

Spotted lanternfly update

California Fruit, Nut Tree and Grapevine Improvement Advisory Board meeting

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Spotted lanternfly

Lycorma delicatula (White) (Hemiptera: Fulgoridae)



Large (up to 25 mm long) and colorful.

First detected in the United States in 2014 (Pennsylvania).

Feeds on >100 species of plants but has a strong preference for tree of heaven (*Ailanthus altissima*).

Grape is another preferred host and is apparently the only crop that is significantly impacted by this pest in the eastern United States.



SLF host plants with field reports of significant (death or dieback) impacts



grape



tree of heaven



walnut

Grapes

Only crop with reports of significant impacts by SLF in eastern United States.

Mass feeding (phloem) can kill vines. Honeydew and sooty mold decrease photosynthesis. Reduced yield.

Adults abundant near and at harvest.
Spraying disrupts harvest timing

One greenhouse study suggests SLF can take up *Xylella fastidiosa*.
Transmission uncertain at this time. Research underway at Penn State with funds from CDFA.
No other diseases known to be vectored.



Updates regarding SLF in eastern vineyards

Berks County, Pennsylvania:

SLF in vineyards every year since 2017.

Reduced SLF populations ~2021-2023.

Increase in late 2024 and 2025.

Research shows that SLF get collected during mechanical grape harvest if vines are not treated.

Walnut

Juglans nigra (black walnut; eastern U.S.) is a good host (SLF can develop to adult on it).

Branch dieback reported in Pennsylvania.

Other *Juglans* species are hosts.

Is *Juglans regia* (main walnut species grown in California) a host?

→ Not known, but it seems likely.



SLF distribution in United States

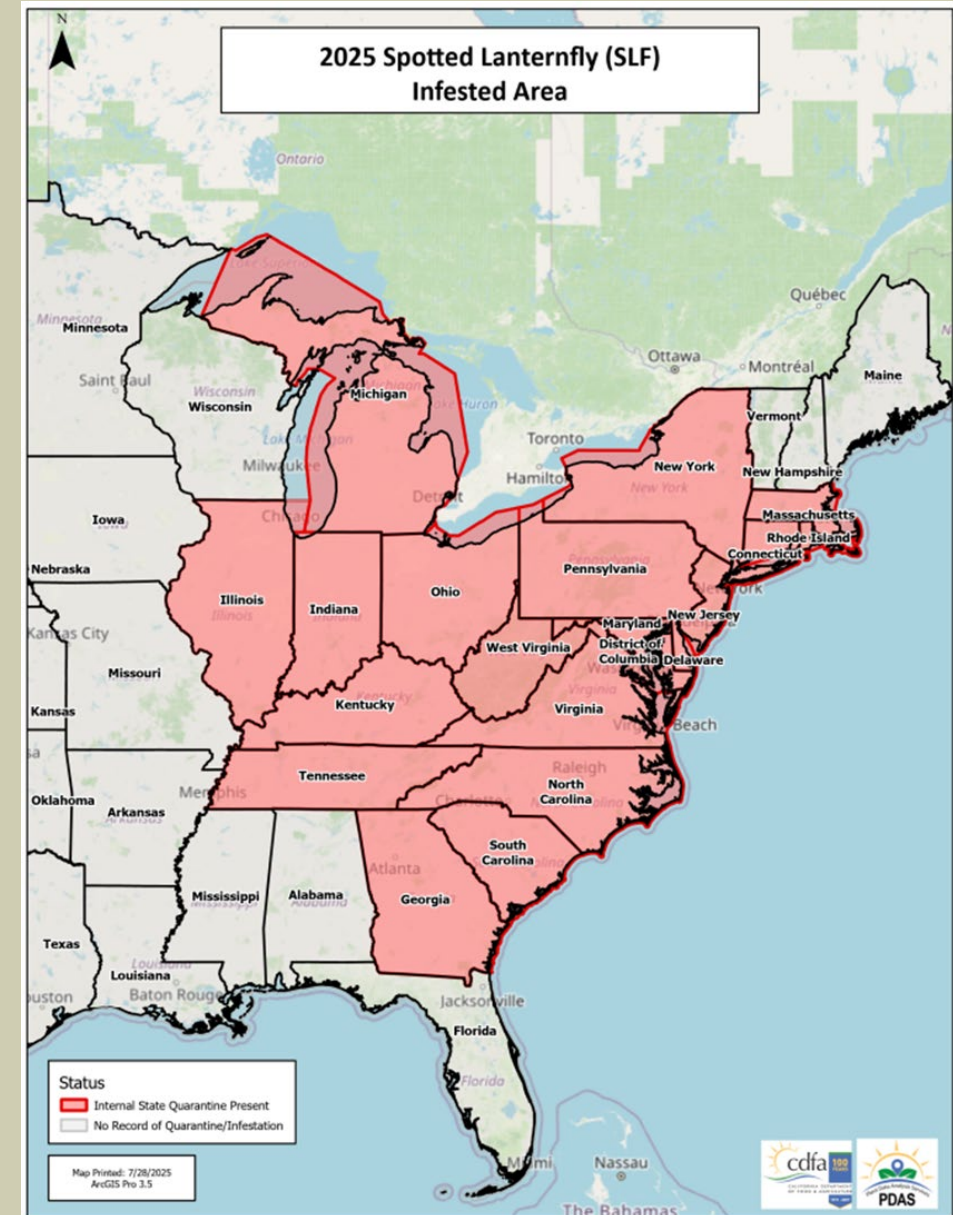
17 states infested (California State Exterior Quarantine).

Frequently intercepted in California, most often at border stations and during Japanese beetle inspections (cargo aircraft).

Most important pathway for long-distance movement is likely egg masses on a variety of objects.

Lays eggs on any flat surface (e.g., tree trunks, vehicles including trains, furniture, sculptures).

At least three egg mass interceptions in 2024-2025.



Could SLF establish in California?

SLF is not known to be established anywhere with a Mediterranean climate.

However...

Tree of heaven and grapevines widely distributed in California. Other hosts present as well.

Niche modelling (e.g., Wakie et al., 2020):
Coast and Central Valley of California may be suitable.

Laboratory research (environmental chambers) by USFS suggests SLF could live in Lodi (temperature and humidity) and Napa.

Keeping SLF out of California

Since 2020: Annual high-risk survey. ~300-600 sites surveyed per year in cooperation with counties.

Action plan (detection, delimitation, eradication, quarantine):

https://www.cdffa.ca.gov/plant/pdep/target_pest_disease_profiles/docs/cdfa_spotted_lanternfly_action_plan.pdf

Supporting research (biological control, spread risk, host range, etc.).

- Some California crops (e.g., citrus, avocado, fig, and almond) and native plants (*Populus fremnontii*) are host plants for nymphs (at least for short periods).
- Nymphs will not develop on many of these “hosts” (e.g., they may only survive for a week or two) but the presence of such plants could make a difference in establishment.
- Impacts: Besides grape, hops and cucumbers are impacted in field experiments (bagging plants).

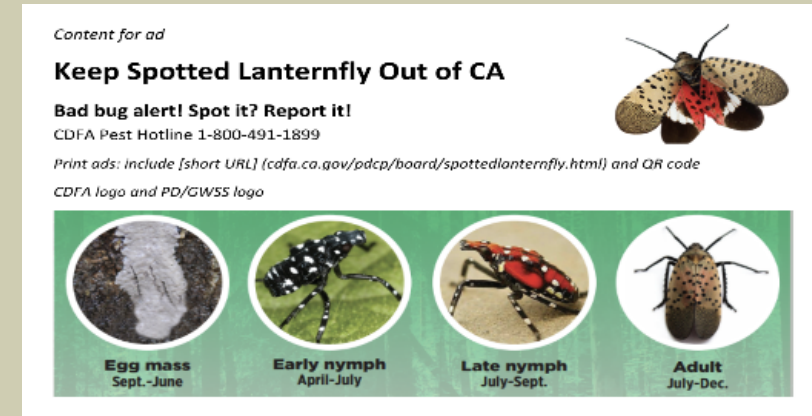
Outreach

Training for county regulatory staff from PHPPS and PDCP through Pest Prevention University

UC Master Gardeners Sentinel program rolled out to Master Gardeners in Lodi.

PD/GWSS Board developed a communications toolkit and advertising campaign:
<https://www.cdfa.ca.gov/pdcp/board/spottedlanternfly.html>

Coordinated with other states and National Plant board produced harmonized SLF quarantine template. Used by CDFA to develop exterior quarantine.





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Report a Pest

☎ **Pest Hotline: 1-800-491-1899**

Have you seen a new or unusual plant or pest in your area?

If so, you can play an important role in protecting California agriculture and your environment by reporting the sighting of a plant or pest that you suspect may be a new invasive species in your area.

- [Report a Pest Web App](#)
- [Report a Pest Sighting Form](#) 





Thank you!