South Dakota State University Extension

# Tree Pest Alert

April 1, 2026 Volume 24, Number 7

## 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 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



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

## Plant development for the growing season

This yo-yo weather must end! We go from warm sunny days to blizzards and back within a few days. We saw temperature swings of 50°F or more during the past week!

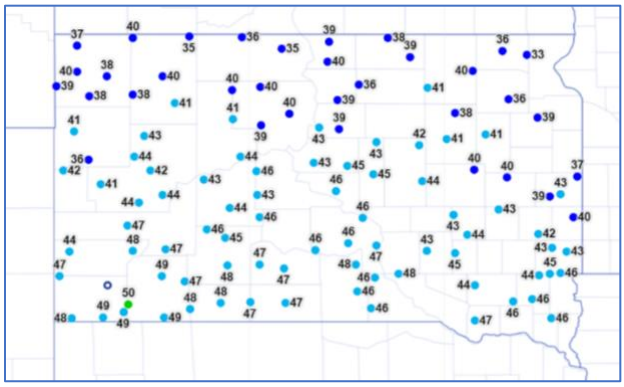
This is confusing to us, as much as it is for our plants. The plant development has been a series of starts and stopls through March. Many plants had buds that began expanding but stopped due to the freezing weather. Forsythias had partially open flower buds for the past week. They finally bloomed in Brookings during the past couple of days (in the snow).

Here is the accumulation of GDD for communities around the state. We gained about another 40 to 50 GDDS during the past week.

| | |
|---|---|
| Aberdeen | 74 |
| Beresford | 231 |
| Chamberlain | 278 |
| Rapid City | 270 |
| Sioux Falls | 193 |

**Soil temperatures**

The soil temperatures at a 4-inch depth are slow to respond to the weather changes. They are still sitting in the low 40s in the southern and western part of the state. I know everyone is eager to start planting bare-root trees and shrubs, but the soil is still too cold. We need warm soil for roots to grow and absorb water, a prerequisite for shoot and leaf expansion. We also need soil moisture – and that is lacking.

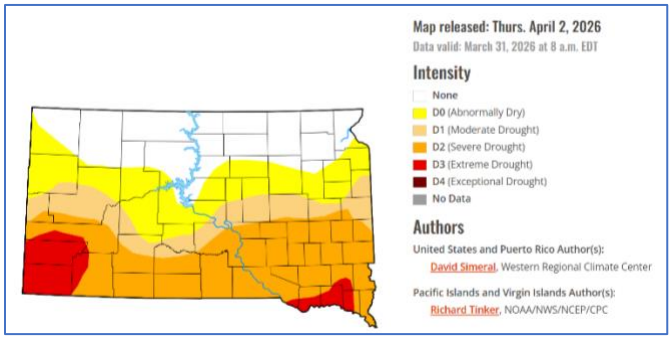


**Drought monitoring**

The drought-free region of the state continues to shrink. A little more than 25 percent of the state, the northern quarter, is drought-free. About 35 percent of the state – a ribbon running through the middle - is classified as “Abnormally Dry” or “Moderate Drought.”

The southern part of the state, about 40%, is classified as “Severe Drought” or “Extreme Drought.” These same counties were in a drought for much of last year. We need some spring rain.

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




## Treatments to Start Soon (or Now)

### *Apple scab*

Apple and crabapple buds will soon begin to swell, so time to begin fungicide treatments. The first application of fungicide is applied as the buds begin to open.

The most common fungicides used for preventative treatments of apple scab have captan (see note on Captan in this issue) or myclobutanil (Spectracide Immunox is a common brand) listed as the active ingredient. If the apple scab treatment is for an ornamental crabapple - one in which the fruit will not be harvested – chlorothalonil may also be used.

Fungicide applications are made about 7 to 10 days apart from the green tip stage until after petal fall. The weather usually turns a little drier by then; a 10-to-14-day interval can be used until the end of June.

### *Pine bark beetle sprays need to be done soon*

The Black Hills have been very dry this spring. Pine engraver beetles, *Ips pini*, will take full advantage of these moisture-stressed trees. The first generation of these beetles will be flying very soon. Any protective sprays need to be put on before they fly.

These bark beetles are content to attack down trees and fresh slash piles but during drought they can move to live trees. There are also a lot of snapped trees that the population can expand in this spring before moving to live trees. The attacks, while often not as deadly as its larger cousin the mountain pine beetle (*Dendroctonus ponderosae*), can still cause branch dieback and even death of infested trees. Fortunately, droughts do not last long, a few years or so, and once the rains return the beetles move back to downed trees and slash.

But pines will be vulnerable to engraver beetles this year. High value trees need to be sprayed with sufficient pressure so that the entire canopy, trunk, and branches, are covered with pesticide. This is a task best left to commercial spray companies that have the equipment and experience to do the job right.

There are many local spray companies in the Black Hills that know how to treat pines, and many started treating them in March (the pesticide will last on the bark all season). You need to be on their list now (if not already!)

### *Zimmerman pine moth*

The larvae begin moving from the winter webbing around 100 GDD, so activity has started in the southern half of the state. You can find the tiny white resin mass where the young larvae are beginning to burrow into the wood. It is time to begin treatments in these areas.

The most common treatment is an application of an insecticide containing permethrin and labelled for control of this insect. The application must coat the trunk, not just fog the needles. This will kill the overwinter larvae crawling on the bark before they burrow into the tree.

## Timely Topics

### *Emerald ash borer update*

We continue to monitor larval development in ash trees. The warm air temperatures take a while to permeate into the sapwood where the larvae are curled. The trunks are also a good insulator, so the interiors do not cool down during our brief snowy periods.

We are starting to see some development in the larvae. The larvae are beginning to straighten out and shrink a bit. This usually begins at about the same time that

forsythia is in full bloom. These larvae are on the south sides of the trees where it warms up a little earlier.

This change is only occurring in the southern part of the state – Dakota Dunes. I do not expect to see these changes at Milbank for several weeks. Once the larvae straighten, they will transition into the pupal stage. This stage will take about three weeks before emergence begins.

More information on EAB lifecycles is available at:

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

## *Captan fungicide discontinued*

The fungicide Captan is frequently mentioned in the *Pest Alert* and numerous other extension publications for managing fruit diseases. It has been a popular fungicide for decades but that is ending. Captan has become another pesticide that is being phased out of the homeowner market.

The manufacturers of many Captan products have discontinued the sale of this product to the public (commercial products are available). There may be some out on the store shelves this spring but expect to find fewer fungicides containing Captan at stores.

The replacement fungicides available to the public contain the active ingredients pyraclostrobin and boscalid (sold together in Bonide Fruit Tree and Plant Guard). These are wide spectrum fungicides that are labeled fruit crops. They have translaminar properties, so they are absorbed into the leaves. This means that they do not wash off as quickly as Captan. They are not absorbed into the fruit nor are they systemic.

## *Maple sap run was short in southern South Dakota*

The up and down weather also caused havoc with the maple sap season. The ideal conditions for sap flow are sunny days in the mid-40s and nights in the upper 20s, along with moist soil. The spring sap run can be up to three weeks if these conditions persist.

That was not the case for 2026. We saw warm temperature in mid-February climb to the 50s and 60s, along with another burst of heat (80s!) in mid-March. Some syrup producers saw a noticeably short and sporadic sap run this year.

## *Maple tapping workshop in Sica Hollow State Park on April 18*


The weather has been more stable in northeastern South Dakota – they have been staying cold! The maple forests in Sica Hollow are still blanketed in snow. This means the maple sap has yet to flow.

But spring will be coming to this area soon. The moist soil and cool spring might make for a great sap season. There will be a maple tapping workshop at Sica Hollow State Park on Saturday, April 18 from 11 am to 2 pm. There will be demonstrations of the tube system for

collecting saps. More details to follow in the next *Pest Alert* but mark your calendar!

## E-samples

### *Winterburn on arborvitae*

This is the first of many pictures (next page) I will receive over the next few weeks. There are patches of brown and dry foliage throughout the globe arborvitae. The owner says the twigs are still soft and flexible.

These are the common symptoms of winter desiccation injury also known as winterburn. The evergreens have lost moisture from their needles during the warm to hot late winter weather. This moisture could not be replaced as the soil was still cold and dry.

While the twigs are still alive, I expect to see much of the browning foliage shed this spring. The best that can be done is water as needed and evaluate the plant again in June to decide whether to remove or keep.

## Samples received/Site visits

### *Beadle County, Bark stripped from Siberian elms*

This was a stop to look at some trees in a windbreak that were stripped of their bark “almost overnight” according to the landowner. The culprit was squirrels. The distinct parallel rows of teeth marks are the clue. Siberian elm is one of squirrel’s favorite winter foods and they will strip bark off branches to access the tasty (by squirrel standards) inner bark. They commonly feed on only certain trees in a row, randomly, but more likely these are trees that just a little “taster” than the surrounding ones.

The other preferred trees are basswood, hackberry, and maple. There is not much that can be done to discourage squirrels from doing this other than placing a metal band round the trunk, as it done to prevent squirrel access to bird feeders and nest boxes.

### *McCook County, Galls on eastern redcedar*

Cedar apple rust disease, as with many rust diseases, must alternate between two different hosts to survive hence the name cedar and apple. Cedar-apple rust alternates between apples (and crabapples) and several species of junipers (though not the true cedars such as American arborvitae *Thuja occidentalis*).

The fungus appears now as a hardened, brownish gall on the twigs and branches of the juniper. The dimples on these galls will give rise to bright orange telia horns in a month or so. The horns release the spores that infect the apple or crabapple leaves. Once the horns release their spores they shrivel and turn brown and the galls become deep brown, brittle, and hard.

Later this growing season, the cycle begins again when spores are released from infected apple and crabapple leaves. These infect the junipers and result in the formation of galls the following year.

### *Minnehaha County, Pine needle scale on mugo pine*

The white bumps on these pine needles are the adult female pine needle scales. These are about 1/8-inch

long with a tear-drop shaped, light gray shell. These are dead now, but beneath the shells are eggs.

These eggs will hatch beginning around 300 GDD. They are pinkish red, turning a tannish brown as they settle and begin to feed on the new needles that will form this spring. The nymphs feed with their piecing-sucking mouthparts by sucking the contents of ruptured cells.

Pine needle scale is a widespread problem on Scotch and mugo pine but also found on other pines. Pine needle scale also infests spruce and occasionally Douglas-fir, junipers, and yews.

Treatments start at about 350 to 400 GDD as the crawlers are beginning to settle. 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!

The other option is a foliage spray, lower trunk spray, or soil drench with an insecticide containing dinotefuran as the active ingredient and labeled for scale.