South Dakota State University Extension

Tree Pest Alert

April 2, 2025 Volume 23, Number 7

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 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

The weather is slowly warming but in increments – warm then cold then warm again. This is slowing pushing the growing degree day (GDD-base 50) accumulation upward. This is our current accumulation for communities around the state. We are in the triple digits everywhere but the frozen north of Aberdeen.

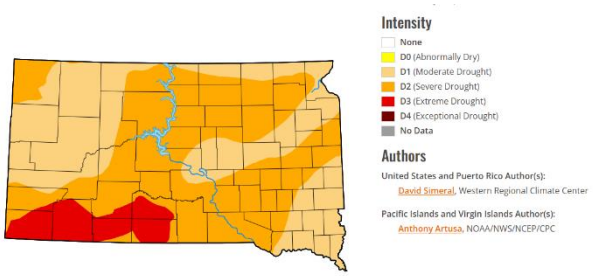
Aberdeen	85
Beresford	166
Chamberlain	183
Rapid City	131
Sioux Falls	141

One of our first flowering shrubs is Corneliancherry (*Cornus mas*). The flower buds were just beginning to open a couple of weeks ago. Flowers open at about 75 to 100 GDD so now the shrubs are in bloom.

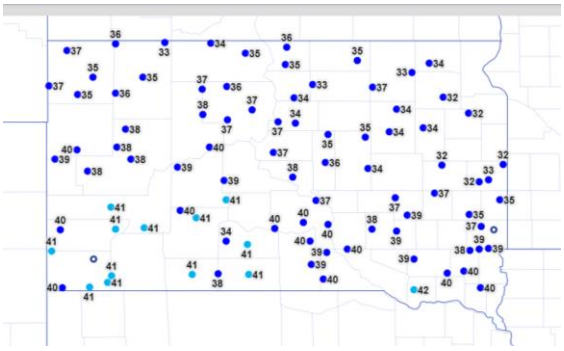
The yellow stamens and sepals are the showy parts of the flowers, they lack petals. No tender petals mean no sensitivity to the cold. Night below freezing does not affect the display.

Drought monitor

The moisture we received during the past two weeks as snow and rain is more than we typically experience in late March but not enough to overcome the deficit. About half the state is classified as "Moderate Drought." The rest of the state is identified as "Severe Drought" with the southwestern counties as "Extreme Drought." Current map from US Drought Monitor is on the following page.



Soil temperatures are now in the 30s – still too soon to think about bare-root tree planting



The soil temperature has increased across the state. The entire state above 32ºF at 4-inch depth in bare-soil. Some sites are at 40ºF. We need at least 45ºF to start tree planting and 50ºF is preferred.

We are still more than three to four weeks away from tree planting in much of the state. A key to successful establishment of newly planted bare-root seedlings is warm soils so the roots will grow and begin absorbing water. Cool air temperatures are also necessary to delay bud break until after the roots are functional.

Planting before soils warm enough to support root growth means the bare-root tree seedlings will suffer desiccation injury and high mortality.

Treatments to Begin Soon

Dispose of any old fruit on or beneath your apple trees

The apples that did not get picked last fall need to be cleaned from the tree or ground. This fruit can serve as an overwinter site for two pathogens – bitter rot and black rot. The fallen fruit can also be a winter home for apple maggot and codling moth larvae though these two insects usually overwinter in the soil.

Apple scab

Apple and crabapple buds will soon begin to swell, so almost 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 or Myclobutanil 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 and a 10-to-14-day interval can be used until the end of June when applications stop.

Spruce needleminer

The larvae will soon begin moving from their webbed nest to resume their feeding of the needles. A spray of high-pressure water right now may knock them off the tree though be sure to rake up the fallen needles and larvae after the water spray. The other approach is pesticide treatments to kill the larvae as they begin moving out onto the foliage. The most common insecticides for this purpose contain Carbaryl or Permethrin as the active ingredient and are labelled for control of this insect.

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. However, be aware the tree will appear a little more open afterwards!

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. Now is the 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

The insect is still curled in its overwinter chamber within the sapwood. I have not seen these larvae shrink and straighten as pre-pupae, but this should begin within the next few weeks. The pupal stage is formed in April and May. Adults should be emerging at the end of May.

Snow loading on evergreen shrubs

Early spring is when we experience heavy wet snow. These are the “heart attack” snows. It is a lot of work to shovel or push this snow from driveways and walks.

The heavy snow is also tough on our evergreen shrubs, especially arborvitae (*Thuja occidentalis*). These shrubs form multiple stems that easily bend with a snow load. Fortunately, they usually bend back once the snow melts. Beating or shoveling the snow off the foliage may cause more damage.

Volcano mulching

The mulch around trees will gray with time. Many people like to freshen the mulch to improve their appearance. The problem is that tree owners add too much mulch creating a mound around the trunk – the volcano.

Piling mulch on the trunk is harmful to the young tree. Bark is the dry, mostly dead, tissue that protects the trunk from pathogens and pests. Piling mulch up on the trunk, even six inches, can keep the bark moist leading to decay.

Deep mulch can also contribute to a layer of roots growing in the mulch, above the soil. This sometimes results in roots pressing against the trunk and becoming stem-girdling roots. These girdling roots can disrupt movement of sugars and water in the trunk which leads to decline and death.

The mulch layer should be maintained at about a four-inch depth with an open area surrounding the trunk. If the aged mulch appearance is no longer attractive, a light layer can be added – as long at the 4-inch depth is maintained – and incorporated into the existing layers of mulch.

E-samples

Possible nectria canker on honeylocust

Honeylocust with symptoms of nectria canker (Thyronectria canker) are common e-samples and questions. The classic symptom is dead, sunken wood with large ridges of woundwood at the margins.

The canker disease is caused by a weak pathogen, one that requires a stressed host. The continual drought has left many honeylocust in towns and windbreaks stressed and vulnerable to infection. The only treatment is to water to improve tree health and remove dying branches. If the cankers have enlarged to extend beyond the old pruning wound – as in this picture – removal is the best option.

Sapsucker injury to elms

Elms, alders, apples, and pines are the favorite trees for sapsuckers to drill (peck) into the bark. The birds are searching for sap and bug trapped in the sap oozing from the drills. They drill parallel rows of ¼-inch holes around the trunks of a tree as they feed.

The damage is more aesthetic than a health threat though the holes can serve as an infection site for pathogens. The birds have their favorites and will return to some trees while ignoring the ones around them. They will return to these same trees every year.

There are not too many means of discouraging sapsuckers from their favorite tree. Also, if they are kept from one of these preferred trees, the birds often find a new favorite tree nearby. One of the simplest means of discouraging the birds is wrap burlap or plastic mesh around the tree. The burlap or plastic mesh should cover all the rows of drill holes and extend a few inches wider.

Samples received/Site visits

Codington County, Bronzing Scotch pines

These were samples from Scotch pines (*Pinus sylvestris*) with bronzing needles and some dieback. There was another Scotch pine on the property that looked healthy.

The first thought is pine wilt disease since this is becoming a common disease problem in the Watertown area. But the sample shoots have live needles mixed in with a few dead ones. The shoots also were still very flexible – not a common symptom with pine wilt.

The needles were covered with scales, but not the larger teardrop shaped female adult scales we commonly see with pine needles scale (*Chionaspis pinifoliae*). These were the much smaller ones from the second generation. They are a little harder to see with the eye but are easy to see with a microscope.

Treatment is an insecticide containing dinotefuran as the active ingredient and labeled for scales. These can be highly effective at killing new crawlers, but timing is critical. The application should be made when common lilac is just beginning to form flower buds, about 290 GDD.

Codington County, Black knot on common chokecherry

This was a young – about ten feet tall – common chokecherry (*Prunus virginiana*) with a few blackened galls encircling shoots. These are the galls formed by black knot (*Apriosporina morbosa*), a fungal disease. The disease is common on chokecherry and bird cherry (Prunus padus). It can occasionally be found on American plum (*Prunus americana*). I rarely see the disease on Amur chokecherry (*Prunus maackia*).

The shoot infection produces elongated woody swelling that may reach eight inches long and more than an inch thick. The galls (knots begin as a slight swelling that is light green. The second year of the infection these galls thicken and turn black and rough. These second-year infections often have a white coating which is another fungus (*Trichothecium roseum*).

The galls can be pruned out of a tree to reduce infection. This sounds good but rarely is successful. While it is easy to see the second-year large black knots and remove these, it is difficult to find the first-year infections, so the knots come right back.

Not every cherry is equally susceptible to black knot. It is common to walk a chokecherry row in a windbreak that has only a few infected trees. These susceptible trees will just become infected again. The best approach is just basal pruning – removal – of heavily infested trees.

If there are only a few galls on a tree, prune these out in late winter/early spring – now – and dispose of the galls so they do not release spores. Also try to find the first-year infections and prune these out as well.

Lawrence County, Declining spruce and scales

The sample was from a white spruce (*Picea glauca*) that was dropping needles. The bag was even filled with detached needles. The needles were being cast from the previous year's growth as well as the two-year-old foliage.

The problem was the same as the Scotch pines in Codington County. The cast needles were covered with small scales while the two-year old needles had teardrop shaped scales. See the Codington County sample for more information.

Union County, Banded ash borer in old ash trees

We were surveying ash trees for emerald ash borers in a riparian forest at the southeastern tip of the county. You are looking north and even a little west into Iowa from this spot. While we were able to find some prepupae of the emerald ash borers in their overwinter chamber, they are not the only borers, nor the most numerous.

The banded ash borer (*Neoclytus caprea*) is a native wood borer. It is one of the roundhead borers, so the body is round. Emerald ash borer is a flatheaded borer and the body (and head) is flat. They are close relatives, so the larvae are sometimes confused. The easiest separation is the body of the banded ash borer larva looks like the tubby and segmented Michelin man.

The female banded ash borer attacks stressed trees – ones that are dying. These trees may be dying from attacks by the emerald ash borer, or the emerald ash borer may be just attracted to the dying trees. Either way it is common to find the two insects in the same tree.

Banded ash borer is one of the first insects to emerge as adults in the spring, but you can still find some larvae in the wood (one is peeking out of the hole) as well as pupae. The galleries for the banded ash borer can be found just beneath the bark – as do emerald ash borers – but will cut deeper into the wood.