South Dakota State University Extension

Tree Pest Alert

Feb 12-19, 2025 (biweekly now until April 2025) Volume 23, Number 4

In This Issue

Samples

John Ball, Professor, SDSU Extension Forestry Specialist & South Dakota Department of Agriculture and Natural Resources Forest Health Specialist

Email: john.ball@sdstate.edu

Phone: 605-688-4737 (office), 605-695-2503 (cell)

Samples sent to: John Ball
Agronomy, Horticulture and Plant Science Department Rm 314, Berg Agricultural Hall, Box 2207A
South Dakota State University
Brookings, SD 57007-0996

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: Carrie Moore and Dawnee Lebeau

This publication made possible through a grant from the USDA Forest Service.

Plant development for the growing season

We hit a period of extremely cold temperatures last week. Many communities had a day or two where the high temperature never reached above zero. There were no growing degree days (GDD base-50) last week!

I expect we will see a slight increase in GDD this next week as temperatures rebound. This is our current accumulation for communities around the state.

Aberdeen	0
Beresford	8
Chamberlain	8
Rapid City	6
Sioux Falls	5

Drought monitoring

About half the state – mostly north of I-90 – is classified as "Moderate Drought." The rest of the state is identified as "Severe Drought" with the southwestern counties as "Extreme Drought." There will be a lot of mortality in windbreaks planted in 2024 unless we receive precipitation in March and April.

Soil temperatures in some northern counties are at root-killing lows

The triangular area of northeastern South Dakota from Brown to Potter and Codington counties and much of northwestern South Dakota are experiencing soil temperatures in the upper four inches of 15ºF or lower. These are root-killing temperatures for young trees. The combination of dry and very cold soil will be a lethal mix to some windbreaks planted in 2024.

Treatments to Begin Now

Time to remove pines killed by pine wilt disease

Pine wilt is a lethal disease of Austrian (*Pinus nigra*) and Scotch pine (*P. sylvestris*). The disease is established across the entire state, along with substantial tree losses. The common symptom pattern for this disease is the pine tree appears normal during the summer but within a few months the entire tree fades to brown. The needles hang from the branches for a while but usually drop by the following spring.

The disease is caused by a small nematode (*Bursaphelenchus xylophilus*) and its associates. They block the movement of water up the tree which explains

the quick death. The nematode cannot move to a new host on its own – it takes a flight on a longhorned beetle (Monochamus).

These flights from the dead host to healthy pine begin sometime in April. The only means of slowing the spread of pine will is to remove any recently dead, infected tree by April 1 to stop the transmission. The wood must be burned (if permitted), buried or chipped.

Timely Topics

Emerald ash borer update

Emerald ash borers (EAB) larvae are doing fine. While the temperatures dropped to an overnight low -20ºF in the Sioux Falls area, I do not expect the cold to kill many larvae. While -20ºF use to kill many overwintering larvae, the ones that survived the cold were the ones to reproduce. Now some EAB can survive -40ºF.

While the extreme cold will slightly reduce the population, I expect to see good survival this winter. This means lots of adults will be flying come June. We will also see an expansion of tree mortality.

Remember to remove the tree tag!

Art, a frequent reader from Pierre, sent in this picture of a plum tree with the tag still attached. The tree had grown around the tag and was girdling the trunk.

This is a more widespread problem than many people realize. It is easy to forget to remove the tag; sometimes people intentionally leave it on, so they remember the name.

Remember to remove any tag when you plant trees this spring. Take the tag and put it in an envelope if you want to remember the name. Also, next week might be a good time to walk around to see if any tags were left on trees planted during the last few years.

How cold is too cold for our trees and shrubs?

It has been cold! The high temperature on Feb. 17 in Sioux Falls was -5ºF. The high temperature that same day at the Gale Crater on Mars was -4ºF. It was warmer on Mars that day than in Sioux Falls, but at least we have a breathable atmosphere.

While it has been very cold for the past week, it has not been that tough on our plants. Most of our woody plants can tolerate temperatures of -30ºF or even -40ºF during mid-winter. Most of the “winter” injury we see in South Dakota is not the result of very cold mid-winter temperatures but widely fluctuating temperature in late autumn and late winter.

If we have the temperatures warm into the 50ºFs next week as forecasted, then drop to subzero later in March that is when we see cold injury. Sioux Falls saw -23ºF in March 1948 and the record is -38ºF in March 1998 at Camp Crook. Do not put away the long underwear just yet.

Hopefully, the extremely cold weather will be behind us as we enter March. But warm temperatures expected in late February are more of a concern to me than the recent -20ºFs.

E-samples

Island chlorosis on hackberry

As mentioned in the last issue, this is the time of year people clear the picture files off their phones. They remember that they took a picture of an interesting plant or problem but do not remember what it was.

This is another one of those e-samples. This is island chlorosis (mosaic) of hackberry (*Celtis occidentalis*). The colorful pattern to the leaves is not from a nutrient deficiency as occurs with birch, maples, and oaks, but thought to be an ampelovirus. The connection of the symptoms to this virus is common but not yet proven.

The bright yellow angular spots are bordered by veins that separate them from the normal green foliage. The virus is believed to be transmitted by aphids. The virus does not seem to harm its host more than create the colorful display.

Pine wilt disease

This is a picture a nearly bare Austrian pine. The photographer said the tree looked fine this past summer but quickly died and woodpeckers attacked it. The pattern to the decline is what we see with pine wilt disease.

The only means to diagnose the disease is to collect nematodes from the wood and see if the pinewood nematode is present (there are many other benign nematodes also found in the wood). Since several other pines in the windbreak were presenting with a similar pattern, there is a high likelihood that this is pine wilt disease.

The best management option is to remove the pines that died this fall and dispose of the wood – see Treatments to Begin Now in this issue for more information.

Samples received/Site visits

Codington County, Spruce tips wilting in early summer

This picture is a Colorado spruce (*Picea pungens*) with the wilted terminals. The expanding growth collapsed last spring rather than formed new shoots. There are many pests and disorders that can cause these symptoms.

The sample – collected last spring and preserved – did not have any signs of any insect, mite or pathogen. The distortion found on the small needles is a common symptom for two disorders – frost and herbicide.

If the symptoms are limited to the southern exposure of the trees, this may be frost. The buds on the warmer south side of the tree will sometime open just a little earlier. The tender growth is susceptible to frost.

If the pattern is circular, spiraling up the trees, this is a common pattern for absorbing soil-applied herbicides. If the pattern is on one side – other than the south side, it may be herbicide drift.

Neither of these can be proven at this time. Regardless, the trees are infected with cytospora canker. This is a common disease of stressed Colorado spruce. It results in the slow decline and death of the lower branches.

Minnehaha County, Trees cracking

I have been receiving numerous calls on tree cracking. A tree owner notices a long vertical crack on the trunk of a tree, one that was not there a few weeks ago. Some of the cracks are opened an inch wide or more. Many of the cracks originate near a limb attached to the trunk.

These are cracks that were already present, but usually very thin cracks caused by earlier stress from wind, ice or other loading. The cracks open during very cold weather as the wood at the bark contracts at a different rate than the wood deeper in the trunk.

These cracks close once the weather warms – most will disappear as the temperatures rises next week. They are usually not a major concern, but they may be signs of a failure beginning in the trunk, one that could cause the tree to split and fall. Large, long cracks on mature trees may require an inspection by an arborist to determine the risk of failure.

Yankton County, Ash bark beetle

This was a stop to look at an ash tree that the owners suspected was infested with EAB. The 25-foot-tall tree has woodpecker pecks and outer bark removed in patches which revealed the light bark beneath – what is known as blonding. Since Yankton is about 45 miles from the nearest confirmed infestation, it was worthwhile to make a quick stop.

Fortunately, it turned out to be the ash bark beetle (*Hylesinus aculeatus*). This is a native beetle that attacks stressed ash trees. Several years of drought in this region have left every tree stressed.

This bark beetle is typically found in branches, but it will also infested trunks of small, stressed ash. The adults overwinter just beneath the bark in small, discolored cells. These cells are close to the bark surface, so they are easy finds for woodpeckers. The birds will shred the bark in their search for these beetles, much like the blonding caused by woodpeckers as they search for EAB.