South Dakota State University Extension

Tree Pest Alert

September 24, 2025 **Volume 23, Number 32**

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

Plant development for the growing season

The beginning of fall does not seem like fall. The weather is hot, not cool and crisp. Daytime temperatures were in the 80s and 90s by at least much of the humidity had disappeared.

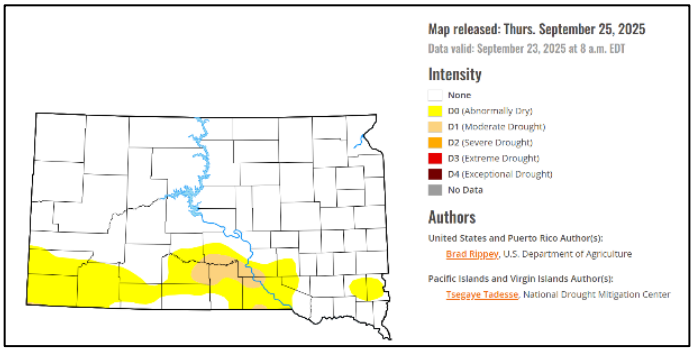
The hot temperatures pushed the accumulated GDD (base-50) by more than 100 DD during the past week. Here is the current GDD accumulation for communities across the state.

Aberdeen	2680
Beresford	3182
Chamberlain	3240
Rapid City	2630
Sioux Falls	3170

Drought monitoring

Many areas of the state are above average in annual rainfall. About 80 percent of the state is drought free. Another 18 percent of the state is classified as "Abnormally Dry." About two percent of South Dakota is classified as "Moderate Drought." This is concentrated along the counties that border Nebraska.

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



Treatments to Begin Soon

Watering trees for winter

Remember now is the time to water your trees, not just before the soil freezes. We have had good rains this year in much of the state, but it is turning drier as we move into fall. If you are in an area that has not received at least three inches of precipitation in the last month you may want to begin watering the trees, particularly the young ones that are beginning to droop.

Watering now is the best way to reduce winter-burn and winterkill. I expect there may be some re-plants in windbreaks next spring if we have another open, dry winter.

Timely Topics

Emerald ash borer update

We continue to monitor larval development of emerald ash borer (EAB) from Dakota Dunes to Milbank. The larvae are about 50:50 in either their 3rd or 4th instars. The 4th instar will feed for another couple of weeks – as long as it stays warm - before burrowing into the sapwood to spend the winter.

Ash trees are dropping their leaves now. This is not a good time for injecting trees. Insecticide uptake is best when the leaves are active and pulling up water. It is better to wait until spring, after the leaves are fully open (and their flowers are fading).

Drones and EAB

We flew Milbank with a small drone at the request of the city. The objective was to do a quick overview of the community tree canopy to detect early signs of EAB. We knew the insect was established at the western edge of the city but there was no ash in the community that presented the common symptoms of EAB.

But the view from the air was different. Infested trees will often show a slight pale color to the upper canopy – which is not visible from the ground. We were able to detect infested ash pockets throughout the community. Not many but these will begin expanding next year.

The value of drone surveys is to help communities detect the early stages of an EAB infestation so they can target their removal/treatment activities. Too often communities wait untill they see declining trees throughout the town. This leads to a rush – and expensive – effort to remove dead and dying ash before they fall.

Asian lady beetles

The multicolored Asian lady beetles (*Harmonia axyridis*) are on the move again this year. The multicolored Asian lady beetles were introduced into this country from Russia, Japan and Korea beginning in 1916 with most introductions in the 1960s and 1970s. They are effective aphid feeders, better than our native lady beetles, These lady beetles are important controls for soybean aphids and the cornleaf aphid in our region. The multicolored Asian lady beetles may be yellow, orange or red and sometimes with spots.

People are already finding them tunneling through their windfall apples (and in their raspberries). Soon people will be noticing these lady beetles on the ceilings in their kitchens and other rooms, particularly sunny rooms. Not only are they a nuisance due to the large number that can be found in a home, but they can also bite!

The bites do not draw blood, nor do they carry any diseases, but it is another annoyance. Finally, if you smack one, you'll find it gives off a yellow-orange fluid (its blood) that has a foul odor and stains surfaces. And if that is not enough about 25% of people have allergic reaction to contact with the beetles. Apparently, these are not the best house guests.

No one is quite sure what triggers the mass migration of these beetles from field to homes, but their mass movement to buildings is most likely related to the shorter day lengths, a drop in night temperature (40s-50sºF) followed by warmer (60s-70sºF) days, and a reduction in food availability. Typically, the lady beetles begin moving sometime in early October. Keeping the beetles out of the house requires several different strategies.

First, seal as many opening into the house as possible, this means around doors and windows, fascia board and vents and any other opening more than 1/8-inch or larger. Second, but only after finding the first approach does not work, is to apply an insecticide. Insecticide should be applied around doors windows, and rooflines, areas where the insects typically enter the house. The common active ingredients used for treating homes are Bifenthrin (Ortho Home Defense Indoor and Outdoor Insect Killer and Deltamethrin (Bonide Household Insect Control).

Do not apply these insecticides to the landscape as beetles can travel long distances to houses and do not necessarily land on nearby trees and shrubs before reaching the house. Remember the strategies focus on keeping them out of the house, once they are in you now have winter guests that will not leave (like relatives).

E-samples

Linden leaf blotch

Calls about lindens increased a little in early fall. This is a common occurrence at this time of year, and there are several possible reasons for the discoloration and premature falling of these leaves. However, one of the more common is a fungal disease called linden leaf blotch (*Didymosphaeria petrakiana*). The blotches begin in late summer, often as small specks that expand to larger blotches. A common feature of the dark brown blotches is a feathery margin. The disease can result in complete defoliation of the tree by mid-September.

There really is no treatment other than remove and destroy the fallen leaves, which is often impractical and has limited value unless it is a community effort. If the spring is relatively dry the disease is often minor and only results in some late season leaf discoloration. This is the case this year. We have only seen a few trees with significant symptoms.

Puffballs are popping up

Puffballs are white, roughly spherical, fungal fruiting structures that appear on the ground often in woody draws among some dead trees. They can range in size from a golf ball to a basketball. If you split them open right now the interior is white and solid. There might be a short stem at the base that has a slight difference in texture when split. If there is a distinct stem running through the fruiting structure from base to top – it's not a puffball.

Puffballs sliced and fried with butter are delicious. They need to be picked before they become infested with tiny worms. The interior also should be firm and white. Once they start turning yellow on the inside, they are not tasty anymore.

A final precaution. Do not harvest mushrooms based on this brief description. Also go with someone that has collected puffballs before so that the right mushroom is picked. A mistake can be deadly!

Samples received/Site visits

Brookings County, Dogwood sawfly

Dogwood sawfly (*Macremphytus*) is still defoliating dogwoods in eastern South Dakota. They feed up to about 3,000 GDD so the larvae are just about gone. The larvae are about an inch long and most are a creamy white with mottled black marks along the body.

The larvae will soon be dropping to the ground to find a place to pupate for the winter. Unfortunately, they like to create a pupa chamber in logs or landscape timbers so they may bore a little into the wood. If you have a lot of larvae, they can degrade any landscape timbers near dogwoods.

Since the larvae are almost finished feeding there is not much value in spraying. However, next year if the larvae are noticed on the plants (and they do not always appear on the same plant from year to year) in August, spraying with an insecticide containing Carbaryl or Malathion as the active ingredient and labelled for this use will eliminate most of the insects before they do much damage.

Codington County, Spruce needlecast disease

I have not mentioned spruce needlecast much this year. We did not see the disease last summer as the weather was dry for the summer and fall. This year with all the wet weather we are seeing an uptick in the disease.

There are two needlecast diseases. This tree was infected with Stigmina needlecast disease (*Stigmina lautii*). Symptoms are like Rhizosphaera needlecast, purple needles and loss of older needles, usually beginning with the lower branches. The small dark fruiting bodies can be found on the needles and differ from those produced by Rhizosphaera.

Stigmina fruiting bodies have a “spider-like” appearance around them, rather than a smooth margin. This disease is managed by applications of a fungicide containing the active ingredient Chlorothalonil applied when the new growth begins to expand in the spring and then repeated every 10-days through August. Treat the entire canopy, not just the lower branches.

Grant County, Pine wilt disease

Pine wilt disease is a serious disease of introduced pines, especially Scotch pines (*Pinus sylvestris*). The disease usually appears on these trees first, killing them, and then moves to any nearby Austrian pines (*Pinus nigra*). The disease is spread from tree to tree by longhorned beetles that carry the small pinewood nematode (*Bursaphelenchus xylopilus*), the causal agent, as it leaves a dead host and flies to a healthy one.

Pine wilt disease usually kills a tree in one year. The tree looks fine in the spring but by mid-summer the foliage is turning yellow, then brown. About this time of year, the infected trees look just like the picture; mostly defoliated with many of the remaining needles discolored and hanging. The needle easily detaches when touched. The twigs snap when bent.

Infected trees that have recently died should be removed and the wood destroyed (not turned into firewood) by April 1, 2026. The longhorned beetles leave the tree during April carrying thousands of pinewood nematodes to a new host.

Minnehaha County, Ash seed weevil

I do not have a lot of ash visits for problems other than EAB but here is a seasonal one, the ash seed weevils (*Lignyodes bischoffi*). These are insects that spent their larval stage feeding inside of ash seeds during late summer. The infested seeds do not look any different from healthy seeds. The only clue is infested seeds have is a small hole where the larvae emerged.

The larvae emerge from the seed in the fall while the seed is still hanging on the tree and drops to the ground. This is what people notice – the small white leg-less larvae on sidewalks and in gutters. Once the larvae are on the ground, they overwinter either in the soil or the litter layer.

Pupation occurs in the spring. The adult weevil emerges in mid-summer with females laying eggs on the newly formed seeds. Once the larvae hatch, they hollow out the seeds as they feed. There is one generation per year. No treatment is recommended or needed.

Sully County, Cottonwood leaves falling

The ground was littered with dying cottonwood leaves. The tree was almost bare! The problem was marssonina leaf spot (*Marssonina brunnea*). This foliar fungal disease is more common on cultivars of cottonwood than the species. The disease can leave some almost completely defoliated by the end of September.

The problem is not a fatal disease for cottonwoods. But the disease can weaken the trees, increase winter injury and susceptibility to drought stress. A common control is to rake up and destroy any fallen leaves to reduce the population of overwintering fungi, but this is of limited value and often impractical.

Fungicide treatments may provide some control with the most common being applications of a fungicide containing chlorothalonil applied at bud-break. If the weather stays moist, applications may need to be continued on a 7 to 10-day cycle till the summer weather turns dry.

Yankton County, Walnut husk maggot

I looked at some mushy walnuts last week. The tree owner was used to picking up fallen walnuts in late September but had not seen ones that just fall apart.

The rotting walnut husks were filled with small legless pale-yellow larvae. These are walnut husk maggots (*Rhagoletis suavis*), a close relative to the apple maggot. The adult fly lays eggs on the developing husk in mid-summer. Once the larvae hatch out, they burrow and feed on the husk which breaks down the fruit into a black, slimy mess.

They do not burrow into the nut, so the nutmeal is not affected by the infestation. However, the slime is more difficult to remove from the nut than a normal husk. The best advice is to pick up and destroy any infested husks when they fall. This will reduce the overwintering population (they pupate in the soil for the winter).