



Tree Pest Alert



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Samples

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of plants or insects from other states. If you live outside of South Dakota and have a question, please send a digital picture of the pest or problem.

Any treatment recommendations, including those identifying specific pesticides, are for the convenience of the reader. Pesticides mentioned in this publication are generally those that are most commonly available to the public in South Dakota and the inclusion of a product shall not be taken as an endorsement or the exclusion a criticism regarding effectiveness. Please read and follow all label instructions as the label is the final authority for a product's use on a pest or plant. Products requiring a commercial pesticide license are occasionally mentioned if there are limited options available. These products will be identified as such, but it is the reader's responsibility to determine if they can legally apply any products identified in this publication.

Reviewed by Master Gardeners: Bess Pallares, Carrie Moore, and Dawnee Lebeau

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Plant development for the growing season

The summer heat continues, and we are now at about 1,600 growing degree-days (base 50) in Sioux Falls. Our average accumulation by this date over the past two decades is about 1,350 GDD. The late lilacs are already finished blooming. It has been warm!



All our summer-flowering shrubs, bumalda spirea, false-spirea, hydrangea and potentilla, are in full bloom though some are wilting. More rain is welcomed!

Treatments to Begin or Continue

Apple Maggot

Apple maggot treatments should be continued. The fly-like adult apple maggots are still flying and laying eggs on the ripening fruit. The adults began emerging from the soil at about 900 GDD and will continue to emerge till about 2,000 GDD. We probably have another two or three weeks to go for treatments.



Treatments are applied to the surface of the apples to kill mom as she is laying eggs and to penetrate the skin to kill the newly hatched larvae. Since these treatments have a short residual time, generally 10 days or so, it is critical to keep reapplying them throughout the flight period (following the label instructions for interval and time till harvest).

Pine needle scale

The second generation of pine needle scale crawlers have moved out from beneath mom's shell and are exploring the new needles for a place to settle down. This generation will feed this summer, become adults, and produce the overwintering eggs for next year's population.



A common treatment recommendation for controlling scale crawlers is 2% horticultural oil. Oil coats and suffocates the crawlers but has far less impact on their nimbler natural enemies that can escape the spray (it does not last long). However, during hot (above 85°F), humid (80%) weather when plants are drought stressed, oils can damage the plant as they interfere with transpiration. The oil can plug up the stomates in tree leaves just as well as they do the spiracles on insects.

Many common insecticides do a good job at killing the enemies of the scales as well as the scale crawlers. The only reason to resort to killing everything is if the pine is covered with scales (more than 4 per needle of the current year's needles). Better is to apply an insect growth regulator, such as products with the active ingredient (A.I.) pyriproxyfen. This A.I. has limited impact on the natural enemies of scales. It is available to commercial applicators.

Timely Topics

Emerald ash borer update

The expanding emerald ash borer infestation is becoming more apparent across Sioux Falls and Canton. Infested trees can be found throughout these two communities (and Worthing) presenting the classic symptom of emerald ash borer attacks. Probably the most common symptom is a tuft of large deep green leaves near the base of the canopy and patches of smaller, lighter green leaves higher in the tree.



The darker green leaves are arising on watersprouts. These are fast-growing succulent, usually vertical, shoots that grow out along the lower branches. Usually when the trees are showing this symptom they have been infested for several years.

E-samples

Ash leaf curl aphid

The ash leaf curl aphid also known as the woolly ash aphid (*Prociphilus fraxinifolii*) is showing up across the state again this year. This is an annual event. I looked back at the July 19, 2004 issue of the *Pest Alert* – 17 years ago - and it was one of the pests discussed. It will probably not be as common by 2038 – 17 years from now - as most of our ash will be gone by then.



The symptoms are curled leaves forming rosettes at the ends of ash shoots especially the rapidly growing terminal shoots. If you unfold the curled leaves, you will

find little “fuzzballs” that are aphids. You might also find lady beetle larvae that are feeding on the insects. The treatment is usually either letting it be – since no treatment will uncurl the leaves and lady beetles do a pretty good job of control.

An insecticide containing Acephate may also be used either as a foliage spray or soil treatment. This is a systemic insecticide and will kill the aphids as they feed on the leaves. Most insecticides are contact poisons and will not reach the aphids living inside the curls.

Blossom blight on crabapple

I am getting reports of apples and crabapples with their spurs – the small twigs that support flowers and are attached to larger branches – covered with wilted leaves. These are common symptoms of blossom blight, a form of fire blight (*Erwinia amylovora*). This bacterial disease is a serious problem on apples and pears. It can also appear on cotoneaster, hawthorn, and mountainash among other members of the rose family.



Fireblight usually presents as dead, curled shoot tips, often described as a shepherd’s crook, with blackened, wilted leaves left hanging. The disease results in branch dieback and death and eventually the entire tree dies.

The bacteria must enter the plant through an opening. It has no means to breach the surface of leaves, twigs, or branches. One avenue is through wounds or sucking insects penetrating tissue to withdraw the sap. Another means is through the flowers as the bees carry the bacteria from infected trees, and this avenue of transmission is called blossom blight.

Bees carry the bacteria in their search for pollen and nectar. If the weather is warm, the bacteria population can expand rapidly, and if it is wet, the bacteria can move down through the flower into the spur. Sometimes the tree can create a barrier to prevent movement in to shoots so only the affected spur dies.

Trees with blossom blight will have spurs with wilted and blackened leaves. The petals on these spurs will be wilting and appear water soaked. However, the shoots which the spurs are attached to may still appear healthy as the tree was able to prevent the disease from moving into the branch.

Copper fungicide can be applied before bloom to reduce the number of bacteria. There are antibiotics, streptomycin, that are labelled for application during flowering to prevent blossom blight. The first application is applied as soon as the flower opens and is repeated at three- to four-day intervals during bloom.

There are only a few products containing streptomycin that are available to home orchardists, Ferti-Lome fire blight spray is one. However, the timing of these multiple applications is difficult, especially if it rains, and they only work to prevent infection, not cure one.

Leaf rollers on Honey Crisp apple

There are several different insects that will roll apple tree leaves. The larval form of these moths will spin threads to roll leaves together as a home and feeding site. This is usually not harmful to the tree but if the caterpillar webs the leaf to a developing apple, the insect will feed on the skin as well.



Since there was only a picture of the leaf, with the remains of the silk, but no caterpillar is not possible to identify which leaf roller is responsible for the rolling.

Mulberry identification

The most common “What is this tree?” question is about white mulberry (*Morus alba*). The reason is that the leaves can have drastically different shapes, even on the same tree or branch. The leaves can have two or three lobes or none.



This small tree is found throughout the state, though it is not native to our state. The tree is native to China but was planted in the United States for silkworms but then escaped from cultivation.

The birds like the raspberry-like fruit. The tree is sometimes sold in catalogs as an attractant to the birds who will then avoid your garden – not likely. They will still like your garden.

You will probably avoid the fruit as it is at best bland. This is not the same fruit as the much sweeter ones that occur on the native red mulberry (*M. rubra*) which grows only as far north as Union and Clay counties.

Samples received/Site visits

Custer County, Pine engraver beetle

The second generation of adult engraver beetles are out attacking recently felled or fallen pine trees and logging slash. The tell-tale sign of an infestation - small patches of fine, light-colored boring dust - can be found on these infested trees and slash.



If possible, landowners should minimize cutting and piling pines on their property for a little while longer. The piles of recently cut material will be attractive to the beetles but may dry too quickly to remain attractive for another generation of adults. This risk is much lower later in the summer and fall.



Davison County, Dog vomit fungus

While this unattractive mass does sometimes look like a dog vomited on the ground, it is not a fungus, so the name is only half right. This is a slime mold that appears in wood mulch or on soil over recently ground stumps during June or July when the temperatures and humidity are high.



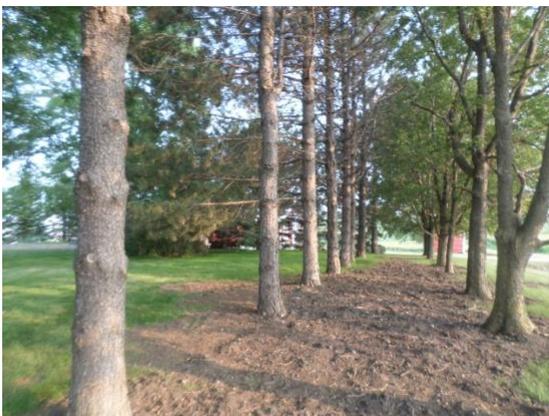
Since this slime mold is frequently found on fresh mulch so most of the calls come in about mulches that have been placed this spring. The only treatment is to break up the mold with a rake to dry it out – it rarely reappears unless you add fresh mulch

Minnehaha County, Pine wilt

This is becoming a too common call. A pine where the needles 'suddenly' turned yellow to light brown and wilted over the entire tree. The discoloration starts at the top and quickly progresses downward, sometimes in a spiral pattern. This is the pine wilt, a disease discussed in many *Pest Alerts* this year.



This visit was to a mature stand of Austrian pines. The trees form the interior row to a belt that surrounds the acreage. One tree died last year and now a second this year. The best management is to remove and destroy an infected tree by the next spring. The sawyer beetles that carry the nematode from dead, infected trees to nearby healthy ones begin emerging at that time.



Pennington County, An unusual juniper tip blight!

This is the reason you sometime must see the tree, not just a sample! The twig had browning needles that were turning crisp but no signs of a pest. However, once a visit was made and I got a ladder to the top, the only part of the tree that was browning, the reason was apparent.

The tree had leaned over during the heavy snows of Atlas. To pull it upright again a wire was wrapped six

times around the top and attached to a pulling rope. The rope was removed but not the wire. The tree was not able to grow around the wire, so the top was girdled and killed.



Pennington County, Oak seedling

The strange growths on the bottom of these seedlings were not galls but the acorn. The woody acorns are rich in carbohydrates, proteins, fats, and minerals which are all valuable resources for the new seedling to tap. The woody acorns will persist for a season as the tree begins to grow and develop a root system.

