SPOTTED LANTERNFLY (SLF)

Lycorma delicatula

Description:

Adults:

Adults are approximately 1 in (25.4 mm) long and 0.5 in (12.7 mm) wide at rest. The forewing is pinkish grey with black spots and hindwings have contrasting patches of red and black with a white band. The abdomen is yellow with broad black bands.

Eggs:

Egg masses contain 30-60 eggs laid in rows. Egg masses are covered by a creamy white, putty like substance that becomes grayish as it dries. After a few weeks, the covering turns dark tan and starts to crack, resembling a mud splotch. Egg masses can be extremely camouflaged against the substrate they are laid on.

Nymphs:

First instar nymphs are approximately 0.25 in (6.35 mm) long and black with white spots. Second and third instar nymphs are also black with white spots. Fourth instar nymphs have red coloration with white spots and are up to 0.75 in (19 mm) long.

Hosts:

Broad host range of more than 65 plant species. Key host plants include grapevines, fruit trees, Tree of Heaven, black walnut, willow, sumac, maples, roses, and river birch, among others.

Damage:

- May cause significant damage to grapevines. Degree of damage is likely dependent on the level of infestation, overall health of the vine, winter conditions, and other stressors.
- Does not kill every plant on which it fees, but some plants are more at risk than others. SLF is a plant stressor, and in combination with other stressors, can cause significant damage to host plants.
- Feeds on sap from plants causing serious damage including oozing sap from trees, wilting, leaf curling, and tree dieback.
- Feeding damage from adults is the most problematic.
- Excretes honeydew, a sticky, sugary substance that is a as a byproduct of feeding. Honeydew attracts bees, wasps, and other insects. Honeydew buildup leads to the growth of sooty mold which can damage plants.

Top left: SLF egg mass (source: E. Swackhamer). Top center: SLF early instar nymph; top right: SLF late instar nymph; bottom left: SLF adult, wings closed (source: Pennsylvania Department of Ag). Bottom right: SLF adult, wings open (source: NYSIPM staff).

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SPOTTED LANTERNFLY (SLF), *Lycorma delicatula*

Phenology:

- One generation per year.
- Overwinters as egg masses.

Stage	*Timing*
Egg masses	October – June
Hatch and 1st Instar	May – June
2nd Instar	June – July
3rd Instar	June – July
4th Instar	July – September
Adults	July – December
Egg Laying	September – November

Trap Design:

- SLF Trap with Replaceable Bag design or SLF Trap with Reusable Full Season Reservoir.

Trécé PHEROCON Spotted Lanternfly Trap, Reusable Design

Placement Time:

- Place traps by mid- to late-April to capture nymphs after they hatch.

Placement Pattern:

- Traps should be attached to the trunks of host trees at approximately 4 ft (1.3 m) high on the trunk of the tree.
- Traps are most efficient on trees with smooth bark and secured tightly against the tree by wrapping the bottom material tightly around tree trunk.
- Use staples to attach to the thickest part of the tree; avoid using nails to secure trap to the tree.

Trap Density:

- Use only one trap per tree.
- Traps can be used on any host tree such as tree of heaven, walnut, willow, or others.

Trap Maintenance:

- Check traps weekly.
- For SLF traps with replaceable bags, replace bags at monthly intervals or empty bag when full.
- For SLF traps with full season reservoir, empty contents of capture reservoir when traps are checked weekly or bi-weekly.

Recommendations:

- Destroy egg masses by scraping them into a bag or container filled with rubbing alcohol or hand sanitizer; egg masses can also be smashed.
- Use SLF traps to capture nymphs and adults as they crawl up the tree trunk to feed higher on the tree. Only set up traps on trees on your property or where you have permission to do so.
- Remove all parts of the trap at the end of the season and store until following season.
- Avoid sticky trunk band traps as they capture other insects and animals including birds, small mammals, pollinators, butterflies, and more.
- Removal of preferred host plants, such as Tree-of-heaven, can aid in management efforts.
- Only use insecticides that are registered by the EPA to treat SLF on your property.
- When you determine that professional help is needed, contact several companies to make sure the one you choose meets all legal and educational requirements, including verifying a valid and current pesticide applicator license and business license.
- If SLF is found outside the quarantine zones, it should be reported to extension authorities or local consultants.

Source: Recommendations and certain other sections were sourced from Penn State Extension SLF Management for Residents, Penn State SLF Management Resources, and PDA Guidelines for Control of SLF.

Note, always:

- Count and record captures as recommended.
- Change trap as needed.
- Follow recommendations.
- Contact local extension authorities and consultants for regional advice.

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