KPOV – *The Point*
Gardening, Get Good At It
"Insect Management in Organic Gardens "
July 10, 2018

Walking through Hollinshead Community Garden last week with other Master Gardeners, we noticed evidence of garden pests that are typical to Central Oregon at this time of year. As Master Gardeners we practice Integrated Pest Management which attempts to grow crops successfully using techniques that have the least harmful effect on the environment. Because Hollinshead is an organic garden we avoid the use of pesticides altogether.

The major problem we noticed was evidence of a flea beetle infestation. We saw rounded irregular holes in the leaves of several different plants that looked as if they'd been damaged by fine buckshot. Young plants and seedlings seemed to be particularly susceptible to flea beetles — tiny bugs that could be seen jumping away as we walked through the garden.

Plants are most susceptible to disease and other pests when they are stressed. Keeping plants healthy by providing good nutrition and adequate moisture will ensure a better chance for affected plants to rebound from insect attack. Seedlings do not tolerate many flea beetles. One to five flea beetles per seedling can cause significant damage. Using transplants instead of directly seeding the garden may lessen flea beetle problems. The use of row cover can act as a physical barrier and protect young seedlings from flea beetles. Once plants begin to flower, row cover should be removed so that pollinating insects can access the plants.

Removing old crop debris in the fall will deprive over-wintering beetles of protective cover. Weeding in and around planted areas will remove nearby food sources. Most flea beetle damage occurs in early spring, so if possible, plant crops late in the season when warmer temperatures will help plants outgrow flea beetle feeding damage. Thick mulch may help reduce the number of flea beetles by interfering with the development of eggs that are laid in the soil and larvae that feed on roots.

Many species of flea beetle attack only one type of plant or a close relative which can be planted as a "trap crop." Research has shown that Chinese Southern Giant Mustard is one of the most practical trap crops and can be planted as a border around your garden. Other highly favored trap crops are radish and daikon which can be planted earlier than your main crop. Adult flea beetles will be attracted to the tallest, earliest crops available and will be drawn away from your broccoli, cabbage, Brussels sprouts and cauliflower. The flea beetles will be more likely to eat the "trap crop" while your crop plants mature with little damage. The trap crop can be harvested or destroyed after the main crop has been established.

Garlic, onion and mint have been recommended by the USDA as natural flea-beetle repellants.

Some chemical controls are available for use in an organic garden. Diatomaceous earth is one of the more effective repellants, applied as a dry powder to the plants. Botanical pesticides recommended for controlling flea beetles include neem, rotenone, and pyrethrin to name a few. Sprays combining rotenone with insecticidal soap are considered very effective. Botanical and sos-based pesticides should be considered a last resort in organic gardens. Like synthetic pesticides, most of these are broad-spectrum and can kill many beneficial insects that keep the flea beetle population in check naturally.

For more information on this or any other gardening topic, call the Master Gardeners at 541-548-6088 or go to our website gocomga.com and click on the KPOV tab on the orange bar.
This has been Gardening: Get Good at it on KPOV, The Point.

Resources:
Here are links to sites with more information about Flea Beetles:

http://www.ext.colostate.edu/pubs/insect/05592.html

http://www.extension.umn.edu/garden/insects/find/flea-beetles/

https://pnwhandbooks.org/node/8068/print

https://attra.ncat.org/attra-pub/viewhtml.php?id=135

OSU Publication:

"Growing Vegetables in Central Oregon: Crook, Deschutes, and Jefferson Counties"; OSU Extension Publication EM 9128; November 2015. https://catalog.extension.oregonstate.edu/em9128