

Spotted Lanternflies and Beekeeping

The spotted lanternfly, *Lycorma delicatula*, is an introduced plant hopper from China that is rapidly expanding its range in the United States.



Figure 1. Spotted lanternfly adult on a leaf. Photo: Robyn Underwood, Penn State

Since arriving in Berks County, Pennsylvania, in 2014, spotted lanternflies (SLF) have spread to and become established in 13 states (CT, DE, IN, MA, MD, MI, NC, NJ, NY, OH, PA, RI, and VA). This invasive insect is a significant economic threat, as it feeds on and damages grapevines and stresses trees. In addition, lanternflies are a major nuisance to humans, especially in the late summer and early fall when the adults aggregate and are very noticeable. Adult lanternflies, found in abundance on the trunks of trees, such as maples and tree-of-heaven, excrete large quantities of sticky, sweet honeydew as they feed on plant sap August-October. The honeydew covers the trunk of the tree and vegetation nearby, attracts sugar-loving insects, including honey bees, and promotes the growth of black sooty mold.



Figure 2. Adult spotted lanternflies aggregated on a tree trunk (left). Spotted lanternfly egg masses on a tree trunk (right). Photos: Robyn Underwood, Penn State

To reduce the spread of these insects, a few things are important to know for beekeepers. Lanternfly eggs can be laid on hive boxes, lids, bottom boards, stands, pallets, etc. In addition, adult lanternflies often jump into vehicles. Beekeepers should check equipment, vehicles, trailers, etc., for lanternflies and their egg masses prior to moving the equipment. Inspecting hive equipment and removing any life stages of SLF prior to movement is critical to avoid spreading it to new areas.

In addition, once lanternflies are established in an area, beekeepers notice unusual late-season honey collecting in their hives. The honeydew is a sugary liquid that accumulates where there are aggregations of lanternfly adults. Honey bees readily collect this honeydew and process it as honey. The taste of the honey depends on several factors, including the plant the lanternflies are feeding on and the abundance of honeydew versus floral nectar in the processed honey.



Figure 3. Lanternfly honeydew honey collecting on a frame with a plastic yellow foundation to show the color. Photo: Robyn Underwood, Penn State

Beekeepers' Frequently Asked Questions

1. Is honey made from spotted lanternfly honeydew safe for consumption?

Yes, honeydew honey is safe for both bees and humans to consume. Preliminary results of laboratory testing show that the levels of pesticides from lanternfly treatment efforts found in honeydew honey are exceedingly small and well below any level of concern. In addition, beekeepers in areas where lanternflies have been established for several years see that honey bees overwinter very well on this type of stored food.

2. How can I recognize spotted lanternfly honeydew honey?

Honey made from spotted lanternfly honeydew has a distinct smokey odor. The color is dark brown but not nearly as dark or black as buckwheat honey. The honeydew honey is not as sweet as other kinds of honey and has a lingering aftertaste.

3. Can I sell lanternfly honeydew honey?

Yes! This honey is marketable. Bakeries readily purchase this honey for use. In unofficial taste tests, half or more of the people that try this honey think it tastes great. Similar to the differing opinions about the flavor of other distinct kinds of honey, such as buckwheat honey, opinions vary. In addition, clever marketing can make this a popular novelty.

4. I don't like the taste of honeydew honey, and I don't want to sell it. What can I do?

To avoid extracting this honey, remove the honey you collected in spring and summer by the end of July. Honeydew honey begins to be collected by bees as lanternflies emerge as adults, usually in August. Do not place supers on colonies for fall honey collection. Instead, allow the bees to provision their hives with honeydew honey as winter feed. By spring, the bees

will have turned that honey into new bees.

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