

Pest control methods for fruit and berry crops



Steve Renquist
Extension Spotlight

Douglas County has such a mild winter and spring that nearly any type of deciduous fruit crop can be grown here successfully.

The local fruit season usually begins with strawberries, goes to blueberries, cherries, raspberries, plums, peaches, blackberries, table grapes, prunes, Asian pears, pears, apples and wine grapes. Oregonians are able to harvest fruit quite continuously from the end of May until November.

Douglas County is a great place to raise fruit crops because we have dry, sunny summer days to minimize plant disease and maximize photosynthesis, while mild enough to grow a wide variety of fruit. In most years we also have enough winter rainfall to recharge ground water and snow pack to supply the Umpqua River for our irrigation needs.

Unfortunately this winter and spring have been very dry, with rainfall totals about 10 inches below normal as of mid-April, so ground water recharge is lacking. It will be very important to monitor your soil moisture levels as we move in to May and early June and provide supplemental water to your fruit crops.



PHOTO BY STEVE RENQUIST

A Brown Marmorated Stink Bug trap utilizes insect pheromones to lure these invasive pests.

Fruit crop development is about 10 days ahead of the last 15 year averages, so critical fruit set may occur at a time where the trees and bushes are being stressed. As we move into summer, water use may be curtailed, so thin tree fruit crop loads to minimize stress to trees.

During the past 10 to 15 years we have seen a trend toward mild winter weather with fewer sub-freezing temperatures. The relatively mild winter weather pattern of 2020 has probably allowed greater survival of many types of insect pests. Since our area is inviting to a large number of insect pests because of the diversity of crops, it is important to prepare for

the most difficult invasive pests.

The Spotted Wing Drosophila (SWD) vinegar fly has been in our area for about 15 years. They are so tiny we don't often see them attacking soft fruit crops like blueberry, raspberry, blackberry, cherry and grapes until it is too late and the fruit is mushy. It is important to apply timely control sprays for SWD when the fruit reaches full size and starts to color, and to apply a second time about ten days later if the fruit is not ready to harvest.

There are also biological controls being implemented too at the state level with releases of a tiny wasp that parasitizes

the eggs of the SWD. This of course will take many years to get established populations. If you don't practice some type of control with SWD, it is pretty difficult to harvest good quality berries, cherries and grapes.

The Brown Marmorated Stink Bug (BMSB) is another difficult invasive pest responsible for doing a dramatic amount of damage to an even larger number of fruit, nut and vegetable crops like apple, pear, cherry, berry, filbert, tomato, corn and pepper crops in Oregon. This stink bug has been in Oregon for about 14 years but only in the past two to three years in Douglas County has started to

cause serious levels of crop damage.

Researchers have been working with a tiny Samurai wasp from Asia that parasitizes the egg masses of the BMSB helping to provide some natural controls. This pest is very difficult to control with pesticides since the adult has a very tough outer body.

There is good news for gardeners and farmers that agricultural researchers have developed trapping systems that utilize insect pheromones. These pheromones are sex attractants specific to each species of insect and will lure them to sticky traps. Once stuck in these traps, farmers or gardeners can count the number of each target

insect to know if there are enough of them to treat the crop with a protectant.

The beauty of this system is that you do not need to use agricultural chemicals unless pest numbers are greater than the established thresholds. These lures and trapping systems can be purchased locally at farm stores or direct from the lure manufacturers. Just look online for insect monitoring systems or pheromone traps for sale.

I use pheromone traps to monitor for codling moths in apples, pears, plums and walnuts. I also use pheromone traps for filbertworm in hazelnuts, cucumber beetles in cucumber, pumpkins or squash, and there are sticky traps and attractants for the BMSB. Still, the best attractant for SWD is to use apple cider vinegar and plastic cup traps.

There are dozens of effective lures each for specific crop plant pests and each pest will have a slightly different type of trap that works best at catching them. So go online and learn more about insect pheromone lures and trapping systems at our publication website <https://catalog.extension.oregonstate.edu>.

Steve Renquist is the Horticulture Extension Agent for OSU Extension Service of Douglas County. He can be reached at steve.renquist@oregonstate.edu, by phone message at 541-672-4461 or at <https://extension.oregonstate.edu/douglas>.