



Tree Pest Alert



April 29, 2026

Volume 24, Number 11

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

Plant development for the growing season

We cooled down during the past week with more seasonal temperatures in the 40s and 50s. Evening temperatures were also mild with nights in the 30s to 40s.

This slowed the accumulation of growing degree days (GDD-base 50). We gained around 30 to 40 GDDs during the past week. Here are the total GDDs for communities across the state.

Aberdeen	192
Beresford	437
Chamberlain	446
Rapid City	420
Sioux Falls	385

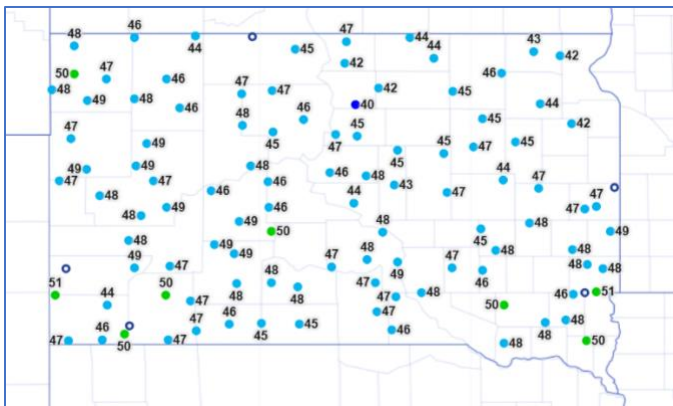
Clove (Buffalo currant (*Ribes aureum*) is one of native spring flowering shrubs. The bright yellow flowers are as attractive as any forsythia. They also have a spicy fragrance that reminds people of cloves or vanilla.



The shrub is in bloom across the state. It is almost finished in Brookings, but the flowers are just beginning to open in the lower elevations in the Black Hills.

Soil temperatures

The soil temperatures at a 4-inch depth have stalled and even retreated a bit. The temperatures are now in the high 40s. They will recover in the coming week as the air temperatures are forecasted to be in the 60s and 70s.



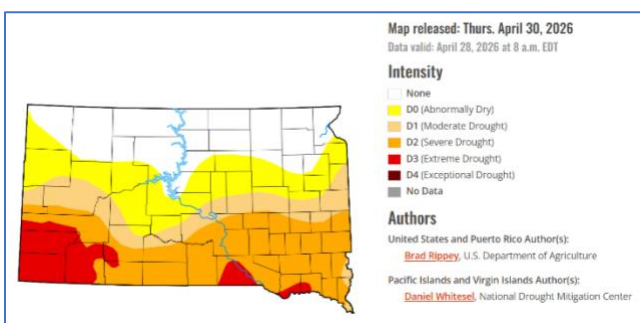
Drought monitor

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. If you are up in the counties bordering North Dakota, the drought has had little to no impact.

Farther south is a different story. Another quarter of the state – a ribbon running through the middle - is classified as “Abnormally Dry.” There is a thinner ribbon, about 15 percent of the state, which is classified as “Moderate drought.”

About a quarter of the state from Brookings to Pennington Counties are under “Severe Drought.” The southwest corner of the state is under “Extreme Drought” along with parts of Bon Homme and Gregory Counties.

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.

Pine needle scale

The white bumps on pine needles are the immobile stage of the insect called pine needle scale (*Chionaspis pinifoliae*). This is a common pest of mugo pines but can also be found on Austrian pines, occasionally Scotch and even Colorado spruce.

All the scales seen on the needles are now dead. But the scales that are on newest needles, the ones formed last year, have eggs beneath the shell of their dead mom. Once the eggs hatch, the first nymph stage is mobile, a common characteristic of armored scales. These nymphs are pinkish red, turning a tannish brown as they settle and begin to feed.

The nymphs feed with their piecing-sucking mouthparts by sucking the contents of ruptured cells. This is a different feeding site than the soft scales that piece the phloem cells to extract nutrients from the sugary sap. The soft scales produce honeydew.

There are two generations per year in the region with the first-generation crawlers hatching at 300 GDD, about the time common lilac is in full bloom. The first generation hatched over a brief period, only about a week or two.

The second-generation crawlers begin hatching at about 1400 GDD, about a week after Ural falsepsirea begin to bloom. The second-generation crawlers hatch over a longer period, often several weeks.

Treatments start at about 350 to 400 GDD as the crawlers are beginning to settle. We should be there by next week in much of the state. The most common treatment is a foliage spray of horticultural oil. The oil will suffocate the young crawlers but have minimal impact on the many insects that feed on the scale. Oils can damage needles if misapplied so read and follow label directions exactly!

Spruce needleminer

The spruce needleminer (*Endothenia albolineana*) larvae are moving from their webbed nest and resuming their feeding. A spray of high-pressure water will knock them off the tree but be sure to rake up the fallen needles and larvae after the water spray.

The other approach is pesticide treatments, most commonly insecticides labelled for the needleminer and contain carbaryl, malathion, or spinosad as the active ingredient. A spray into the canopy will kill the larvae as they begin moving out onto the foliage. Remember to spray inside the canopy, not just the exterior.

Actually “power washing” the lower canopy of the spruce is an effective way of cleaning off all the dead and dying needles as well as some insects. But beware the tree will appear a little open afterwards!

Timely Topics

Emerald ash borer update

We continue to monitor development of emerald ash borers in ash trees. We see the transition from the larval to the pupal stage from Brookings to Dakota Dunes.



The pupae begin the stage as milky white rhombic masses with few features. They begin to form dark eye spots in about 10 days. After this, the body becomes a

golden green and starts to resemble an adult. This process takes about three weeks.

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>

Pine engraver beetles update for the Black Hills

The pine engraver beetles (*Ips pini*) appear to be sleeping this spring. Kurt Allen, a forest entomologist with the USDA Forest Service, reports catching a few adult beetles in their trapping. We have yet to see any pine engraver beetle activity in the down branches and broken treetops left from the winter windstorm.



The adults overwinter in the litter on the forest floor. Come spring, the adults are attracted to fresh down pine branches as these still have inner bark that is a suitable food source for their young. Down branches also lack the resin defenses of living trees so the adults and their young can tunnel without the risk of drowning in sap.

Infested wood can be identified by the small piles of brown dust-like powder along crevices on the bark. If the bark beneath the sawdust is pulled away, the small (1/8 to 3/16 inch long) reddish brown beetles can be found carving tunnels in a Y- pattern. During the next week, tiny tunnels will be radiating out from these tunnels as the larvae hatches.

The larvae will tunnel and feed for about two to four weeks. The pupal stage will last another week or so and then the next generation of adults will emerge (about 35 to 45 days from now). If this second generation of adults cannot find fresh green down wood, they will move to standing trees. The continuing drought has left our Black

Hills pines stressed. These trees may be very susceptible to attack by this second beetle generation.

Pine beetles update and management program May 11 in Spearfish

Pine engraver beetle and mountain pine beetle populations are on the rise in the northern Black Hills. This evening program will cover where tree mortality is occurring in the region, what we expect to see this year, and what forest landowners can do to manage these beetles.

There will be a program on bark beetle identification and management on Monday, May 11, 2026, from 6:30 to 8:00 pm. The program will be held in the multi-purpose room at the Spearfish Recreation Center, 122 Recreation Lane, Spearfish

The evening program will be led by John Ball, Forest Health, South Dakota Department of Agriculture and Natural Resources, and Kurt Allen, Forest Health, USDA Forest Service. They will give a short program on the bark beetle identification and management then open it for questions.

The program is open to the public. There is no charge nor are reservations required. Please come with your questions.

E-samples

Crabapple with two different flower colors

This picture was sent in of a crabapple with two different flower colors. The flower colors do not change along a branch but – as seen in the picture – it almost appears as two trees, each with their own flower colors.



This is a single tree, but it has become a multi-stem tree. Crabapples are grafted trees; the cultivars are placed on rootstocks. A common rootstock is the Dolgo crabapple. This crabapple has white flowers so may be the rootstock for the cultivar.

A sucker sprouted from the rootstock of this tree. The sucker rapidly grew and now is the same size as the cultivar. This means the tree has two different flowers and fruits.

This is the reason any suckers that sprout should be promptly removed. While you do not want them to become this big before pruning them, it is still not too late for this tree.

Samples received/Site visits

Fall River County, Elm sawfly in Siberian elms

Many of the new leaves on this Siberian elm (*Ulmus pumila*) were covered with these small flies. Except they are not flies. These are the adults to the elm leafminer. (*Kaliofenuse ulmi* syn *Fenusa ulmi*).

These are dark fly-like insects that appear as elm leaves unfold. They are out during mid-day laying eggs along the midvein of the young leaves. These will hatch in about ten days. The very tiny caterpillars will feed within the leaves, hence the name leafminer.



The mines result in discolored blotches in the leaves. Infested leaves will wilt and then fall. The caterpillars crawl into the soil to form cocoons where they spend their time until the following spring.

The defoliation is rarely serious enough to harm the tree. This is just another insect – along with the elm leaf beetle and the elm flea weevil - that causes elms, especially Siberian elms to look tattered in the summer.

Minnehaha County, Stem girdling roots on a Norway maple

This was a stop to look at a 25-year-old Norway maple (*Acer plantanoides*) that had started to die back a year or two ago. Most of the canopy is dead this spring. There are also some vertical cracks and loose bark near the base of the trunk.

The maple is in a near-perfect lawn that makes you suspect herbicide. But the owners say they do not use “weed and feed” products and a nearby maple looked fine. Herbicide is not likely to be a factor.

The problem is stem-girdling roots. The clue was that the trunk was flat on three quarters of its diameter at the base. There was only one flare root at the base of the tree. The trunk was restricted.

A little shoveling around the base revealed a root that was circling the trunk, it was embedding into the trunk. This constriction was cutting off the movement of food produced by the leaves from reaching the roots.



The problem began with planting when the circling roots were not removed. Eventually – and it often takes a decade or two – the trunk and root grew into one another. This is one of the most missed reasons for a tree’s sudden death.

The problem of stem girdling roots is most seen in maples and lindens. When the trees are removed from the container at planting any circling roots need to be pruned back,

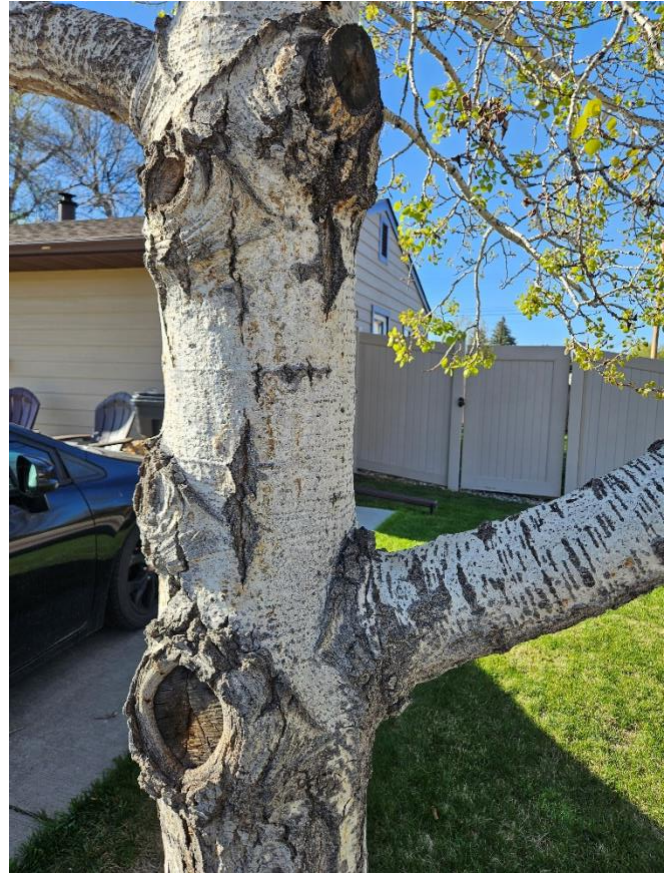
Pennington County, Canker on aspen

This stop was to look at a quaking aspen (*Populus tremuloides*) that was declining. The problem is cytospora canker (*Cytospora chrysosperma*). The cankers are also known as bleeding cankers as a yellow-orange stain will stand out against the creamy white bark of the tree.

This canker disease is a weak pathogen. The spores germinate in open wounds on the trunks such as those created by sunscald, fire, or mechanical injury. Once the fungus begins to grow, it will spread to infect the living sapwood surrounding the wound. This can eventually girdle the infected branch or trunk which results in dieback and decline.

Since the disease infects wounds, removing any dying and damaged branches will help reduce the infection. Also keeping urban aspen healthy by watering and

mulching will help prevent an infection from becoming established.



Pennington County, Spruce bud scale

The visit was to look at a Colorado spruce (*Picea pungens*) that was thinning because of needle loss. Many of the thinning shoots had a sooty appearance to the needles that were still attached.

The reason for the soot was an exceedingly small insect, the smaller spruce bud scale (*Physokermes hemicryphus*). This insect, as the name implies, resembles a bud so is easily overlooked. The reddish brown, 1/8-inch globose adult females are at the nodes of the branches.



These are sessile – they do not move. Instead, they settle down after the winter (120 GDD), swell, and darken. Eggs develop beneath their shell. The eggs will hatch at about 800 GDD. The mobile young are called crawlers. They move out to the needles to feed until fall when they return to the shoots.

Spruce bud scales pierce the plant tissue and suck out the sap. A byproduct of this feeding is honeydew, a sugary substance the insect excretes. This leaves a sticky film on the needles which becomes colonized by a powdery black mold.

The tree can be treated with an insecticide after the eggs hatch. This is a few weeks away. It will be covered in the “Treatments to Begin Now” section of the *Pest Alert* at the appropriate time.