



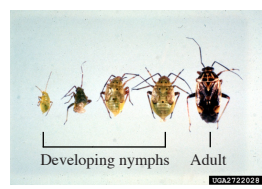
# Integrated Pest Management Issues

January 2015

## Managing Lygus Bugs in Peony Crops

### Introduction and Background

Peony growers in Alaska have been observing damage to developing buds, possibly a result of lygus bug feeding. Two species of these bugs were identified from peonies in Alaska, *Lygus borealis* and *Lygus punctatus*. In general, *Lygus* species are oval-shaped, approximately ¼ inch long as adults, and green, brown or black in color. Immature lygus bugs (called nymphs) are light green and develop black spots and wing buds as they get older.



University of Georgia Archive, University of Georgia, Bugwood.org



*Lygus borealis*, cedarcreek.umn.edu



*Lygus punctatus*, Jarmo Holopainen

*Lygus* bugs overwinter as adults in plant debris and emerge in the spring to feed and lay eggs. It is currently thought that *L. borealis* and *L. punctatus* have only one generation per year in Alaska.

All *Lygus* species are plant feeders and may utilize a wide range of hosts. Non-crop host plants may impact the presence and abundance of lygus bugs in the crop area, and little is known about these hosts in Alaska. Research on lygus bug biology will provide useful information for determining type and timing of control efforts.

### Management

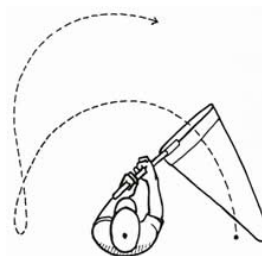
#### Scouting and Monitoring

Scouting and monitoring for lygus bugs, both outside and within the field, will be your first line of defense against this pest. Sticky traps are a useful tool for monitoring. Lygus bugs are attracted to the color white; if



ipm.iastate.edu

your field has a white variety section, inspection for lygus bugs might begin there. White or yellow sticky traps should be placed in the rows between plants around the perimeter of the field to provide you with information on insect populations and locations. Sticky traps can be mounted on sticks in the field and should be plant-high for easy viewing of contents and replacement when necessary.



diagnostics.montana.edu

Sweep nets may also be used to capture insects for monitoring. Walk through the rows using a gentle sweeping motion, turning the net to close it so the contents can be either released or put into a container for later identification. Sweeping may also be useful in nearby non-crop, forested or other crop areas.

A simple white bucket is also useful for scouting. Hold the bucket under leaves and new growth and lightly tap the plants. Most insects will release into the bucket and can be fairly easily viewed. The shallower the bucket, the better.



harborfreight.com

Familiarize yourself with what the different life stages of lygus bugs look like, and when performing field inspections carry a hand lens (magnifying glass) with you. This will help you determine if the contents of your net or traps are pests or beneficial insects. Make notes about the life stages and quantity of lygus bugs you are catching to help determine if actions are needed. On a statewide scale, there is currently not enough information known about lygus bugs to determine specific action thresholds. Any information you can col-

For more information, contact

UAF Cooperative Extension Service at 877-520-5211 or visit our website at [www.uaf.edu/ces/ipm/](http://www.uaf.edu/ces/ipm/).

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lect will help your farm in the future and contribute to determining industry standards.

### Weed Management

Because lygus bugs are known to utilize other vegetation for overwintering and breeding, control of those plants both in and around the field will reduce the potential for these pests to build up populations. Removing debris from fields and tilling to destroy overwintering sites can be effective at reducing populations. However, timing can be an issue. Removing alternate hosts when lygus bugs are in the active adult stage can encourage them to migrate to your crops, so it is important to consistently manage vegetation between rows and around fields throughout the growing season. Using previously mentioned monitoring techniques will help identify these host plants.

### Insecticides

Insecticides can be part of an integrated pest management system if other methods are not sufficient for control. The need for insecticides must be evaluated carefully on a field-by-field basis, as treatments may result in secondary outbreaks of other insect pests. Do **NOT** preemptively spray for any insect pest. If an insecticide is deemed necessary, attempt to use the most appropriate pesticide for your site that will control the pest. Below is a table

of insecticides that may be used on peonies in Alaska. With all chemical controls, treat a few plants and check for phototoxicity before using on an entire crop. Chemical controls should be considered a part of an IPM program and not a stand-alone treatment. If you destroy beneficial insects along with pests, you inherit their job! Several natural insect predators — including big-eyed bugs, damsel bugs, rove beetles, and crab spiders — can help maintain low populations of lygus bug nymphs.

### Learning More

Because there are few entomologists in Alaska, we hope that our growers will help to gather and record information to assist the statewide industry with developing an IPM system for lygus bugs in peony crops. Keep in touch with nearby growers and Extension agents concerning lygus bug populations at the start of, and throughout, the growing season.

Extension offices will accept specimens preserved in alcohol as long as the following information is attached to the sample: date collected, location collected, collection method (sweep net, bucket, sticky trap) and habitat (on peony plant, leaf litter, species of vegetation in field or around perimeter). The goal will be to learn more about where lygus bugs are living at certain times of the year.

Active Ingredient	Trade Name	Notes	Restricted Use?	Labeled For
Acephate	Orthene	Low selectivity	No	Ornamental herbaceous plants, lygus bugs
Azadirachtin	AzaMax	Insect growth regulator	No	Ornamental herbaceous plants
<i>Beauveria basiana</i>	Mycotrol	Entomopathogenic fungi	No	Ornamental herbaceous plants, lygus bugs
Piperonyl Butoxide	X-Clude	Insecticide synergist, enhances effectiveness of pyrethrin, permethrin, and other insecticides	No	Ornamental herbaceous plants

Read and follow the label of the product you purchase for application rate, timing, and approved sites.

**Remember – The label is the law!**

For more information:

**Alaska Department of Environmental Conservation Pesticide Control Program:** 907-376-1870 or <https://dec.alaska.gov/eh/pest/>

**Overview of Monitoring and Identification Techniques for Insect Pests.** <http://bit.ly/scoutingIPM>

**Canola Council of Canada, Lygus Bugs.** <http://bit.ly/canolalygus>

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**Tanana District:** Darcy Etcheverry, [ddecheverry@alaska.edu](mailto:ddecheverry@alaska.edu), 474-2422

**Invasive plants:** Gino Graziano, [gagraziano@alaska.edu](mailto:gagraziano@alaska.edu), 786-6315

Citizen Monitoring Portal for digital submission of information:  
[www.uaf.edu/ces/ipm](http://www.uaf.edu/ces/ipm)  
 877-520-5211 (toll free)



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