What to Do About Spotted Lanternfly on Ornamental Trees and Plants in Residential and Public Landscapes

Deciding what to do about spotted lanternfly in your landscape depends on the level of risk to your plants and what works for you.

Spotted lanternfly nymphs on a young walnut tree. Photo: Emelie Swackhamer, Penn State

Spotted lanternfly (SLF) is a complex pest problem and unfortunately, there is no "one size fits all" solution. Each situation is different and deciding on a plan of action requires everyone to assess their situation and decide what makes sense for them.

Consider the steps below to think about your situation, goals, and the management options that are available and possible for your situation. Continue to remain vigilant and adapt your action plan if your unique situation changes.

Most concerns about SLF in ornamental landscapes involve trees, so in this article, we will mostly refer to trees but remember the concepts we discuss can also apply to herbaceous plants, shrubs, and vines.

1. Gather information about your situation by answering these questions

• How can you protect the environment while managing SLF?
• How many SLF do you see?

• What life stage are you trying to control? (nymphs, adults or eggs)
• How much effort or money do you want to use to reduce the infestation?
• Are your trees/plants otherwise healthy or stressed?
• On what tree/plant are they feeding?
• Are they feeding on a preferred host plant like Ailanthus altissima or grapes?
• Are there preferred host plants nearby?
• Are you close to a vineyard or a plant production nursery?
• Are you close to major transportation areas like railroads or shipping hubs?

2. Assess your risk: consider the SLF population size and vulnerability of your plants

• If you find SLF in your landscape, avoid overreacting. To date, SLF has not killed valuable landscape trees. However, large numbers of SLF feeding for several months is known to adversely affect the ability of a tree to photosynthesize and produce sugar (energy) from sunlight. Researchers are working to better understand how much damage SLF can do to trees.
• Currently, we try to estimate the potential for risk by looking at two factors: 1) the number of SLF present and 2) the likelihood that SLF will feed on the trees that are there. We also try to take into account the presence or absence of other stressors that interfere with the health and vigor of the tree(s).
• Figure 1 demonstrates a way to think about the potential risk to your enjoyment of your landscape and the potential for damage to your ornamental trees. On the top, increasing numbers of SLF may increase various landscape problems (e.g. sheer numbers of annoying insects, amount of honeydew and sooty mold present, numbers of stinging insects attracted to the honeydew, etc.) On the left side, factors that contribute to tree stress including both SLF feeding preferences and other stressors are considered.
There is no exact way to measure the risk to your landscape or trees, but Figure 1 illustrates one way to think about it in relation to your unique situation.

Figure 1. Assess your risk: SLF population size and vulnerability of plants

![Image: Amy Korman and Emelie Swackhammer, Penn State]

3. Consider the Management Options

- After thinking realistically about the risk that SLF poses to your property and trees, the next step is deciding on a course of action that works for you. Figure 2 summarizes many management options that may help. Additional options may be added as we learn more about SLF through research experiments.

- Integrated Pest Management (IPM) provides a framework for choosing between effective management options in an ecologically responsible way. When using IPM to manage a pest, first consider the least toxic but effective option. Try to use options in the lower part of the IPM triangle before resorting to the careful use of chemical insecticides only when necessary.

- The time, effort, and cost of the action plan you choose will vary depending on many factors. You may have the ability, tools, and desire to implement some management options yourself, or you may choose to hire a pest management professional. Prices of insecticides vary, so before deciding on any one specific product, read the label and calculate how much you will need to use and how much it will cost.

4. Choose an action plan that is right for you from the possible options in the IPM framework.

- To decide on an action plan use all of the information you have compiled. Include your thoughts about estimating your risk from Figure 1, what you know about your resources, ability, tools, and desire to implement any management options. Consider trying management options in the lower part of the IPM triangle first.

- In any of the suggested action plans listed below, you might use one, several, or all the suggested options.

- Other plans of action are certainly possible and remember to remain vigilant and adapt your action plan if your unique situation changes.

Important Reminders

- Treating for SLF will not prevent more SLF from coming into your landscape.

- Use pesticides safely. Read and follow all pesticide label directions.

- Everyone is required to comply with the SLF quarantine regulations at all times.

- For more discussion about making SLF management decisions see Deciding If and When to Treat for Spotted Lanternfly on Ornamentals.
• For more information about managing spotted lanternfly and to report SLF sightings visit the Penn State Extension spotted lanternfly website or call 1-888-4BAD FLY.

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