

Fall Control Options for Viburnum Leaf Beetle

Viburnum leaf beetle (*Pyrrhalta viburni*) larvae feed on members of the Viburnum genus causing significant defoliation. While the larvae are active in May and June, there are some steps that can be taken in the fall to reduce or prevent injury the following year.

Fall Mechanical Control

From July until frost, adult females create a cavity along viburnum twigs where they deposit eggs. They cap the egg cavities with a combination of plant material, saliva and frass. As temperatures cool and the beetles stop laying eggs, the eggs can be removed to reduce egg hatch in the spring.

Eggs can be removed from viburnum by pruning out infested twigs. The egg cavity caps (shown below) will be easier to find when the leaves have dropped in the fall. After the twigs have been removed, they should be burned, buried or discarded in a location away from the viburnum plants. This is one of the most effective ways to reduce viburnum leaf beetle populations.



Viburnum leaf beetle egg cavity caps, Bruce Watt, University of Maine, Bugwood.org

Fall Cultural Control

Planting varieties of viburnum that are less susceptible to viburnum leaf beetle attack is a good way to avoid injury from this insect all together. These varieties include: David viburnum (*Viburnum davidii*),

dawn viburnum (*V. bodnantense*), doublefile viburnum (*V. plicatum* or *V. plicatum* var. *tomentosum*), Judd viburnum (*V. x juddii*), Koreanspice viburnum (*V. carlesii*), leatherleaf viburnum (*V. rhytidophyllum*), Siebold viburnum (*V. sieboldii*), or tea viburnum (*V. setigerum*).

[\(Sarah Hughson\)](#)

Seasonal Needle Drop

Around this time of year, the U of I Plant Clinic receives many calls regarding yellowing needles on evergreens. The appearance can be quite alarming to homeowners whose seemingly healthy evergreens suddenly turn yellow and drop large numbers of needles. Fortunately, most are witnessing a harmless and natural part of the plant's cycle. Despite the name, evergreen foliage does not stay on the plant forever. Evergreens commonly shed their less productive or older needles. Most pine species shed their needles after 3 to 4 years. The occurrence is more noticeable on some species, such as white pine, and less evident on others, such as spruce and fir.

Seasonal needle drop is usually confined to the innermost (oldest) needles. Homeowners should be more concerned when the new/current season's growth suddenly discolors, wilts, or drops from the plant. Damage occurring to the new growth could be the signal of a more severe pest or cultural problem.

Deciduous conifers have also been known to cause alarm to some novice gardeners. During the growing season, bald cypress and larch trees look similar to their evergreen counterparts. However, they shed all of their leaves in the autumn. Over the years, the Plant Clinic has received several samples from "spruce trees" that had suddenly dropped all their leaves at the end of the season. Fortunately, for our clients, and their trees, we were able to correctly identify the tree, and let them know the tree's leaves would return in the spring.

[\(Travis Cleveland\)](#)



Photo 1. Seasonal Needle Drop on White Pine



Photo 2. Seasonal Needle Drop on Pine

White Pine Decline

The University of Illinois Plant Clinic frequently received white pine samples with symptoms described as, “Dying trees with thinning, yellowing and browning needles.” These samples are always somewhat frustrating because they usually lack any pathogens to explain the symptoms. Incubated needles and branches rarely produce any diagnostic clues. The lack of pathogen(s) leads us to attribute the symptoms to white pine decline, a condition caused by an environmental or abiotic stress.

What does white pine decline look like? In some instances, a single tree may be the only one affected out of a group. Trees have yellowish-green or browning needles that drop prematurely, resulting in an overall thinned canopy. Bark on branches and smaller limbs appears shriveled or wrinkled and will sometimes exude sap. The U of I Plant Clinic rarely gets the opportunity to view landscape plants' root systems, especially large trees. Those who have had a chance to examine roots have reported that white pine decline affected trees have sparse root systems with few fine, white roots compared to healthy trees.

White pine decline is believed to result from environmental and site stress, especially for trees planted outside the species' requirements. White pine performs best on moist, sandy loam soils. Though considered an adaptable species, they seem to grow with intermittent success in Illinois. Many of the symptomatic trees were growing on sites with heavy clay soils, often with high soil pH. An overall trend toward wetter spring climate may also be a contributing factor. Excessive rains saturate soils resulting in a lack of oxygen and impaired root development. Further damage occurs when the tree's root system is unable to tolerate extended dry spells.

The decline is difficult to reverse once it begins. Fortunately, affected trees do not pose a threat to surrounding trees, and immediate removal is not necessary. Watering during dry periods can help, along with mulching with 3–4 inches of a natural mulch over the root system. Fertilizing with an acidic fertilizer specifically packaged for pines or acid-loving plants may also help. However, prevention is by far the best way to manage white pine decline. Locate white pines on sites well suited to the species.

[\(Travis Cleveland\)](#)



Photo 3. Eastern white pine (*Pinus strobus*) with yellowing needles and thin canopy.



Photo 4. Eastern white pine with yellowing and browning needles attributed to white pine decline



Photo 5. Shriveled and wrinkled bark on eastern white pine affected by white pine decline.

Illinois Pesticide Applicator/Operator Training & Testing Options for 2020-2021

University of Illinois' Pesticide Safety Education Program (PSEP) and Illinois Department of Agriculture (IDA) are taking steps to provide safe training and testing options for pesticide applicators and operators. PSEP will not offer in-person training during fall 2020 or spring 2021. The decision to cancel in-person training was based on the health of not only training clinic attendees, but the staff and the surrounding community with whom we share spaces. Additionally, in-person training was not feasible given the current restrictions which limit event attendance to the lesser of 50 persons OR 50% of the overall room capacity. In place of in-person training, PESP plans to offer the following resources to individuals preparing for Illinois Pesticide Certification Exams during the COVID-19 pandemic:

Training Option A: Online Training

In place of PSEP's in-person training clinics, online courses will be made available for most of our traditional training categories. To best serve our diverse clientele, the courses are designed to be completed asynchronously (i.e. on your own schedule and at your own pace). Each course will guide

you through lessons instructed by PSEP specialists, and keep you engaged with plenty of exam-prep questions along the way.

Training Option B: Self-Study Publications

If you would rather study with a pen and paper instead of an iPad, PSEP has an option for you as well. Training Manuals are available for each category of licensure. Accompanying fill-in-the-blank-style workbooks are available for common categories, which will help guide you through the manual and prepare you for the associated exam.

Illinois Department of Agriculture (IDA) anticipates 15,000 – 20,000 certification exams will be offered during the 2021 certification year. In a typical year, most of these exams would be administered at in-person training and testing clinics. In the absence of in-person training clinics, IDA will utilize online testing and limited in-person testing to meet certification needs.

Testing Option A: Online Testing

Certification exams will be available in an online format through a commercial proctoring service. Exam length and time allotment will be similar to that of in-person testing. However, individuals will need to schedule each exam with the proctoring service, and pay the service's \$12 proctoring fee.

Testing Option B: In-Person Testing

For those needing an alternative to online testing, IDA will continue to offer in-person testing for all certification exams. Due to social-distancing requirements and occupancy restrictions, there will be limited availability of in-person testing sessions. IDA is working to increase location availability, and this will likely evolve rapidly over the next several months.

We are working to provide access to training and testing as soon as possible. With that in mind, the planned rollout of online training and testing will roughly follow the traditional availability of training sessions. Figure 1 shows the tentative schedule. To keep up to date with training and testing availability options, please visit: <http://pesticidesafety.illinois.edu>

(Travis Cleveland)

| Pesticide Applicator Online Training/Testing Tentative Rollout Schedule | | | | | |
|--|--------------------------|------------------|---------------------|-----------------|---------------------|
| Estimated Availability Date | Category | Online Training? | Online Training Fee | Online Testing? | Online Testing Fee* |
| November 1, 2020 | Private Applicator | ✓ | \$45 | ✓ | \$12 |
| | General Standards | ✓ | \$45 | ✓ | \$12 |
| | Aerial General Standards | X | - | ✓ | \$12 |
| | Dealer | X | - | ✓ | \$12 |
| | Field Crops | ✓ | \$25 | ✓ | \$12 |
| December 1, 2020 | Rights-of-Way | ✓ | \$25 | ✓ | \$12 |
| | Vegetable | ✓ | \$25 | ✓ | \$12 |
| | Demonstration & Research | ✓ | \$25 | ✓ | \$12 |
| | Private Grain Fumigation | ✓ | \$25 | ✓ | \$12 |
| | Grain Facility | ✓ | \$25 | ✓ | \$12 |
| | Seed Treatment | X | - | ✓ | \$12 |
| January 15, 2021 | Turfgrass | ✓ | \$25 | ✓ | \$12 |
| | Ornamentals | ✓ | \$25 | ✓ | \$12 |
| February 1, 2021 | Aquatics | ✓ | \$25 | ✓ | \$12 |
| | Mosquito | ✓ | \$25 | ✓ | \$12 |
| March 1, 2021 | Plant Management | ✓ | \$25 | ✓ | \$12 |
| | Forest | X | - | ✓ | \$12 |
| | Fruit Crops | X | - | ✓ | \$12 |
| | Livestock | X | - | ✓ | \$12 |
| | Sewer Line Root | X | - | ✓ | \$12 |
| | Soil Fumigation | X | - | ✓ | \$12 |

*Fee paid directly to exam scheduling/proctoring service

Figure 6- Tentative Rollout Schedule