

Number 6 - June 4, 2018

Modified Growing Degree Days (Base 50°F, March 1 through May 31)

Station Location	Actual Total	Historical Average (11 year)	One-Week Projection	Two-Week Projection
Freeport	620	459	715	839
St. Charles	627	436	714	830
DeKalb	589	504	689	818
Monmouth	750	559	855	988
Peoria	770	596	878	1014
Champaign	816	612	930	1072
Springfield	947	682	1068	1216
Perry	934	639	1044	1182
Brownstown	901	743	1027	1179
Belleville	941	777	1068	1212
Rend Lake	996	839	1131	1292
Carbondale	935	795	1064	1215
Dixon Springs	994	854	1127	1282

Insect development is temperature dependent. We can use [degree days](#) to help predict insect emergence and activity. Home, Yard, and Garden readers can use the links below with the degree day accumulations above to determine what insect pests could be active in their area.

[GDD of Landscape Pests](#)
[GDD of Conifer Pests](#)

Degree day accumulations calculated using the [Illinois IPM Degree-Day Calculator](#) (a project by the Department of Crop Sciences at the University of Illinois and the Illinois Water Survey).
(Kelly Estes)

Viburnum Leaf Beetles Active in Northeast Illinois

Several reports have come in detailing severe defoliation of viburnum. Upon

closer inspections, homeowners found the culprit to be small larvae on the undersides of the leaves.

The viburnum leaf beetle, a native to Europe, was brought to North America on infected viburnums. While it is established in several northeastern states, we've only confirmed this pest in a handful of counties in northeast Illinois. If your viburnum plants are showing signs of defoliation, please keep your eyes open for larvae now or Viburnum Leaf Beetle adults during the summer. Viburnum leaf beetles overwinter as eggs on twigs of the host plant. In May, larvae hatch from the overwintered eggs and begin feeding on host plants. The larvae are greenish-yellow and develop dark spots as they age. They are usually found feeding in groups. Between early and mid-June, larvae drop to the ground and pupate. They remain in the ground for about 10 days. Adult emergence generally occurs from mid- to late July. The adult beetle is small, 1/4 to 3/8 of an inch long and is a golden brown color with sheen when in sunlight. Adults will remain active until the first frost. Development from egg to adult takes eight to ten weeks. In late summer and fall, females will begin laying eggs. They chew holes in the bark of twigs to deposit eggs and then cover them with excrement and fragments of chewed bark. A female can lay up to 500 eggs.

Feeding is limited to species of viburnum. The viburnum leaf beetles have a

preference for viburnums with little hair (pubescence) on the foliage, including the European cranberrybush viburnum, arrowwood viburnum, and American cranberrybush viburnum. They also feed on wayfaringtree viburnum, Rafinesque viburnum, mapleleaf viburnum, nannyberry viburnum, and Sargent viburnum. There are several resistant varieties, including Koreanspice viburnum, Burkwood viburnum, doublefile viburnum, Judd viburnum, lanatanaphyllum viburnum, and leatherleaf viburnum.

Table 1. Preliminary list of viburnum that are relatively susceptible or relatively resistant to viburnum leaf beetles (compiled by Dr. Paul Watson, Cornell University).

Highly susceptible:

- *V. dentatum* complex, arrowwood viburnums
- *V. nudum*, possum-haw, smooth withered viburnum
- *V. opulus*, European cranberrybush viburnum
- *V. opulus* var. *americana* (formerly *V. trilobum*), American cranberrybush viburnum
- *V. propinquum**, Chinese viburnum, Taiwanese viburnum
- *V. rafinesquianum*, Rafinesque viburnum

Highly susceptible species are the first to be attacked, and are generally destroyed in the first 2-3 years following infestation.

Susceptible:

- *V. acerifolium*, mapleleaf viburnum
- *V. lantana*, wayfaringtree viburnum
- *V. rufidulum*, rusty blackhaw, southern black-haw
- *V. sargentii*, Sargent viburnum
- *V. wrightii*, Wright viburnum

Susceptible species are eventually destroyed, but usually are not heavily fed upon until the most susceptible species are eliminated.

Moderately susceptible

- *V. alnifolium* (syn. *V. lantanoides*), hobblebush
- *V. burkwoodii*, Burkwood viburnum
- *V. x carlcephalum*, Carlcephalum viburnum
- *V. cassinoides*, withered viburnum

- *V. dilatatum*, linden viburnum
- *V. farreri*, fragrant viburnum (except 'Nanum', which is highly susceptible)
- *V. lantanoides* (syn. *V. alnifolium*), hobblebush
- *V. lentago*, nannyberry viburnum
- *V. macrocephalum*, Chinese Snowball Viburnum
- *V. x pragense*, pragense viburnum
- *V. prunifolium*, blackhaw viburnum
- *V. x rhytidophylloides*, lantanaphyllum viburnum
- *V. tinus**, laurustinus viburnum

Moderately susceptible species show varying degrees of susceptibility, but usually are not destroyed by the beetle.

Viburnum most resistant to the viburnum leaf beetle:

- *V. bodnantense*, dawn viburnum
- *V. carlesii*, Koreanspice viburnum
- *V. davidii**, David viburnum
- *V. x juddii*, Judd viburnum
- *V. plicatum*, doublefile viburnum
- *V. plicatum* var. *tomentosum*, doublefile viburnum
- *V. rhytidophyllum*, leatherleaf viburnum
- *V. setigerum*, tea viburnum
- *V. sieboldii*, Siebold viburnum

Resistant species show little or no feeding damage, and survive infestations rather well. Most species in all susceptibility groups exhibit more feeding damage when grown in the shade.

(Source:

<http://www.hort.cornell.edu/vlb/suscept.html>)

The most effective means for controlling VLB is to prune infested branches in the fall. However, reducing the larval population will ultimately reduce the adult population that lays the eggs. Products containing carbaryl (Sevin) as the active ingredient or one of the pyrethroids (cyfluthrin, permethrin, resmethrin) are effective as foliar sprays.

In regards to other management options, Cornell has a very helpful man-

agement guide for homeowners (<http://www.hort.cornell.edu/vlb/management.html>). At this time of year, for homeowners who are experiencing defoliation, the best option is going to be pesticides. It is important to make sure larvae are present and to make a thorough application so the pesticide comes in direct contact with the larvae. Spraying adults or eggs is less effective. There is some information on the use of horticultural oils and insecticidal soaps (<http://www.hort.cornell.edu/vlb/newtools.html>). (Kelly Estes)

Bindweed: The Vines that Bind (to Turf and Ornamentals)

My morning commute was filled with flowers today. Bindweed is in full bloom in many of the lawns along my regular route. From a distance, it is a pretty little plant. However, if it is growing in your lawn or garden, you may have other less favorable things to say about this persistent and difficult to manage perennial weed.

Proper identification is critical to good weed control as is scouting often for emerging weed issues. Need some help identifying bindweed? Here is a brief description of the two commonly found types we have in Illinois. Other weedy vines such as morningglories, honeyvine milkweed, and wild buckwheat may also be found in lawns and gardens. As with all broadleaf weeds, leaf arrangement, flower type and the presence of underground structures such as rhizomes or tubers all play a key role in identification.

Hedge bindweed (*Calystegia sepium*) is a perennial vine that spreads by rhizomes. The leaves are alternate on the

stem and are distinctly triangular in shape with a pointy tip. The leaf base is cut squarely. The flowers appear May to September, are white to pink, and funnel-shaped like that of morningglory. Bindweed is often mistaken for morningglory which is an annual weed. Initially, it may not be perceived as much of a problem, although, the rhizomes can help this vine to spread quickly.

Field bindweed (*Convolvulus arvensis*) is similar to hedge bindweed except the leaves are arrowhead shaped with a rounded tip. Also, the leaves are smaller and the leaf bases are rounded with outwardly divergent lobes. I try to keep the two straight by thinking “hedges have edges”. Field bindweed is a rhizomatous perennial as well.

Controls for vines such as bindweed include repeated pulling or cutting back, mowing, mulching, and herbicides. In a turf situation, grass should be properly maintained and mowed as high as possible. These vines have a difficult time growing in thick, lush turfgrass. Central Illinois has been fairly dry lately and turf growth has slowed. Bindweed tolerates drought quite well. These factors make it more visible now. In addition to cultural controls, postemergent herbicides can be used. Ones that provide at least some control of these vines include but are not limited to the following: 2,4-D, carfentrazone, quinclorac, dicamba, ox-fluorfen, and triclopyr.

Glyphosate may also be used for spot applications as it is a non-selective herbicide. If bindweed is growing within other plants, extra caution should be taken. Protect plants by covering them with plastic. Glyphosate may be carefully painted or dabbed onto the leaves so

that the application is precise. Be sure to carefully read and follow all label directions. Repeated applications may be necessary. Spring and fall applications of postemergent herbicides may be necessary for complete control. Pre-emergent herbicides are not particularly effective against perennial weeds.
(Michelle Wiesbrook)

Rotten Weather and Root Rots

We've received a number of samples with root rot at the Plant Clinic recently. Approximately half have been infected with *Pythium*, with the other half infected with *Rhizoctonia*. This is not a huge surprise given the extremely varied weather we've been experiencing.

There are two basic groups of root rots: seedling root rots and damping-off, and root nibblers that usually affect mature plants. Root rots can be caused by both fungi and oomycetes, fungal-like organisms that are also known as water molds. *Pythium* and *Phytophthora* are two common genera of oomycetes that cause root rots. Common fungal pathogens include *Rhizoctonia* and *Fusarium* species.

Seedling root rots often cause the death of the plant, either because the seedling cannot establish or because the rot extends to the crown of the plant and causes a condition known as damping-off. Most people who have grown plants from seed are familiar with damping-off: one day the seedlings look normal, the next day they've collapsed due to a rotten area at the base of the plant. Seedling death due to root rots tends to be fairly fast and dramatic, because the plants have so few roots that they can't compensate for the damage caused by the disease.

Root rots of established plants can also occur. These pathogens are often the same or related to the seedling root pathogens. They often act more as root nibblers in mature plants, damaging the root tips and smaller roots while not causing extensive injury to the overall root system. Healthy plants can often overcome the damage. However, if the plant becomes stressed due to environmental conditions such as drought or due to other pest issues, the plant may have a more difficult time maintaining its vigor.

We think of root rots as being favored by cool, wet weather. This is true for some root rot pathogens (generally, the oomycetes) but warm, dry weather tends to favor the fungal root rots. Once the pathogen has gained entry to the root system, there's not much we can do. Fungicide seed treatments can be used to protect seedling root systems. Ensuring good drainage and adequate water during the growing season is also important for managing these diseases. For greenhouse and nursery producers, using sterile growing media and sanitizing tools and equipment is important to reduce the spread of disease. Unfortunately, many of these pathogens are ubiquitous in our soils, so our best management is keeping our plants healthy and reducing environmental factors that favor the development of root rot diseases. (Diane Plewa)

Suckers and Water Sprouts

Some ornamentals and trees have a tendency to develop numerous epicormic sprouts. These vigorously growing sprouts arise from latent or adventitious buds. Sprouts that form on root tissues

are referred to as “suckers,” while those that form on stems and branches are termed “water sprouts.” The main issues with either of these is that they have poor limb structure, the potential to shade out the main plant, and may even rob the desirable plant tissues of nutrients and water. If the sprouts or suckers are allowed to continue to grow, your ornamental tree may end up looking more like a shrub.

So why does an ornamental or tree form sprouts? Some species are more prone to suckering than others, e.g. ornamental crabapples. In most cases, there are two reasons that a tree will put on suckers.

The first reason is stress. Some plants will produce new sprouts in response to stress. Trees attempt to develop more limbs so that they can overcome the injury or stress. Some pests or diseases will stimulate the tree to putting on more sprouts and. Age may factor into the stress. Many trees may not sucker when they are young, but will sucker as they mature in an attempt to start new trees.

The second reason that they will put on sprouts is that many trees are grafted. Rootstocks for many grafted trees are

selected based on several qualities including their ability to reproduce easily. This can become a problem if the graft doesn't take well and the rootstock starts to sucker. The root stock isn't normally a desirable type. Those sprouts or suckers should be removed.

The misconception on pruning suckers or water sprouts is that you should wait until the winter when the plant is dormant. The problem is, the longer a sucker or sprout is allowed to stay around, the harder it to be remove. The sprouts will start to develop bark and continue to compete with the plant for nutrients. If this is a rootstock sucker, it will eventually develop leaves and fruit that is not desired and much different from the desired species. As you see a water sprout or sucker start, it is best to remove them at the origin. This may take several times through the season, but it will help the main species to thrive. (*Maria Turner*)

<https://www.purduelandscapereport.org/article/so-long-suckers/>

<https://www.loveyourlandscape.org/expert-advice/tree-care/insects-and-disease/dealing-with-tree-suckers/>