



Using Traps for Spotted Lanternfly Management

Introduction

Spotted lanternfly (SLF), *Lycorma delicatula*, is an invasive planthopper, native to Asia, that was first detected in southeastern Pennsylvania in 2014. It feeds on and damages many plants, including economically important crops such as fruit trees, grapevines, hops, hardwoods, and ornamentals. If you have SLF on your property, you can use traps to kill them and possibly reduce damage to your trees. Currently, the most effective trap for SLF is a sticky band wrapped around the trunks of trees. SLF nymphs and adults are trapped in the sticky barrier as they crawl up from the ground onto the trunks and move upward to feed on the tree. Sticky bands are a nonchemical method of killing, they are relatively easy to install, and they can be a good option for residential landscapes. However, there are several important things to consider when installing a sticky band, especially how to avoid catching unintended, nontarget creatures (e.g., bees, butterflies, and mammals), often referred to as bycatch. There is no way to prevent SLF from moving on to your property, and using traps alone may not eliminate SLF. Consult extension.psu.edu/spotted-lanternfly for additional recommendations on management of this pest.

Installation

Only use tree banding where you see SLF feeding on trees or observe SLF crawling up the trees. Banding is not effective on bushes or most vines because they don't have a large enough diameter for the banding tape. Place the bands about 4 feet



Figure 1. SLF nymphs stuck at the base of a sticky band.

from the ground and tightly secured against the tree. Gaps below the band allow the SLF to crawl under the band and avoid being trapped. Secure bands by wrapping the material tightly, stapling it into the tree, or using pushpins. Bands on trees with deep grooves in the bark may not be as effective as bands on trees with smooth bark. We suggest banding infested trees as soon as SLF hatches (late April–June). While adult SLF can be captured by sticky bands, they are less likely to be trapped by some bands or they may avoid them altogether.

How to Obtain Sticky Bands Homemade Traps

There are some options to make your own bands. This includes using duct tape wrapped backward (sticky side out)



Figure 2. (A) A sticky band that has been cut in half to reduce the surface area and risk of vertebrate bycatch and (B) a sticky band that has been covered in a chicken-wire caging to prevent vertebrates from getting stuck on the band.

Elizabeth Finlay

and using pushpins to secure the duct tape. While this option might be cheaper, it tends to be less effective because it loses its stickiness quickly, especially if it rains. Another option is to wrap your tree in a thin (3–5 inches wide) plastic or water-resistant paper, secure it with pushpins or staples, and cover the paper with a sticky substance like commercially available products made of gum resins (e.g., petroleum jelly). If using petroleum jelly, take caution to not get it on the tree, as it may discolor the bark of the tree.

Purchased Traps

Sticky bands and tree banding glue are available commercially. They can be purchased online or at your local garden center or hardware store. To date, we have not found that any commercially available band is better than another.

Avoiding Bycatch

When banding for SLF, it is possible that you may accidentally trap nontarget animals, including beneficial insects, small mammals (bats, squirrels, etc.), small birds, and lizards. There are several practices you can use to try to reduce the risk of capturing these nontargets, especially the larger creatures. One option is to reduce the width of the band, thereby reducing the surface area that a nontarget animal encounters (Figure 2A). This involves cutting commercially available bands in half or in thirds. Because SLF are trapped on the bands from the bottom up, this method can capture the same amount of SLF and will help your supply of banding material last longer.

Another option is to build a guard over the band out of wire (fencing, such as chicken wire, or mesh, such as window screening) to prevent larger animals from contacting the sticky surface (Figure 2B). Both of these methods have worked well to reduce bycatch. More detailed instructions on these methods can be found in the how-to video at extension.psu

.edu/spotted-lanternfly-banding. The petroleum jelly method (described above) is not known to capture mammals. There is also a commercially available band that uses a white fiber material to hold the inward-facing sticky side of the band away from the trunk of the tree. This creates a protected sticky surface, which reduces the potential of catching birds and other animals.

If you decide to use sticky bands, check them regularly (once per week). If you capture an animal, do not attempt to free it by yourself. You may put the animal and yourself in danger. If you wish to try to save the animal, cover any exposed sticky material with plastic wrap or paper to reduce additional entanglement, remove the band from the tree as carefully as possible, and take the animal to a wildlife rehabilitation center (pawr.com).

Note: Several different methods of killing and trapping SLF are being researched. Stay up to date on new and approved methods by visiting extension.psu.edu/spotted-lanternfly or contacting your county extension office.

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