



**SOUTH DAKOTA STATE
UNIVERSITY EXTENSION**

Tree Pest Alert



July 22, 2026

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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

This past week's weather was hot as daytime temperatures peaked into the 90s. The warm temperatures pushed the growing degree days (GDD-base 50). We accumulated another 160 or more GDDs during the past week. Here are the total GDDs for communities across the state.

Aberdeen	1622
Beresford	2021
Chamberlain	1997
Rapid City	1771
Sioux Falls	1976

We are continuing to see fruit ripening in our warm summer. Catalpa (*Catalpa speciosa*) pod-like capsules are already hanging from the trees. The long, slender capsules are the reason for the common names' cigar tree and green bean tree.



The capsule when fully ripened, contain more than a hundred flat winged seeds. The seeds must experience a cold winter before they can germinate so do not pick them yet.

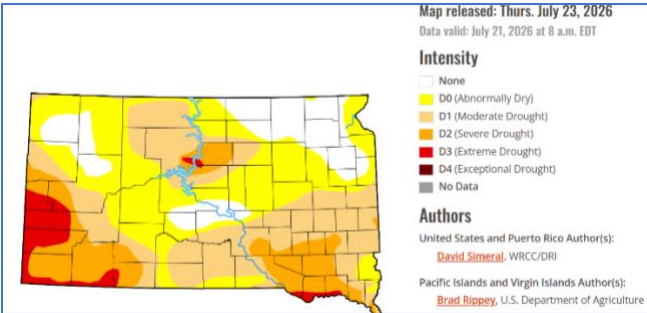
Drought monitor

We are losing ground again. We dropped from 18% of the state drought free to 15%. Last year at this time

about 60% of the state was drought-free. Here is a comparison of drought intensity by percent area of the state for the third week in July last year and this year.

Intensity	2025	2026
Drought-free	62%	15%
Abnormally dry	24%	33%
Moderate drought	13%	31%
Severe drought	0%	16%
Extreme drought	0%	5%

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



Treatments to Start Now

Water your trees!

Water your trees! As a reminder, fertilizing is not a replacement for watering. Fertilizing trees during drought is not beneficial and can even be harmful.

First, the trees are not putting out much growth this year, so their development and health are not limited by nutrient deficiencies. Second, absorbing elements requires the tree to expend energy. A drought stressed one has little energy to spare. Finally, newly planted tree seedlings can be injured by fertilizer salts in dry soil.

But drought is not the only issue. See the Lawrence County site visit in this issue for heat injury.

Timely Topics

Emerald ash borer update

We are continuing to monitor the larval development of emerald ash borer (EAB). The larvae are mostly in their 1st and 2nd instar, but we are beginning to see a few 3rd instar larvae. This third stage is the one where the insect is large enough to severely disrupt the trunk movement of sugars from the leaves and water from the roots.

Canopy presentation for ash tree infested by emerald ash borer

The calls keep coming in about infested trees. Callers notice a declining ash and assume the decline is due to this insect.

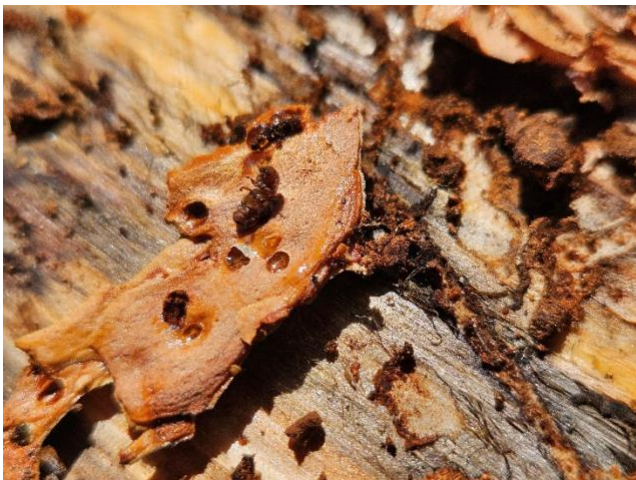
There is a common canopy pattern to ash trees infested by EAB. The trees will show decline in their upper canopies, so these branches have fewer leaves; these leaves are smaller, and often lighter green than normal.



Just beneath these sparse tips there will be a gap, an opening, through the canopy. Below that, at the base of the canopy, there will be a thick cluster of long shoots with large, deep green leaves. These are the watersprouts that are a response to the disruption of sugars movement in the tree.

Pine engraver beetle update

The second-generation adult pine engraver beetles (*Ips pini*) are burrowing into green slash piles and recently fallen branches. This small cousin to the mountain pine beetle lacks the ability to successfully attack vigorous pines.



Engraver beetles must be content to attack declining trees and green down branches – any green material that does not produce sufficient sap to impede their burrowing. It must still be green, however, as the larvae require living or recently dead inner bark to develop.

This year the beetles are content to stay in fallen branches and slash piles. The branches and trees that

fell during the winter windstorm are still green beneath the bark. These past two weeks fresh piles of brown frass indicate where the new adults are burrowing in for the next generation.

While we have not had abundant rain in the Black Hills, they have been sufficient to keep most of the pines from becoming attractive hosts to the beetles. The trees have enough sap flow that they can repel engraver beetle attack.

E-samples

Drought-stressed leaves turning red

I have been receiving pictures of trees with leaves that are turning yellow or red. Some trees look like they are going into autumn. Unfortunately, this is not a sign of fall, but stress.

Severe drought can also result in premature fall color. Premature fall color and leaf drop are a result of leaf desiccation due to failure to absorb sufficient water from the soil or excess heat in the leaf tissue.



Chlorophyll production slows so the yellow pigments always present in the leaf are unmasked. The drought-stressed trees will also produce protective pigments like anthocyanins. Red fall color now is not a sign of an early autumn but a summer drought – water!

Hackberry nipple gall

The elongated bumps that cover this hackberry leaf 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 this fall. Adult psyllids, however, are very tiny, about 1/10-inch wide. They can often squeeze through screen mesh.

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 – such as this one - 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 into the old ones. These new gall-free leaves hide the interior damaged leaves.

Hawthorn mealybug

The small, fuzzy, white insects on the twig of this hawthorn (*Crataegus*) are hawthorn mealybugs (*Phenacoccus dearnessi*). These insects are about 1/8-inch long, round and covered with a white, waxy layer.

They feed on the twigs and small branches of hawthorns but can sometimes be found on serviceberries

(*Amelanchier*) and mountainash (*Sorbus*). They also feed on the foliage during midsummer. Mealybugs are sucking insects. As they feed from twigs and leaves, they excrete a sticky fluid called honeydew.



Infestations are rarely dense enough to warrant treatment. If treatments are necessary, Malathion or insecticidal soap can be applied in the spring, but it is difficult for these insecticides to penetrate the waxy covering.

Samples received/Site visits

Brookings County, Powdery mildew on Chinese lilac

Powdery mildew (*Erysiphe syringae*) is showing up again this summer as it always does. This is an unusual disease in that mildew does not require wet weather for infection. What it needs is hot, humid weather and we have had plenty of that.

The disease is characterized by a powdery, almost cloudy, appearance to the leaf surface. Sometimes you can find small black dots in this powder, and these are the cleistothecium (fruiting structures) for the fungi.

There are many different species of powdery mildew fungi, almost one hundred, and they cover several different genera of host plants. These fungi are very specialized and usually a powdery mildew species is limited to a specific plant genus. The one that infects

lilacs is different from the ones that infect ninebarks or snowberries.

The simplest management of powdery mildew is to alter the growing environment, making it less favorable for the development of the disease. This requires pruning to open planting beds to decrease night humidity and improve air flow. Fungicides that contain chlorothalonil or propiconazole may be used to manage the disease but are best applied before the problem appears.



There is also a difference in susceptibility among lilac species. Chinese lilac (*Syringa x chinensis*) is one of the most susceptible while Miss Kim lilac (*Syringa pubescens* subsp. *patula* 'Miss Kim') is one of the least. The Sensation common lilac (*Syringa vulgaris* 'Sensation') is also rarely affected by the disease.

Faulk County, Growth regulator herbicide drift on trumpet-creeper

This was a sample sent in of a trumpet-creeper vine (*Campsis radicans*). The leaflets are distorted with some cupping and strapping. These are common symptoms of exposure to a growth regulator herbicide such as 2,4-D or dicamba. These synthetic auxin chemicals affect the growing tips so the newest leaves will be more damaged than the older ones.



Lawrence County, Declining spruce – it is heat stress

It has been hot and dry across much of the state this summer. This has generated numerous “Why is my spruce dying” calls, text messages and visits. These are coming from across the state. The concerns are with Colorado (blue) spruce (*Picea pungens*) and white spruce (Black Hills) spruce (*Picea glauca*).

Spruces are ‘heat sensitive’ trees while most pines including Austrian (*Pinus nigra*), ponderosa (*Pinus ponderosa*) and Scotch pine (*Pinus sylvestris*) are ‘heat tolerant.’ The primary reason for the poor appearance of spruce this summer is the heat.



The drought is also a factor. Trees, including spruce, cool themselves through transpiration. This evaporative cooling keeps the needle temperatures in an acceptable range. Drought can reduce water absorption from the soil which in turn reduces transpiration and cooling.

The loss or reduction in the evaporative cooling causing the needle surface temperatures to increase above that of the ambient air temperature. Heat injury occurs to the needles which reduces photosynthesis.

Needles also serve as food storage organs so not only does the heat reduce food manufacturing it also affects food reserves. The trees begin to decline. Needles become discolored, some are shed.

Spruce performs best in climates with an annual mean temperature of 39° to 43°F. Among our larger communities only Aberdeen fits within this range. Pierre, Rapid City and Sioux Falls have an annual mean temperature between 46° and 48°F.

This is one reason we are experiencing a ‘sudden’ decline in spruce across much of the state. The heat is the primary factor while drought is a contributing factor. While white spruce is native to the Black Hills, it was commonly found only in cool canyons along streams.

The change in fire regimes during the past century has allowed white spruce to grow in sites that previously supported pine. White spruces on these hot, drier sites are vulnerable to heat stress. All windbreak spruces across the state are experiencing heat stress.

Meyer spruce (*Picea meyeri*) is more heat tolerant than either Colorado or white spruce. It grows slower, however, and experiences more deer browsing than the other two spruces.

Meade County, Fall webworm on chokecherry

One of the SDDANR interns and I came upon a chokecherry thicket with fall webworm (*Hyphantria cunea*) caterpillars. These caterpillars are almost done with their summer feeding. They are dropped to the ground to spin a cocoon in the leaf litter or in a bark crevasse at the base of a tree. They will rest in the cocoon until next spring where they emerge as a white moth.



Fall webworms form their nests on the tips of branches, not at the branch unions as the tent caterpillars do. The webworms do not leave the nests but continue to enlarge them as they feed. The nest can become so thick that infested trees look like they are laced with cotton-candy.

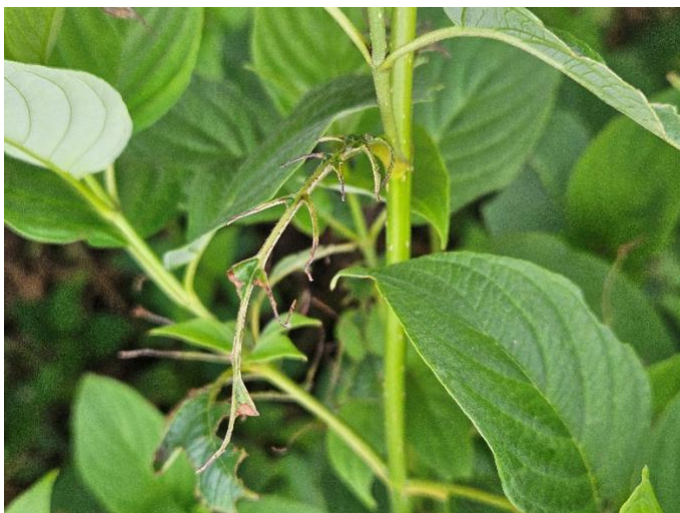
The nests can persist, so it is common to see them even into the following year. The old nests are tan to brown. The nests created this year are still white.

If you unwind one of the white nests, you might find a 1-inch long, hairy, green caterpillar or two still feeding along the leaves encased in the web.



Minnehaha County, Dogwood sawfly adult

This was a stop to look at redosier dogwoods (*Cornus sericea*) that had been defoliated. Foliage was reduced to lace as only the larger veins remained. The soft leaf tissue had been consumed by the larvae of the dogwood sawfly (*Macremphytus*). This insect was discussed in the July 24, 2026, issue of the *Pest Alert*.



The larvae are still feeding and there are more to come! They do not all appear at once, so it is possible to find larvae and adults during the summer. I was lucky to find one of the adults on the leaf of this dogwood. The slender wasp-like are about 1/2-inch long. The adult female uses their ovipositor to cut slit in the underside of the leaves to lay eggs. This is why they are called sawflies.



Pennington County, declining cottonwoods

This was a stop to look at some declining cottonwoods (*Populus deltoides*). The trees had extensive dieback. The bark was already shedding from the upper trunks.



At the base of these trees were dark, shriveled inky cap mushrooms (next page). These are saprophytic fungi. They live on decaying organic matter, such as dead tree rooms. I often find them around stumps.

The question from the tree owner was whether the trees might recover. The answer is no. The decline is too far along. The loss of roots also means the trees may fail.

Since they are near the house – and leaning towards it – removal of the trees is the best option.



Yankton County, Honeylocust spider mite defoliating trees

The honeylocust in the southeastern corner of the state cannot catch break. Not only have they been suffering from a continual drought but now they are being defoliated by two pests, the honeylocust plant bug (see July 15, 2026, issue of the *Pest Alert*) and the honeylocust spider mite (*Platytetranychus multidigituli*).



The plant bug and spider mite suck sap from the foliage. This causes stippling – tiny flecking on leaflet. The infested leaflets turn yellow and may fall prematurely.

The honeylocust spider mite is a warm season mite, so they thrive during hot, dry summers. The adult mites are very tiny (1/80-inch), pale green to yellow green. They lack the dark marking of the two-spotted mite (*Tetranychus urticae*).

The population is at its peak now. They will begin to decline soon and become dormant as fall begins. No control measures will be effective at this time. Infested trees can be treated with a horticultural oil next spring to kill the overwintering female mites.