South Dakota State University Extension

Tree Pest Alert

August 6, 2025 Volume 23, Number 25

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 temperatures were mild during much of the week, high in the 70s and 80s though central South Dakotans still endured some 90s. This was a much-needed break from 100s the week before.

The GDD increased by another 150 or more during the past week. Here is the current GDD accumulation for communities across the state.

Aberdeen	1840
Beresford	2222
Chamberlain	2230
Rapid City	1800
Sioux Falls	2190

The fruit is ripening on many of our trees. Some are ripe enough to pick now. We are near the end of the month of *Canpasapa Wi*, the "moon of cherries blackening." The chokecherries are fully ripe now. The glossy black fruit is a favorite of birds.

It is not eaten right off the tree anymore. The name tells it all, the fruit can be astringent. There are too many other choices that are sweeter. But if you picked them dead-ripe and dipped in a bowl of sugar it was a summertime favorite of kids on a sweltering day.

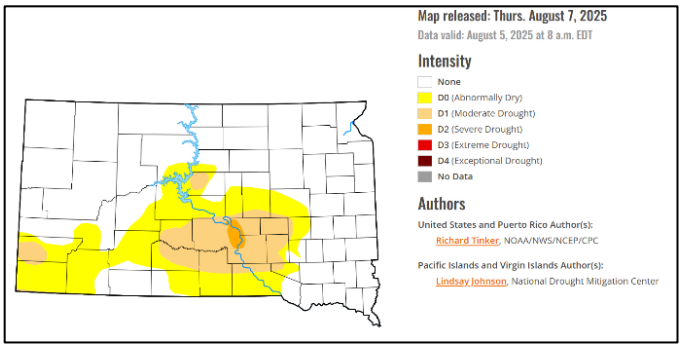
Drought monitoring

The rain has been continuing during the past week. Almost 70 percent of the state remains drought free. Another 20 percent of the state is classified as 'Abnormally Dry.' About 10 percent of South Dakota is classified as 'Moderate Drought' and less than 1 percent of the state, a small stretch of the river between Lyman

and Buffalo-Brule Counties classified as ‘Severe Drought.’

This may slip back to drought for many counties by late August. The rain may be less and become more scattered for the next few weeks.

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



Treatments to Continue

Watering

Most of the state has been receiving adequate precipitation. But as we enter August, this is a reminder on watering trees, especially small conifers, during the next two months. If we do not receive an inch of rain during a week – which may begin to happen in much of the state - irrigation is recommended. Watering during late summer and early fall helps the trees prepare for winter and reduces winter desiccation injury.

Timely Topics

Emerald ash borer updates

Emerald ash borers (EABs) are mostly in their 3rd instar (molt). We can still find 2nd instars in Milbank where insect development is a little slower due to the cooler weather.

While adults are still out there, these are much fewer in numbers. It is unlikely, though possible, to find one of them walking on the trunk of a tree.

Finding Bigfoot

Emerald ash borer and Bigfoot have a few things in common. People have seen them, but no one has a good image or captured a specimen.

Each week I received calls from people that are certain they saw an emerald ash borer. Unfortunately, they do not have an adult beetle or a good picture. It always gets away or the picture (below) is out of focus.

The certainty of their identification is sometimes linked to one of the insect ID apps such as Obsidentify, Picture Insect and Seek iNaturalist. These apps vary in their ability to properly identify insects but are best used for common insects.

While it is difficult to grab the phone and get a picture before the adult emerald ash borer takes flight – try your best! Please send images as a text or email to my addresses listed under Samples.

Do not remove tree tubes too soon

I am receiving calls from producers that are removing tree tubes from their young windbreak trees. A widespread problem with tree tubes is that trees will sometimes fall over once the tubes are removed. Tree tubes protect from rabbit browsing and deer browsing and rubbing as well as mechanical injury from weed eaters. They also provide a ‘mini greenhouse’ that improves the growing environment for the young trees resulting in better survival and growth.

The downside is the rapid terminal growth comes at the expense of diameter growth. The protective tubes limit swaying in the wind, an important trigger for diameter growth, so the trees in the tubes do not develop the proper taper. If the tubes are removed after the tree just begins to grow above the top, the slender stem will often bend completely over as it cannot support the top.

The solution is to either remove the tube while the tree is still small and not peeking out above the tube (though this eliminates the protection) or leave it in the tube until the tree's trunk is almost filling it and the canopy is far above it. As the tree increases in height above the tube, the trunk will sway and develop the necessary taper. Trees often need another two to four years in the tube, after the canopy reaches above the tube top.

The worst time to remove the tube is just after the tree has branched out above the tube. These young branches are heavy since they now have room to expand but the trunk is still too slender to support it.

Tree tubes and winter injury

While tree tubes reduce tree mortality and increase growth, they can also contribute to winter injury. Tree tubes function as 'mini greenhouse' trapping heat and accelerating growth. The challenge is the growth can continue late into the year which delays acclimation to frigid winter temperatures.

Tree tubes, especially the unvented ones, have been a contributing factor in tree dieback and mortality. The trees did not harden off sufficiently before freezing weather (below 28ºF) started. During the winter, they were exposed to higher day temperatures and lower night temperatures than trees not in tubes. The combination of incomplete acclimatation and extremes in winter daily temperatures caused injury.

Tree species that exhibit sustained growth are most sensitive to this injury. These trees will continue to grow while conditions are favorable, and the conditions stay favorable too long in tubes. Common trees with sustained growth include birch (*Betula*), cottonwood (*Populus*), elm (*Ulmus*), hackberry (*Celtis*), and lindens (*Tilia*) (pictured above. Vented tubes, which reduce elevated temperatures, are necessary for these species.

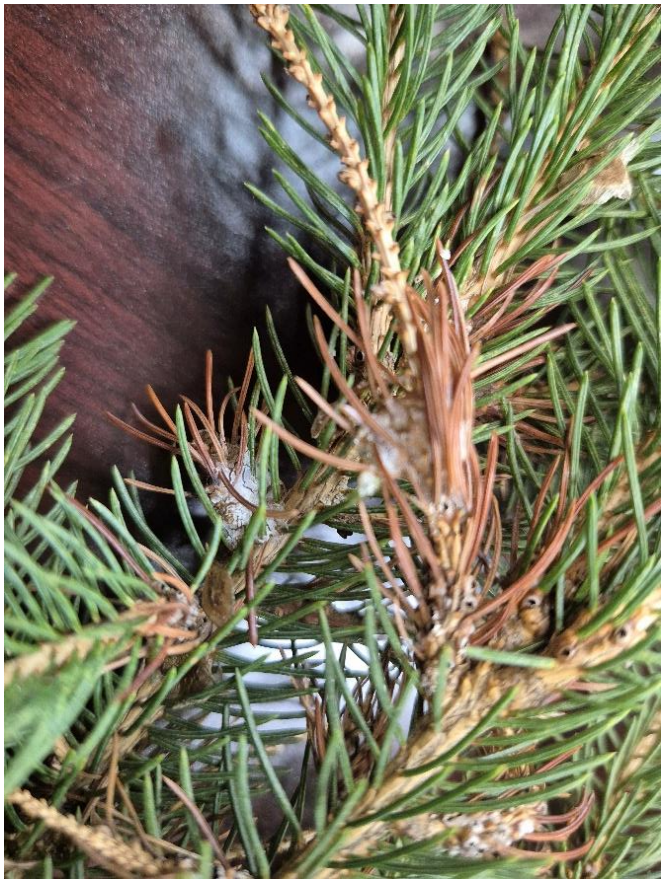
Tree species with preformed growth complete their shoot extension within 30 days or so even if conditions remain favorable. Common trees with preformed growth include cherry (*Prunus*), hickory (*Carya*), and oak (*Quercus*). While I recommend vented tubes for all species, these trees are not easily fooled by the greenhouse environment of a tree tube and shut down early enough to prepare for winter.

E-samples

Eastern spruce gall adelgids

This was a picture from Aberdeen of small, light-colored pineapple shaped galls at the base of the terminal shoots. This is the work of the eastern spruce gall adelgid (*Adelges abietis*).

Adelgids are small aphid-like insects that suck the sap from the base of the newly forming needles. As they suck the sap, the adelgids inject a toxin that causes the pineapple-shaped galls to develop around them. This serves as their home while they feed.



The nymphs are finished feeding and the galls are opening. The adelgids leave the galls as winged adults between 1,500 and 1,800 GDD, so most have left by now.

The galls are usually not numerous enough to require treatment. If a treatment is desired, then a horticultural oil spray is applied to the buds at about 200 GDD. This will kill the adult adelgid before they lay eggs.

Hackberry nipple gall

The elongated bumps on the lower surface of these hackberry leaves are due to feeding by the hackberry nipplegall maker (*Pachypsylla*), a small psyllid insect.

The adult psyllids, which resemble small cicadas, overwinter in the warty bark of the hackberry and once the new leaves appear migrate out to them and lay eggs. Once the eggs hatch, the young nymphs begin feeding and while doing so inject a substance into the leaf which stimulates the formation of a gall to enclose and protect the insect.

The nymphs hatch out from these galls as adults in late summer and either fly about often collecting on window screens and even plugging up the intakes on air conditioners before settling in for the winter to survive the winter. Caulking cracks around windows and doors and repairing holes in screens can reduce the number that enter the house though the adults, at 1/10-inch, can often squeeze through screen mech.

While the galls do detract from the appearance of the tree, think of them as zits on a teenager, they cause no significant injury to their host. Occasionally some heavily infested leaves will fall prematurely but generally the tree capability to manufacture food is not reduced by the formation of these galls. Hackberries also continue to produce new foliage as the season progresses. New leaves form after the nymphs have settled in. These new gall-free leaves hide the interior damaged leaves.

Pesticides containing Acephate or Carbaryl as active ingredients can be applied just as the spring leaves are expanding; one application often reduces the extent of damage but will not eliminate the problem.

Samples received/Site visits

Davison County, Leaf spot/defoliation on lilac windbreaks

Leaf spot diseases, pseudocercospora and septoria among others, on lilacs are causing increasing concern in eastern South Dakota. These leaf spot diseases present as brown spots starting at the margins and progressing to blotches and eventually defoliation.

Most of the calls and visits are for lilacs used in windbreaks. I have looked at some windbreaks where every lilac in a row is bare except for a few leaves at the

tips. These diseases require warm, humid conditions to flourish, and it has been wet and humid this year.

These leaf spot diseases are not a threat to otherwise healthy shrubs. Lilacs can withstand a year of defoliation, so no control is always necessary. If the lilacs were affected last year and again this year, a fungicide application of Chlorothalonil (labeled for this use) can be made just as the leaves are opening next spring to reduce the severity of the disease.

Lawrence County, Herbicide injury to ponderosa pines

This was a visit to inspect native pines in a grassland. Some of the trees were showing signs of needle scorching and dead or deformed shoot tips. These are common signs associated with herbicide applications.

Herbicide was applied for weed control in the grasses with the last application made in the fall of 2024. Samples were collected from the damaged trees and analyzed for growth-regulator herbicides – the herbicides used for the treatment.

The results showed about 13 ppb of 2,4-D and 0.5 ppb of dicamba. While these are low concentrations of residue, both these chemicals can degrade quickly in plant tissue, so more was there when the injury occurred. This is one reason for the common requirement that samples be collected within 30 days of application.

The value of testing is more a presence or absence of a herbicide. Many herbicides degrade very quickly. We cannot trace back to determine the precise amount that was absorbed by the tree at the time of application. Even if we could, there is little data for establishing a threshold for injury. We do not know if it takes 5 ppb or 50 ppb of residue to cause injury.

The one available chart gives a threshold of 18 ppm of 2,4-D and 3 ppb of dicamba to cause injury. But the samples were taken in the spring and the last application was last fall. Since we use a presence or absence rather than a ppb, I still believe that herbicides are responsible for the damage. There were no symptoms or signs associated with any common insects, mites or pathogens.

Minnehaha County, Leafroller in birchleaf spirea

Birchleaf spirea (*Spiraea betulifolia*) can be an attractive shrub. It has white flowers in late spring – the last of our spring flowering spireas - followed by autumn foliage of gold, red, and purple. However, it does seem to have one pest problem that detracts from its otherwise near perfect appearance – the fruittree leafroller (*Archips argyospila*). I have seen entire plantings where the terminals were curled like ice cream cones.

The fruittree leafroller infests a wide range of hosts from ash to willow but seems to like birchleaf spirea (as well as apple trees). The insect gets its name from the habit of the larvae feeding inside a protective shelter of rolled up leaves that are webbed together.

If you peeled the webbing open a few weeks ago you would have found a small, about one-half-inch greenish larvae with brown heads. The larvae now have become pupae snug inside the silk tied curled leaves. They will become adult moths in another week. The adults are a small rusty brown moth.

These moths will lay gray-brown eggs in overlapping rows on the shoot tips. These eggs will hatch next spring at about 300 GDD, just after the leaves open. Insecticide containing Carbaryl or Malathion and labelled for this use can be sprayed in another week to kill the adults as they lay eggs.

Another approach is to spray the plant with an insecticide containing Spinosad just as you start seeing the larvae. However, do not spray if the plants are already in bloom as the insecticide can kill pollinators that visit the late spring flowers.

Stanley County, Gummosis on Schubert chokecherry

The question was whether these bubbles of a gum-like substance were a concern to their Schubert chokecherry (*Prunus virginiana* 'Schubert'). The exudation of this gummy, amber-colored substance is called gummosis. While it can be associated with borers, the causes are likely to be pathogens.

Bacterial canker (*Psudomonas syringae* pv *syringae*) which forms beneath the bark often presents with gummosis (and spots or holes in the leaves). Cytospora canker (*Cytospora*) which results in sunken cankers along the stem of the host can also present with gummosis on chokecherry trees. These are both weak pathogens that cause decline in trees already stressed by a predisposing factor, frequently drought.

This tree shows serious decline and stability. It has developed a lean – towards the house, of course. The best option is removal.

Stanley County, Locust borer in Purple Robe locust

This is a Purple Robe locust (*Robinia pseudoacacia* 'Purple Robe') that has been attacked by the locust borer (*Megacyllene robiniae*). The large holes the adult beetles make as they leave the tree are found all around the trunk. This cultivar is so susceptible to the locust borer that most do not even reach this size.

The long hanging racemes of purple flowers in late spring combined with the tree's ability to grow on poor sites have led to its popularity. The susceptibility to the locust borer has been its downfall. Unless Purple Robe locust trees are sprayed each year, do not expect them to live more than five years.

Locust borers begin emerging at about 2,300 GDD and continue to 2,800 GDD. The trunks – to 5 or 10 feet - can be sprayed at about 2,300 GDD with an insecticide to kill the adult borers as they lay eggs. These bark sprays contain Bifenthrin, Carbaryl, or Permethrin as the active ingredient and must be labeled for control of this insect. Most injectable products are ineffective against this borer.

Stanley County, Plum pockets

These shriveled, blackened plums crunch when you squeeze them – not very appetizing. These are plum pockets. The plum fruit, rather than developing a thin, firm skin that holds a sweet and juicy flesh around a single large seed, forms a thick spongy skin and the flesh and seed disappear.

By August, their spongy skin has shrunk and hardened This is a fungal disease *Taphrina communis*. At this time, the best management is to remove and destroy the infected fruit so it cannot produce spores that will infect next year's fruit. Next spring, any tree that was infected this year can be treated with a single application of Bordeaux mix (copper sulfate) just before the buds open. This treatment will not eliminate the problem, but it will significantly reduce the number of infected fruits.