



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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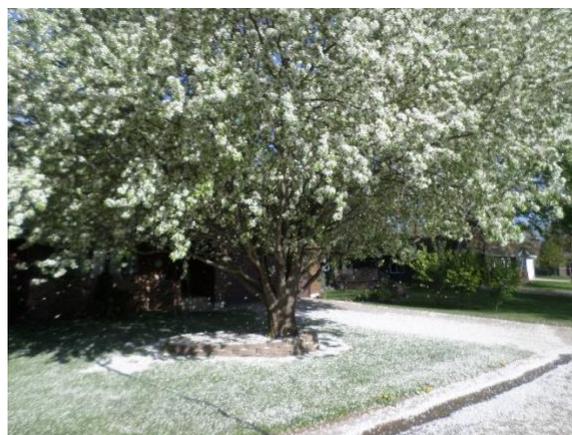
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Plant development for the growing season

The weather is finally staying warm which is a prerequisite for spring growth, but we are not receiving the rains needed to “fuel” this growth. If we do not start receiving our spring rains soon, we may find our trees and shrubs severely stressed by this dry spell. We have had about 7.4 inches of precipitation in Sioux Falls so far in 2021. By this same time in 2019 we were at 14 inches!

We are ahead in plant development this year and approaching 220 growing degree-days (base 50). The buckeyes are in full leaf and beginning to bloom. Crabapples are still in flower across the state but some trees, such as the black locust, hit the snooze button and have not yet opened their buds.

Some crabapples are already dropping their petals. This is a picture of a Spring Snow crabapple shedding the petals. The picture shows why it is called Spring Snow!



Treatments to Begin Now Clearwing ash borer

This was the most common borer in ash before the arrival of emerald ash borer. The big difference is that the clearwing ash borer is a native insect so can only successfully attack stressed trees.

Treatment with an insecticide containing Permethrin as an active ingredient can begin now. The lower 6 to 10 feet of the ash trunk should be sprayed to protect susceptible trees. The insecticide will kill the adults as they are walking on the bark to lay their eggs. The adults with their banded abdomen and smokey brown wings resemble wasps. A good way to get birds and people to

leave you alone! Fortunately, the borer lacks a stinger so are only a threat to ash and lilacs. People are safe.



The insecticide will also kill the newly hatched larvae before they burrow into the wood. Systemic treatments are generally ineffective so injecting a pesticide or pouring one around the soil are not practical means of managing this borer.

The adults are usually out flying about a week or so after Vanhouttee spireas begin to bloom and the shrub is just starting to flower now. You will also know the adults are flying when you see the pupa skins sticking out of the emergence holes on infested trees.

All ash trees do not need to be sprayed, just ones that are showing stress from drought or other stressors. A healthy ash tree usually is not susceptible to this borer. Lilacs that have canes less than 1 inch in diameter at the base are also not susceptible to this borer, but it is common in the older canes of mature lilacs.

Timely Topics

Emerald ash borer update

We are continuing to monitor insect development this spring. While there are a few larvae still in the J-shaped stage (which they entered last fall), most are now in the prepupa and pupa stage. The pupa stage should be completed for some by the end of the month.

Based on the current development of the insect and the long-range weather forecast, emergence is expected to begin around June 1 in Sioux Falls. However, I do not expect the flight to be as large as last year. Our monitoring is still showing significant winter mortality. Some branch samples had only dead J-shaped larvae.



These were collected from 2- to 4-inch diameter branches so the bark is thin. The combination of thin bark and smaller volume of wood means that low temperatures, -20°F or colder, needed to kill a high number of larvae are easier to achieve. The lower trunks with their thicker bark and greater mass provides enough insulation that the cold does not penetrate down to the overwintering cells and the larvae survive.

Pollen problems

Every spring some unlucky people greet the warm weather with a sneeze rather than a sign of relief that the winter is over. The spring pollen problems are not the same as the summer when “hay fever” becomes the issue. Hay fever is not related to hay, but ragweed, a common weed that flowers during late summer. This weed and many grasses are responsible for most of the plant pollen problems for people living on the Northern Plains.

What do grasses and ragweed have in common? First, they are wind pollinated. The pollen from these plants is light and small enough that it is easily carried by the wind to distance plants. They also release pollen grains in the billions!

Plants that have colorful flowers are attractive to bees and other pollinators and are rarely the pollen source for allergies. The pollen for attractive flowers is too sticky to be carried by the wind; it is designed to be stuck on an insect (like a post-it note). So, unless you are sticking your nose into these flowers, you are not likely to pick up much pollen.

There are lots of plants that are blamed for itchy noses and running eyes that are not an allergy problem. The best-known example is lilac (*Syringa*). The flowers on common lilac are very fragrant, but there is a low frequency of sensitivity to the pollen. Lilac, along with privet (*Ligustrum*), are insect-pollinated but not especially attractive to most insect so there is some transfer via wind. The pollen is very large (22-28 micrometers vs 0.4-4.5 micrometers for ragweed) so only travels a short distance.

Some people are sensitive to the fragrance of lilacs (not the pollen) but for this reaction they need to be standing next to cut blossoms in a vase rather than viewing outside.

The most common trees and shrubs that produce pollen resulting in an allergic reaction for sensitive people are these wind-pollinated plants:

- Alder (*Alnus*)
- Ash (*Fraxinus*)
- Birch (*Betula*)
- Boxelder (*Acer negundo*)
- Cottonwood and poplars (*Populus*)
- Juniper (*Juniperus*)
- Oak (*Quercus*)
- Walnut (*Juglans*)

And not all members of these genera or species are a problem. Also notice that there is only one conifer on the list, juniper (cedar) as most other conifers produce too large of pollen grains to cause an allergic reaction.

Many of these trees are dioecious, meaning they have either male or female flowers on a tree. Only the males produce pollen, so it is the guys that are the problem.

E-samples

A “galling” problem on lindens

I received pictures of lindens with small bumps on the newly opened leaves. These are caused by small mites that form spindle galls - elongated galls on the top of the leaves - or erineum (velvet) galls - fuzzy patches on the underside of the leaves.



Regardless of which mite might be responsible for the symptoms, there is little that should, be done for the problem. The galls rarely destroy enough leaf tissue to affect the tree's health. They are an aesthetic problem, not a serious health threat.

There is very little that can be done to reduce the problem anyway as most insecticides provide minimal control of mites: even if they will work, the timing of the treatment is not known. Often these galls appear on a tree for several years and then just disappear.

A spruce “problem”

Another ‘gall’ problem is occurred on spruce around the state. This is not a problem, it is normal. These are the male cones forming on the tips of the lower branches.

Conifers do not form true flowers but instead male and female cones. The female cones are the woody ones that form higher in the tree and release the winged seeds. The male cones appear on the tips of lower branches and only last for a couple of weeks as they release pollen.

This yellow “dust” that comes off the spruce cones is light, so it can travel far, but large enough that it gets stuck in your nose (pleasant thought) so does not cause the allergic reaction of the small, but light, deciduous tree pollen.



Planting problems

This is a linden that was planted this spring in one of the many new developments in the Sioux Falls metro area. These developments are known to be a death sentence to trees. Why? Many of the new developments had the soil removed during construction and all that was returned was a thin layer of hard clay. A frequent complaint from tree planters is hitting a hard pan only six inches or a foot down.



The best means of managing these soils is to dig the planting hole about three times wider that the container and sit the plant so the top of the soil (and remember to remove the soils from the very top of the container down to the first root) is above the surrounding grade. Creating a slight berm is the best means of getting these trees off to a good start despite the poor soils.

As a reminder, the only soil placed back in the planting hole is the same soil removed from it. Do not add peat or sand as these will interfere with water movement between the planting hole and the surrounding soil.

Samples received/Site visits

Brookings County, Dying spruce

The spruce calls continue to come in. Most of these calls are about over-mature (20 years or older) Colorado spruce (*Picea pungens*) that are losing their lower branches. Some of these trees have almost half their branches bare or only a few needles still attached.

The problem is usually crowding where the spruces are planted so close that they are shading out each other's lower branches. The tight spacing also means more competition for water and other resources so even the outer branches are declining.



I can usually find several problems on these trees – cytospora canker and spruce bud scales – the two most common. The primary problems are age and spacing and there are no treatments for these problems. Sometimes the best solution is removal and plant new trees (and give them a little more spacing).

Grant County, Fabric issues

The call was about Colorado spruce planted more than a decade ago that some of the trees were becoming discolored and one had already died.

The discoloration was apparent when I inspected the trees. The discolored trees also had far less growth than the nearby trees in the belt.



The problem appears to be the fabric. When I crawled beneath the trees, the stunted, discolored trees had the fabric imbedding in the trunk. The fabric could not be pulled out even after cutting away some of the material.



Most of the trees had the fabric tearing near the bases so girdling was not an issue. The same was true with all the deciduous trees in the belt. The exposure to sunlight beneath these trees weakens the fabric and it easily tears as the trunk expands.

The two trees with the most problem with girdling fabric are junipers (cedars) and spruce. The shading prevents the fabric from degrading and tearing easier. As the trunk expands, the fabric does not tear, so the tree can become girdled by the fabric.



If possible, the fabric should be removed from juniper and spruce rows at about the fifth year. The fabric had done its job by then – removing grass and weed competition while the tree become established.

Lawrence County, Woolly pine aphid

The small homopteran insect turned out to be *Pineus pini*, the woolly pine aphid (May 5, 2021 Pest Alert). These usually do not cause the damage discussed in the letter attached to the sample. A visit will be necessary.

Lincoln County, Is this ash infested?

This is becoming a more common call and anyone living in Sioux Falls should just assume their ash are infested or will become infested very soon. There is no need to inspect the tree for the pest, either decide to treat it or remove it.

I do receive these same requests from acreages in the county and these are still worth following up on. Once

the emerald ash borer starts infesting windbreaks, they are going to move through along a row very quickly.

The trees in this belt did not appear to be infested. There were no signs or symptoms of the beetle but for the first year or two, there are usually no indicators a tree is attacked.

Windbreaks in Minnehaha and Lincoln counties will become infested during the 2020s, a few already are, so decisions need to be made now rather than wait. The options for windbreaks are fewer – insecticide treatments are too expensive to be practical – so removal and replanting is the best approach.