



# 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 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 weather was warm during much of the past week with daytime highs in the 80s across the state. We did not see the temperatures dip below freezing. This consistently warm weather accelerated plant development.

Here is the accumulation of growing degree days (GDD-base 50) for communities around the state. We gained around 70 GDDs during the past week.

Aberdeen	173
Beresford	401
Chamberlain	426
Rapid City	411
Sioux Falls	352

Norway maples and serviceberries are usually blooming by about 200 to 250 GDD. This year they are starting to bloom at 300 to 400 GDD. Why?

Growing degree days reflect an accumulation of conditions that drive plant development. One is that the plant is ready to grow. Our woody plants must fulfill a chilling requirement as a prerequisite for spring growth.

About 100 GDD accumulated during the unseasonable warm days during this past mid to late winter. While the air temperatures were warm during these brief episodes, it did not lead to any development.

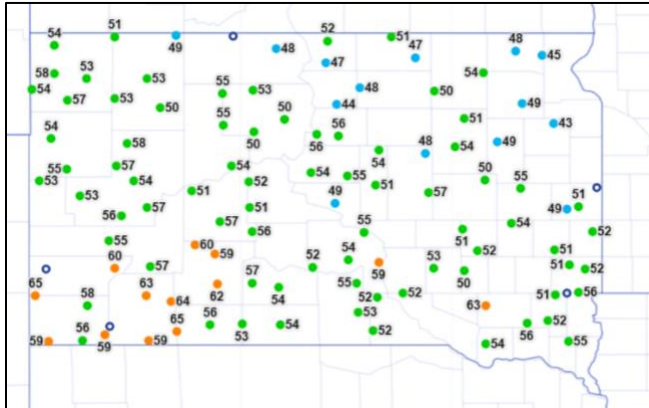


Soil temperatures also play a role in waking up of our woody plants. The serviceberries (*Amelanchier*) are now

in bloom in many areas of the state. These small trees begin flowering when the soils are warm enough to plant.

### Soil temperatures

The soil temperatures at a 4-inch depth are now in the 50s for most of the state. There are a few locations – the counties bordering North Dakota – that are still in the 40s. We are seeing some 60s for soil temperatures in southwestern region of the state.

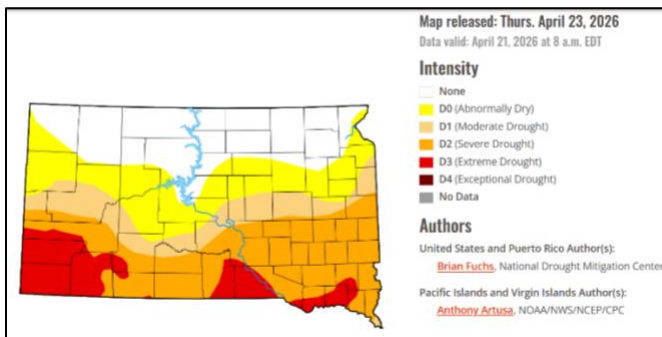


### Drought monitoring

The drought-free region of the state has not changed in the past several weeks. A little more than a quarter of the state, the northern quarter, is drought-free. Another quarter of the state – a ribbon running through the middle - is classified as “Abnormally Dry.” There is a thinner ribbon, about ten percent of the state, which is classified as “Moderate drought.”

The southern half is under more severe drought conditions. The southwest and southeast corners of the state are still under “Extreme Drought.” These two regions of the state have been under some level of drought intensity for the past couple of years.

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



## Treatments to Start Now or Soon

### *Diplodia tip blight*

*Diplodia tip blight (Diplodia)* is a disfiguring fungal disease of 2- and 3-needle pines in South Dakota. It is a common disease of Austrian (*Pinus nigra*) and ponderosa (*P. ponderosa*) pines. We rarely see it on Scotch pine (*P. sylvestris*).

The disease can be managed with fungicides. The treatment is foliage applications with fungicide containing thiophanate-methyl, propiconazole, or chlorothalonil (and labeled for treatment of this disease). The first application is applied just before the bud sheaths have opened. This is happening across the southern half of the state. We are not there yet for areas north of Highway 212.

Timing is critical. Once the bud sheaths have opened and the candle begins to form, it is a little late to begin the first application. This is the application that provides most of the protection. A second application is made about two weeks later.

### *Emerald ash borer*

The injection season starts as the ash tree begins to leaf out. Ash must create a new plumbing system each spring. The water pipes must be built and working for the leaves to expand. We need the pipes working to carry the injected insecticide through the tree.

Ash leaves are unfolding in the southern half of the state. The optimum period for injection is between leaf out and early June. As the leaves force water up from the roots through transpiration, any pesticide injected in the trunk will be carried along.

We need insecticide in the tree when the EAB adults emerge. Since mom needs to feed on leaves for a week or so before laying eggs, having the insecticide in the foliage will reduce the number of eggs.

The insecticide will also be carried throughout the vascular tissue of the tree. Any larvae that do hatch from eggs will be killed in the phloem before they do much damage.

## Timely Topics

### *Emerald ash borer update*

We continue to monitor larval development in ash trees. We see larvae uncurl and shrink into prepupae. We are even seeing some pupae forming in the southeast corner of the state.

Adult emergence is expected to begin in mid to late May in Dakota Dunes and early to mid-June in Milbank.

More information on EAB lifecycles is available at:

<https://extension.sdstate.edu/sites/default/files/2023-05/P-00266.pdf>

**Arbor Day – last Friday in April**

Arbor Day is an international celebration of the importance of trees. Festivities have been observed since the 1500s in Europe. Arbor Day is celebrated in communities across every continent but in Antarctica.

South Dakota celebrates Arbor Day last Friday in April, the National Arbor Day date. But the official state days vary around the country. Arbor Day is on the third Friday in January for Florida and the third Friday in May for Alaska.

South Dakota State University got a jump on Arbor Day – after all we are the Jackrabbits. The celebration was held on Thursday April 23. Students planted St. Croix elms (*Ulmus americana* 'St. Croix.' This true American elm is highly tolerant of Dutch elm disease. This has been confirmed through inoculation trials. It should be planted more often.



### **Maple syrup season has ended**



The sap season ended in Sica Hollows State Park this week. The maples buds are expanding. When this begins, the sap flow diminishes and becomes cloudy. The flavor also changes from a mild, sweet taste to a

bitter, cabbage-like flavor. Not what you want on your pancakes.



The last of the clear sap is being boiled down to syrup. The spiles are being removed and the buckets cleaned for the 2027 season.



### **April Forest Health Zoom program – Timely Treatment for Tree Pests**

The April SDDANR forest health zoom workshop will be Wednesday April 29 from noon to 1 pm (MDT) or 1 to 2 pm (CDT). The live zoom session will cover timely treatments for tree pests. Attendance is free but register at this link:

[https://state-sd.zoom.us/meeting/register/no38jSN\\_SGexiUzFNKhFKw](https://state-sd.zoom.us/meeting/register/no38jSN_SGexiUzFNKhFKw)

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### **E-samples**

#### **Ash flowers littering the ground**

As our community ash populations decline, this litter has become less of a problem. But I still receiving pictures and questions every year about the brown fuzzy “balls” on the sidewalks beneath ash trees.



These are the remnants of early spring ash flowers. The staminate flowers on ash become infested with a mite – the ash flower gall mite (*Eriophyes fraxiniflora*). The only food for these mites is the staminate flowers on ash. Since no one wanted seeds on their ash trees, communities were over-planted with trees that only have staminate (male) flowers. This meant plenty of food for the mites.

The dried-up flowers are falling now as they are replaced by the new leaves. There is nothing that can be done about the flower litter except get a rake or broom out to clean up the mess.

### **Split crabapple**



This is a picture sent in of a crabapple with long vertical splits in the trunk. The split at the base may be due to earlier wounding or even planting too deep. Either can result in stem cracking. The crack at the top of the

picture is due to a co-dominant leaders – two upright stems. These create a weak point in the stem that propagates into a long crack.

Regardless of origin, the outcome is the same. The tree is weak, a weakness that cannot be corrected. The tree should be removed.

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### **Samples received/Site visits**

#### **Brookings County, Cold weather injury to tree lilac**

Many of the new leaves on this Japanese tree lilac (*Syringa reticulata*) are distorted. There are also small shriveled and blackened leaves hanging from the shoots. This is not herbicide injury, a conclusion many jump to when seeing these symptoms on a tree.



This is cold weather injury from the near-zero temperatures when the trees were budding out a couple of weeks ago. The warm to hot day temperatures pushed the bud expansion but the freezing temperatures at night killed the tender foliage.

This injury is most common on black walnuts, catalpas, hackberries, hydrangeas, tree lilacs, and viburnums. The injury is not fatal as the affected plants will produce new leaves very quickly.

#### **Charles Mix County, Planting depth for windbreak seedlings**

This was a stop to look at a young windbreak that suffered high mortality across rows and species. I am looking into the reasons – so it is ongoing – but one factor to consider is planting depth.

Planting so the root collar is at the soil line or even slightly higher leads to low seedling mortality. This is the “sweet spot” for planting. Planting deeper so the stem lateral buds or shoots are buried or too shallow so the roots are in the air may increase mortality to 20 to 40 percent.



This highbush cranberrybush (*Viburnum opulus*, syn *Viburnum trilobum*) was planted too deep. The lateral buds that opened when sending white – almost blanched – shoots up through the soil. This depth can increase root collar decay and mortality.

### **Clay County, Phylloxera galls on shagbark hickory**

It is interesting to drive from Dakota Dune to Sica Hollow in a day. It is like going from late spring to late winter (though the snow is finally gone in Marshall County). While the trees are only beginning to expand their buds in Sica Hollow, the trees in Dakota Dune are in full leaf.

There are some nice shagbark hickories (*Carya ovata*) in the Vermillion area. I found these galls on one tree. The galls on one side of the leaflets are circular and projected upward into a cone. Beneath these cones, on the opposite side of the leaf, is a slightly raised disk.



These galls are phylloxera insects, possibly *Phylloxera caryaefoliae*. Phylloxeras are sucking, aphid-like insects. They suck sap from the leaves but also inject a chemical that causes the galls to form. There are at least five different species that feed on hickories and pecans.

They are rarely a serious problem except for pecan (*Carya illinoensis*) orchards where infestations have reduced nut production. No treatment is necessary.

### **Union County, Eastern tent caterpillar on cherry**

The caterpillar nests are forming on branch unions in trees in the southeast corner of the state. This is a web of eastern tent caterpillars (*Malacosoma americanum*). They hatched at about 150 to 200 GDD, about the time apples and cherries buds were opening.

The eastern tent caterpillars are pale blue with a white strip bordered by reddish-orange bands along their back and sides. The caterpillars are less than 1/2-inch long now. They will be two inches long in a few weeks.



The caterpillar appetite increases with their size. Now the feeding is barely noticeable but, in a few weeks, they can defoliate the entire tree. Treating the caterpillars now can reduce defoliation. Treating in a few weeks is revenge spray as the damage is done.

There are many pesticides available for treating tent caterpillars. When nests first appear treat canopy with an insecticide containing azadirachtin, carbaryl, malathion, permethrin, or spinosad as the active ingredient (and labelled for this use). Do not spray chokecherry tree in bloom as this will kill pollinators.