



Agricultural Producers Guide to the Spotted Lanternfly



Integrated Pest Management promotes non-chemical control measures as the initial response to pests. Responses can increase from **physical to biological and finally chemical methods** depending on the severity of the infestation. Below are control methods for the invasive Spotted Lanternfly (SLF) and its host tree *Ailanthus altissima*, commonly known as tree-of-heaven.

Protecting your Field Perimeter

Trees at risk: Maple, Walnut, Willow, Poplar, Sycamore



PHYSICAL

Egg Scraping: SLF eggs are laid in late September to October. Eggs hatch in late April. Scout for egg masses November to April. Scrape all egg masses that are accessible. Dispose of egg masses by placing them in isopropyl alcohol, or by smashing the eggs.

Tree Banding: Banding trees with sticky tape can capture and kill spotted lanternfly nymphs and adults. This non-toxic, inexpensive technique can be used on any tree. Most effective on the nymph stage. Apply bands at first sign of hatch, usually early May.



CHEMICAL

Hack and Squirt Method: Most effective method for eradicating *Ailanthus* trees. Herbicide treatments are made using a cut stump application of Triclopyr herbicide (Garlon 3a or equivalent). *Ailanthus* trees can be left standing or cut down and disposed of.

Trap Tree Method: The trap tree method is most effective where there is an *Ailanthus* tree standing alone, with no other *Ailanthus* trees within a 15ft radius. Trap tree method consists of a bark/trunk insecticide application on the *Ailanthus* tree. The most common insecticide used for this is Dinotefuran Tree Care 70WSP. Insecticide applications are made only after the SLF has reached adult stage and is feeding on trees.

Protecting your Crop Field

Crops at risk: Plum, Cherry, Apple, Peach, Grapes, Hops



PHYSICAL

See methods above for Protecting your Field Perimeter



BIOLOGICAL

Beauveria bassiana: A fungal pathogen that leads to the natural decline of the Spotted Lanternfly. Some biopesticides containing *B.bassiana* have been approved by the EPA and are available for sale.



CHEMICAL

Insecticide Use: Spotted Lanternfly adults are said to be very susceptible to direct sprays of insecticides. Found in the table below are the best insecticides to mitigate SLF adult and nymph activity.

Nymph Foliar Application Table

Product name	Active ingredient	Mean % mortality 0 days after spray	Mean % mortality 7 days after spray	Mean % mortality 14 days after spray
Brigade 10WSB	Bifenthrin	100 a	100 a	78.8 a
Imidan 70WP	Phosmet	100 a	96.7 a	48.1 bc
Danitol 2.4EC	Fenpropathrin	100 a	80.6 ab	24.1 bc

Adult Foliar Application Table

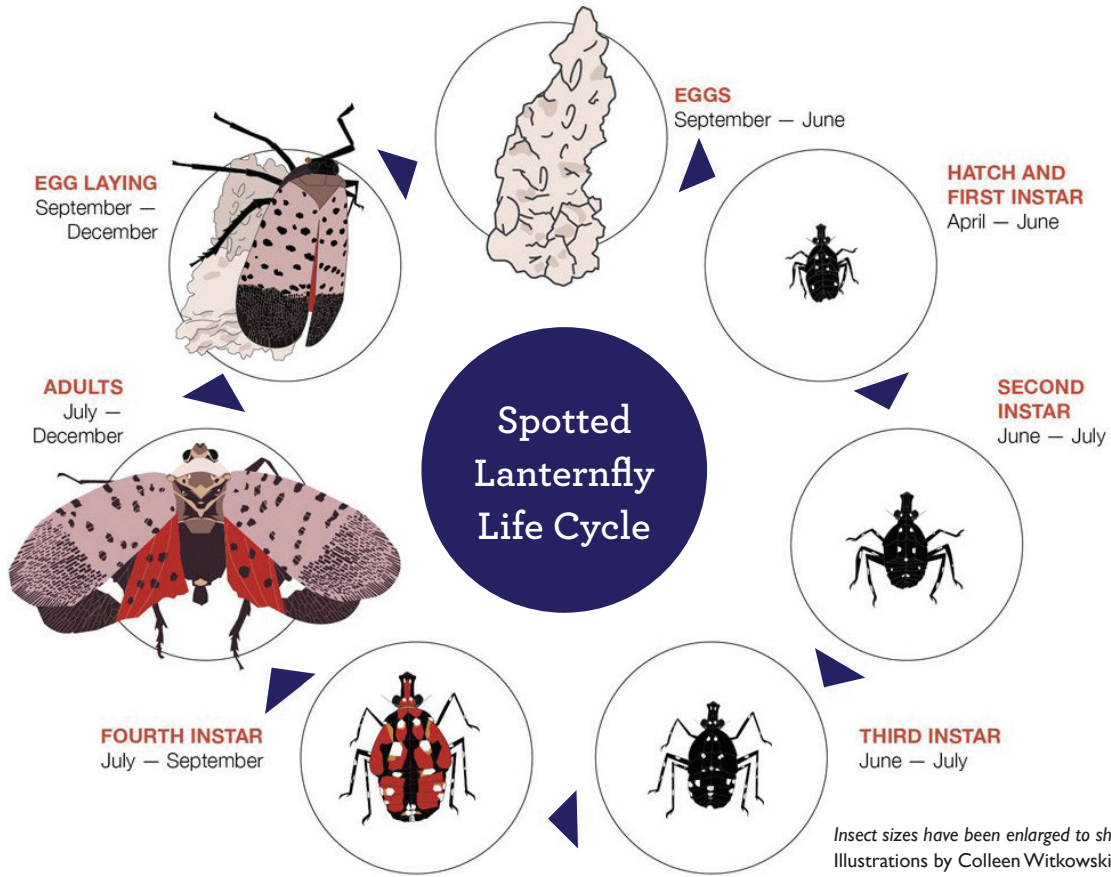
Product name	Active ingredient	Class	Rate-per acre	Rating
Imidan 70WP-high	Phosmet	Organophosphate	3 lb	Exc.
Scorpion 35SL	Dinotefuran	Neonicotinoid	5 fl oz	Exc.
Brigade 10WSB	Bifenthrin	Pyrethroid	16 oz	Exc.
Actara 25WDG	Thiamethoxam	Neonicotinoid	3.5 oz	Exc.

*Based on 2018 PSU insecticide trials for peaches and grapes respectively.



SAFE INSECTICIDE USE

Important information regarding the pesticide can be found on the product's label. The label is a legal document required for every pesticide registered in the United States.



Timeline for Management Techniques

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Destroy egg masses												
Use sticky bands to capture spotted lanternfly												
Registered insecticides can be effective for nymphs												
Registered insecticides can be effective for adults												
Avoid moving fertilized females												
Avoid moving viable egg masses												
Treat most Tree-of-Heaven (Ailanthus altissima) trees with herbicide												
Treat tree-of-heaven "trap" trees with systemic insecticides												

Table recommended by Penn State Extension. Areas in green represent recommended time frame.