South Dakota State University Extension

Tree Pest Alert

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In This Issue

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 ocynin this publication are generally those that are most commonly available to the public in South Dakota and the listing 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: Carrie Moore and Dawnee Lebeau

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Plant development for the growing season

The last full week of summer ended with summer-like weather. Daytime temperatures were in the 80s and 90s with high humidity. There was just enough rain that clouds of mosquitoes would follow you. Let us hope that the fall equinox – the calendar switch from summer to autumn – also switches our weather to cooler!

The hot temperatures pushed the accumulated GDD (base-50) by more than 100 DD during the past week for southern communities. Here is the current GDD accumulation for communities across the state.

Aberdeen	2586
Beresford	3060
Chamberlain	3120
Rapid City	2542
Sioux Falls	3049

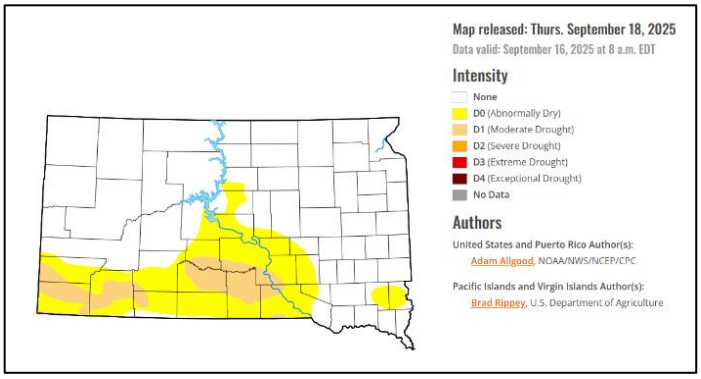
Apple harvest is in full swing. Some of our mid-season apples – Cortland and Sweet Sixteen (my favorite) – are ready for picking. A ripe apple has a bright color (which varies by cultivar) and firm skin. If the apple easily separates from the tree when you lift and slightly twist the fruit – its ready. If you are pulling the fruit and the branch, it is not ready to pick.

Drought monitoring

Many areas of the state are above average in annual rainfall. About 73 percent of the state is drought free. Another 20 percent of the state is classified as "Abnormally Dry." About seven percent of South Dakota is classified as "Moderate Drought." This is concentrated

in the southwestern part of the state but extends east to Aurora and Douglas counties.

Here is the current map from the National Drought Mitigation Center at the University of Nebraska-Lincoln.



Treatments to Begin Soon

Apple orchard sanitation

It is a great time to get out and pick ripe apples but as a reminder, any fallen fruit should be picked up and destroyed. We are at the time of year that sanitation is the best pest treatment. If we remove and destroy infested or infected apples, we may reduce the severity of these pests next year.

This is the time to pick up and discard any fallen apples that may be infested with apple maggot (or even a few late season codling moth larvae). Another apple pest treatment at this time of year is to rake up and dispose of fallen leaves infected with the fungal disease apple scab. Eliminating the overwintering inoculum can reduce the source for the disease next spring. Just as effective and easier to do is to simply mow the lawn low this fall to shred the infected leaves, so they decompose quicker.

However, these treatments must be applied over a large area for them to be effective. If you pick up the wormy apples in your yard, but your neighbor does not, the insect can easily move back to your tree next summer. The same is true for raking the falling leaves that are infected with apple scab. If you are the only one doing it, the disease can easily spread next spring from the infected leaves beneath your neighbor's apple tree.

The sanitation measures are more effective if applied over a larger area so it might be best to get the neighbors involved. If everyone on the block picks up and discards the wormy apples or rake/mows the apple scab infected leaves this fall everyone might benefit.

Timely Topics

Emerald ash borer update

We continue to monitor larval development of emerald ash borer (EAB) from Dakota Dunes to Milbank. The larvae are about 50:50 in either their 3rd or 4th instars. The 4th instar will feed for another couple of weeks before burrowing into the sapwood to spend the winter.

Ash trees are beginning to have their leaves turn yellow and drop. This is not a good time for injecting trees. Insecticide uptake is best when the leaves are active and pulling up water. It is better to wait until spring, after the leaves are fully open (and their flowers are fading).

Needles turning yellow on pines

I am receiving calls about yellowing foliage on pines. These are the interior needles. The yellowing of these in the fall is normal. Evergreen does not mean "forever green."

Pines shed their oldest needles at this time of year. These needles often change color from their normal green to reddish brown to yellow prior to being shed. If we have sunny weather – which is occurring in much of the state – these older needles can turn a golden yellow before falling.

Spotted lanternfly update

No, spotted lanternfly (*Lycorma delicatula*) has not yet been found in our state. I was in the Rochester, New York area last week and we found a new population.

It is an insect no one wants. The nymphs and adults suck sap from many different tree species as well as fruit trees and grape vines. While the loss of sap can be stressful (or fatal to grape vines) the primary problem is the excessive sap dripping down from infested trees. The sticky film becomes infected with sooty mold leaving a tacky, black powder on surfaces.

The adult population is very abundant by late summer. The flying adults can cover entire tree trunks and branches as well as buildings – and people! They become as annoying as flies.

But the adults are not flies but planthoppers. The insect is native to China and Vietnam where it feeds on tree-of-heaven (*Ailanthus altissima*). The insect was first found in North America in Pennsylvania in 2014. It has spread as far west as Chicago and Detroit. The distribution is patchy as the insect spreads not by long flights but by car and truck and the material they haul.

The insect's primary host is tree-of-heaven. This Asian tree is not hardy to the northern half of the state. It can be found as far north as Sioux Falls, Chamberlain, Pierre, Kadoka, and Hot Springs.

E-samples

Pine wilt in Christmas tree plantations

The common thought was that Scots pine (*Pinus sylvestris*) Christmas trees were safe from becoming infected with the pinewilt nematode (*Bursaphelenchus xylophilus*)., which is responsible for pine wilt disease. The sawyer beetles that carry the nematode from a dead, infected tree to a healthy Scotch pine would not be attracted to small trees.

This has held true. Scots pine is still grown as a Christmas tree in Michigan, a state that has dealt with pine wilt disease since the early 1980s. But I received pictures of younger 5- to 6-foot-tall Scots pines with needles turning tan and drying by late summer with trees dying in August or September. The trunks of these trees have blue-stain, another characteristic of a pine infected by the nematode.

We are going to collect some wood samples from Scots pine Christmas trees that have recently died. These will be brought back to the lab where we will see if we can extract the pinewood nematode.

Samples received/Site visits

Brown County, Pine tortoise scale on Scots pine

This is a Scots pine with yellowing needles that are covered with sticky, black powder. The twigs are dotted with the dome-shaped reddish brown female scales called pine tortoise scale (*Tourmeyella parvicornis*). The adult females are sessile, remaining in one spot as the shell forms around them. They will lay eggs in early spring then die. The eggs hatch at about 500 GDD and the crawlers move out on the new shoots to suck sap.

Pine tortoise scale is a soft scale, so they suck sap directly from the sugary phloem tissue. They cannot utilize all the sap they ingest so some is excreted out as honeydew – a sugary liquid. The honeydew film becomes infected with a black, powdery sooty mold.

Day County, Diplodia tip blight on ponderosa pine

While we do not lose ponderosa pines (*Pinus ponderosa*) to diplodia tip blight (*Diplodia pinea*), it can leave the host disfigured and stressed. This fungal pathogen kills the expanding needles and shoots on 2- and 3-needled pines. It does not affect the 5-needled pines such as eastern white pine (*Pinus strobus*).

Diplodia tip blight is not usually a tree killer as the disease cannot invade older shoots. Mature branches and even the trunk can sometimes be killed by the disease if wounded by hail or other injury. They can also invade older tissue if the tree is stressed. The infection

can also remain dormant for years in host tissue until stress weakens the tree's defenses. one to three years.

The most common symptoms are new shoots which are stunted with their needles turning straw-colored. These needles may be covered with sap (resin) causing them to be stuck together. The affected needles turn gray by the end of the year and may hang for another season before falling.

The disease usually affects the lower two-thirds of the canopy. One common indicator of the disease is the lower branches are covered in straw- and gray-colored needles while the top of the canopy has normal color needles.

Fungicides are applied in the spring. This will be covered in the April 2026 issues of the *Tree Pest Alert*.

Lake County, Willow scab

This was another willow that was dropping leaves. The reason is willow scab (*Venturia saliciperda*). it is a common foliage disease that appears in late summer on willow trees across the state. I am more of the disease this year due to the wet spring and summer.

The disease is closely related to apple and pear scab. The common symptoms are discolored and falling leaves as well as tip dieback. This disease has similar symptoms to black canker (*Glomerella miyabeana*), a willow twig disease that can also cause the leaves to wilt and the shoot tips to die back.

The two diseases are difficult to separate. They are closely related but the willow scab infected leaves will usually have "tufts" of spores on the underside of the leaf, generally along the midvein. These two diseases are often found in association with one another and when they occur together the disease is simply called willow blight.

Marshall County, Bur oak blight (BOB)

This site visit was to look at two mature bur oaks that were near a parking lot and building. The bases of the trees were partially covered with gravel. This was not an ideal site for these trees, but the dieback still seems excessive.

The scattered sprouts of leaves on these trees also had common symptoms of fungal disease bur oak blight (BOB) (*Tubakia iowensis*). They had dark veins on the underside, and the tops showed the characteristic yellowish wedge-shaped patches that followed the major veins.

The trees were the small acorn variety of bur oak, *Quercus macrocarpa* var *oliviformis*. This is the variety that is most susceptible to the disease. It is also the native bur oak in South Dakota in the counties bordering Minnesota and Iowa.

Foliage samples were collected and brought back to the lab for culturing. We were able to confirm the pathogen from the samples. Symptoms alone are not enough to determine whether the tree has this pathogen.

The disease is not a death sentence for an infected tree - at least not initially. It takes four or five years of consecutive attacks to kill a tree. The tree leafs out in the spring, but the foliage becomes infected and drops. The next year the tree leafs out again but this time with few leaves which become infected and drop. It is a slow starvation due to the continual loss of foliage.

The infection overwinters on the petioles of infected leaves. But pruning out dying branches or raking up infected leaves are not effective management activities. Fungicide (propiconazole) treatments for infected trees can be injected in late spring just after full leaf expansion. This treatment can prevent the dormant infection from becoming active.

Minnehaha County, Banded ash borer, not EAB

I was checking for emerald ash borer (EAB) in Dell Rapids this week. I can find it within a few miles of town, but not in town yet. But as I was driving by the park, I saw a tree that had all the classic symptoms of EAB – decline and excessive blonding from the woodpeckers searching for the larvae beneath the bark.

When I closely examined the tree, I could not find the D-shaped exit holes of EAB, only the oval holes of the banded ash borer (*Neoclytus caprea*). I pulled bark away and found galleries, but these were the slightly wider and meandering galleries of the banded ash borer.

I was able to extract larvae from galleries. The larvae were not the flat, bell-shaped segmented shape of EAB. They had rounded segments – a lumpy appearance – with a dark head capsule. These were the banded ash borer.

There is no law that an ash tree can only be infested with one borer species. I often find banded ash borers attacking trees already infested with EAB. But in this instance, there were no signs of EAB.