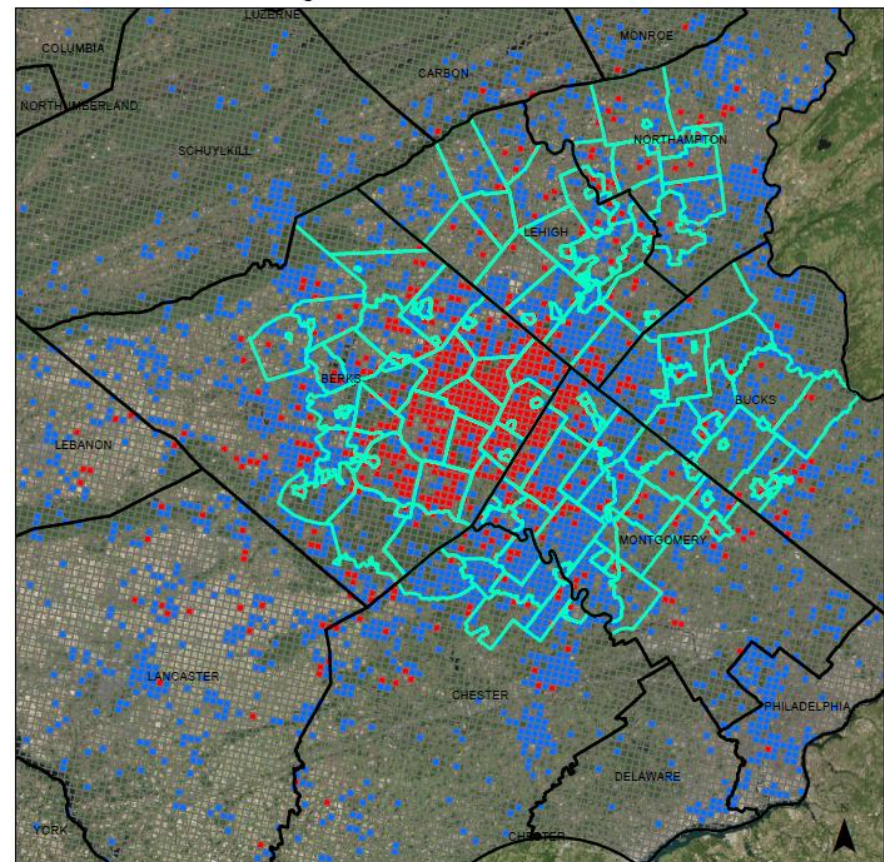
Results Through October 12 2017



1,462 properties known to be infested

Public reports aid new detections, many are single specimens

Spread seems linked to hitchhiking specimens



As the population of spotted lanternfly grows, and the insect adapts, new threats to multiple industries emerge

It is clear that more help is needed to contain this pest



THANK YOU
agriculture.pa.gov/SpottedLanternflyAlert

