South Dakota State University Extension

Tree Pest Alert

August 20, 2025 Volume 23, Number 27

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 warm to hot during the week. The highs were in the 90ºs and even some triple digits, but cooler weather is in the forecast with the high temperatures dropping to the 60ºs. We will see warm weather again, but fall-like temperatures and humidity are a nice break.

The warm weather pushed the accumulated GDD (base-50) by about 200 DD during the past week. Here is the current GDD accumulation for communities across the state.

Aberdeen	2140
Beresford	2575
Chamberlain	2586
Rapid City	2082
Sioux Falls	2550

Apples are beginning to ripen. The early season cultivars are ready for picking. Here is a Whitney crabapple that is ripening (but still has three weeks to go). Whitney is a great apple for eating right from the tree. People think that crabapples are not for fresh eating. Many are not, but some are delicious.

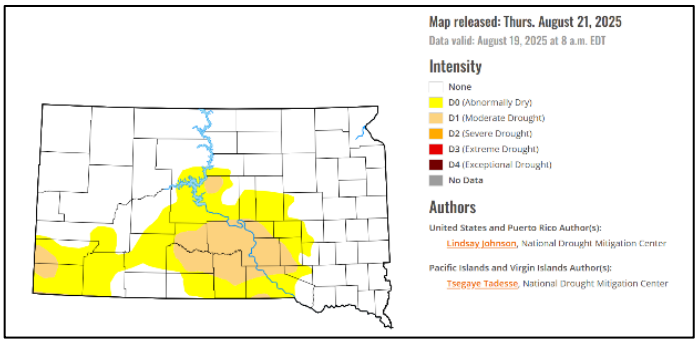
The difference between apples and crabapples is not the flavor of the fruit but its size. If the fruit is less than two inches in diameter at maturity, it is a crabapple. Whitney and chestnut are two of my favorites for eating right from the tree. But I like my apples on the tart side.

Drought monitoring

We had rain across the state last week, but it was hit or miss. Almost 70 percent of the state is drought free. Another 20 percent of the state is classified as

'Abnormally Dry.' About 10 percent of South Dakota is classified as 'Moderate Drought' with one spot of severe drought disappearing during the week.

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



Treatments to Begin Now

Locust borer

Locust borers (*Megacyllene robiniae*) began emerging at about 2,300 GDD and will continue to 2,800 GDD. Adults are out in much of the state.

The adults are hard to miss. They are about an inch long with long antennae. The body is almost black but with bright yellow stripes running across their back. Some of the stripes form a large W – that does not stand for wasp though they look like one!

You can also find these colorful adults on goldenrod flowers where they feed on pollen. But they are also laying eggs on the locust, as in the picture, and these will soon hatch to become larvae. The larvae tunnel through the inner bark and sapwood during their lives and become an inch long at maturity. The tunneling by the larvae weakens the trunk and may cause the infested branch or trunk to snap.

The locust borer only attacks locust (*Robinia*), not honeylocust (*Gleditsia*). Black locusts survive the attacks and continue to grow though there may be a few broken limbs and knotty swelling on the trunks as signs the insect has called the tree home. Once the tree is about ten years old, it is rarely attacked.

But good luck keeping the Purple Robe locust (*R. pseudoacacia* 'Purple Robe') alive that long. While this cultivar has attractive chains of purple pea-like flowers, it is borer candy. I rarely find one that lives even five years before being killed by locust borer.

Treatment is usually a saw to remove the dead, infested (and often snapped) tree but the trunks can be sprayed now with an insecticide to kill the insect. These bark sprays contain Bifenthrin, Carbaryl, or Permethrin as the active ingredient and must be labelled for control of this insect. Most injectable products are ineffective against this insect.

Timely Topics

Emerald ash borer update

Emerald ash borers (EABs) are in their 3rd instar (molt) in the eastern South Dakota. This instar and the 4th, which we should see very soon, cause most of the injuries to their ash host.

Pine engraver beetle update

The Black Hills experienced average or above-average precipitation during the spring except for western Pennington County. The entire region was out of drought by mid-summer.

Drought and pine engraver beetle go together. During times of drought, tree sap flow decreases, and the beetles can successfully attack live trees. We saw an increase in tree mortality from this bark beetle during the past two years.

This year, not so much. The trees are healthy, so the beetles have had to content with attacking fresh, down branches or the moist wood buried in slash piles.

I was able to find adults in the moist inner bark of large logs. These larger (3- or 4-inches diameter) logs were buried in slash that was piled last March. During drought, these piles would have completely dried out and the adults moved to nearby trees.

But not this year. There was enough precipitation that these logs stayed moist. The adults that are emerging now may be the overwintering generation that stays in the litter during the cold months. There may also still be one more generation.

Lilacs are blooming again

It has been quite the year for lilacs. Leaves are dropping and flowers are blooming! We had adequate moisture during the spring and early summer, so the lilacs had a good flower bud set.

Now with the drier weather and the stress of leaf diseases, the plants have been fooled to start flowering again. This is a Japanese tree lilac in full bloom. The cooler temperatures that are coming will only increase this trend.

There is nothing that can be done to stop the lilacs from blooming. The only drawback to the late summer – early fall display will be fewer blooms next spring.

Tree tube staking discussion continues

Last week I discussed the problem with trees bending in the tree tube if the tubes are not adequately supported. Jeremy, from Lincoln County CD, sent me an image from a video sent to him of hackberries bending out of the tree tube.

Hackberries and elms are two vigorously growing trees that can quickly shoot above the tube's top. The picture shows a hackberry at almost 90º angle from the weight of the spindly leader.

The suggestion given to Jermey by the tube manufacturer is to use a 7-foot-long stake to support the top. They have instruction in their 'How to Add a Tree Tube Extension' https://www.treepro.com/pages/install-video

It is worth a try, but the problem is the lack of taper in the stem for the tree to support itself. Taper improves if the trunk is subjected to bending from wind gusts. Staking high and tight can hold the canopy too rigid and extend the period where the tree is not self-supporting.

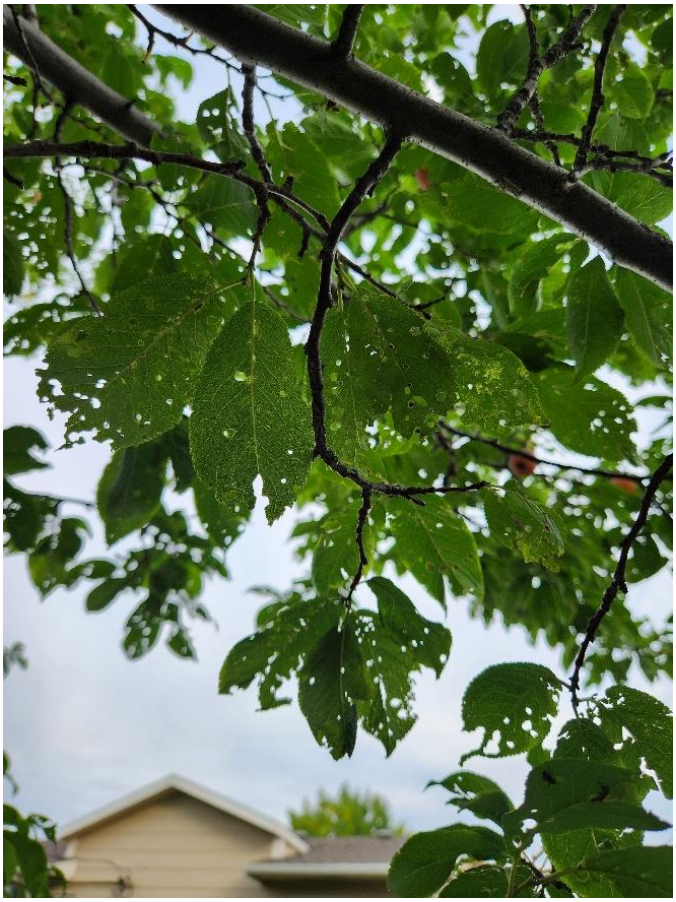
If longer stakes are used, the highest tie should be at least three feet below the terminal. The tie should be loose enough so that the trunk can still move with the wind. If the tree does not develop taper, it will need support for several years.

E-samples

Coryneum blight, Shothole disease, on plum

People are sending pictures of plums and other stone fruit trees that have their leaves covered in small holes. This one was sent by Prairey, our extension Master Gardener coordinator. There are several possible causal agents for this damage but the most common is coryneum blight caused by the fungal pathogen *Wilsonmyces carpophilus*.

The other common name, shothole disease, comes from the small, circular holes that appear throughout a leaf. People assume these are caused by insects. But they never see any bugs on the leaves.



The infection begins during wet spring weather. The first symptoms are small round purple to tan lesions. The infected tissue becomes bumpy and rough, then drops out as the leaf continues to expand.

The disease causes only cosmetic injury to the leaves, but it can kill twigs and damage fruit. Terminal buds can also become infected. This will develop a canker that causes the shoot tips to die. Infected fruit develops small purple spots that leak a gummy substance.

If the infection is spread to the buds and fruit, there are treatments. At 50% leaf fall this autumn, copper fungicide should be sprayed on the tree to protect the winter buds. After petal fall next spring, the trees can be sprayed again but with fungicide containing either Chlorothalonil or Myclobutanil that is labelled for fruit crops.

One more lilac leaf spot e-sample

This has appeared in the past several issues of the *Pest Alert*. There are common lilacs (*Syringa vulgaris*) that are bare except for a few leaves at the tips. The leaves hanging on the shoots, as well as the ones on the ground, have dark leaf spots and blotches.

This is the result of leaf fungal diseases; *Pseudocercospora* is a common pathogen. These diseases started last spring during the wet, mild, and humid spring weather. Lilacs that are shaded or in long, crowded windbreak rows are most affected. Shaded and crowded plants have their foliage remain wet for a longer time which allows the spores to germinate.

The diseases are more cosmetic than a threat to their host. The buds and twigs are still green and alive. The diseases may not appear again next year – we often go years without any infections since the weather and spore dispersal did not match.

Samples received/Site visits

DakotaFest samples

Hot weather and DakotaFest seem to go together. The free ice cream at the SDSU Extension test was extremely popular. But folks stopped by with samples (and stayed for the ice cream). Here are two samples.

Rough bulletgalls on bur oak. These are not acorns but the work of a small cynipid wasp (*Disholcaspis quercusmamma*). The adult female injects eggs with a chemical into the twig. The chemical causes the twig to form a woody shell over the egg which serves as home to the larva after it hatches.

The galls swell and from their extrafloral nectaries produce droplets of a sweet, sticky nectar that attracts yellowjackets. These wasps provide protection for the developing larvae inside the galls – who wants to mess with hornets!

Chlorotic maple. There are red, silver and Freeman maples that have chlorotic leaves. Red maples tend to have light yellow leaf blades with faint green veins. Silver and Freeman maples have yellow to cream leaf blades with black blotches and green veins.

The discoloration is from the lack of iron and manganese in the foliage. The deficiency is due to high soil pH limiting the solubility of these two microelements. They are present in the soil but not in a form that the trees can use.

The solution is to not plant maples on alkaline soils. Established trees can be treated by injecting iron and manganese into the trunk or a chelated form into the soil. These treatments must be repeated every two or three years.

Hutchinson County, Chlorotic swamp white oak

This has been the year for leaf diseases and disorders. Swamp white oak (*Quercus bicolor*) is one of the trees, along with maples, which is affected by chlorosis – yellow leaf blade with green veins. This is due to a lack of iron in the foliage.

Chlorosis on maples is due to lack of iron and manganese, while on oaks and birch it is only iron that is missing. The oaks commonly planted in South Dakota that are affected by iron chlorosis are northern red oak (*Quercus rubra*), eastern pin oak (*Q. palustris*) and swamp white oak.

The problem is common on soils with a pH above 7.3. If the soil is just near this point, incorporating elemental sulfur might be sufficient to relieve the symptoms. If the pH is higher either injecting iron into the trunk or a chelated form into the soil will be needed.

Pennington County, Japanese beetles on cottonwood leaves

Japanese beetles (*Popillia japonica*) are appearing in South Dakota though at lower numbers and later then we typically see. The adults are about 1/3 to 1/2 inch long, with copper-brown wing covers that shine in sunlight. There are also five white patches of hair on the side of the abdomen, just below the wing covers.

Rose petals and grape leaves are their favorites, but they are not fussy eaters. They also love linden leaves and will even feed on cottonwood foliage (if they must – it is like broccoli for kids). Here are some unhappy Japanese beetles feeding on cottonwood. They feed between the veins so leave a lace-like appearance to the devoured leaf.

The feeding is nearly done so treatments are a little too late for this season. Cottonwood can survive this late season defoliate. The Japanese beetle larvae, the white grubs, which live in the soils and feed on grass roots are the concern. The infested lawn will turn brown and can easily be pulled up since the roots are severed.

Turner County, Dogwood sawfly

Dogwoods (*Cornus*) are being defoliated by the dogwood sawfly (*Macremphytus*). This is a complex of three species, but they are similar in appearance and life cycles. They are out feeding between 1,000 to 3,000 GDD.

The larvae look like caterpillars but do not become butterflies and moths. They become wasps. The adult wasps are not a concern to us as they do not sting. Instead, they use their ovipositor to cut small slits in the leaf veins to lay eggs.

Once the eggs hatch, the larvae feed through a leaf right down to the veins, creating a patchwork of holes before moving to the next leaf. They feed in groups – they like company for lunch - and can turn foliage in a dogwood to a delicate lace supported only by a framework of tough veins.

The larvae go through color changes as they develop. In the first stage they are amber and almost transparent. The second stage they are covered with a white powder – like a donut. The third, and final, stage is creamy yellow with black patches. This is the stage that will overwinter in the soil, usually in rotted wood such as old landscape timbers if near the dogwoods.

We usually see only the final larval instar in late August. But these are earlier instars so a treatment might be worthwhile to reduce defoliation. Since they are showing up on only scattered leaves, just removing these infested leaves and disposing of the small larvae might be the best approach.

Spraying the larvae with insecticidal soap is also effective. But the larvae must be sprayed, not just the foliage and the larvae tend to be found on the underside of the leaves.