South Dakota State University Extension

Tree Pest Alert

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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 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

The weather this past week was the double H's – Hot and Humid. The day temperatures were in the high 80s and low 90s. The dew points in the 70s. It was a week of Florida weather in South Dakota. Evening temperatures were in the 60s but the clouds of mosquitoes kept anyone from enjoying a walk.

The warm weather has pushed the growing degree day (GDD-base 50) accumulation. The GDD increased by another 160 during the past week. Here is the current GDD accumulation for communities across the state.

Aberdeen	1550
Beresford	1912
Chamberlain	1873
Rapid City	1490
Sioux Falls	1878

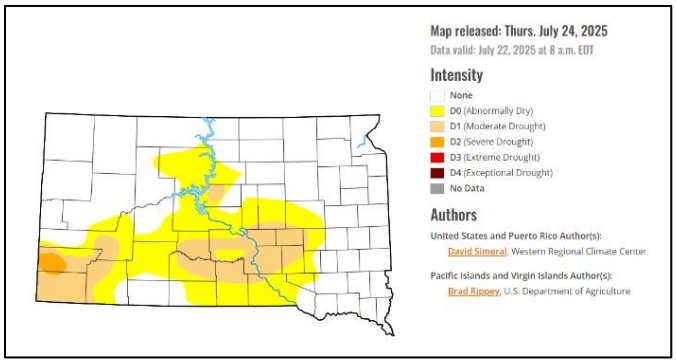
Not many shrubs are in bloom during the end of July, but this is the peak for the smooth hydrangeas (*Hydrangea arborescens*). They have large, snowball-like flowers. Often the canes are bending under the weight of these large flower heads. Smooth hydrangea is known as a 'water pig' for its demand for water. Fortunately, the rain is occurring often enough the floral display is nearly perfect.

Drought monitoring

The rain has been continuing during the past week. Now more than 60 percent of the state is drought free. Another 24 percent of the state is classified as "Abnormally Dry." About 13 percent of South Dakota is classified as "Moderate Drought" and only 1 percent of

the state, western Custer County, is still classified as “Severe Drought.” The severe drought just seems to hang in this western location.

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



Treatments to Continue

Apple maggot

This small fly continues to emerge from the soil. The peak emergence is between 1,400 and 1,700 GDD so we are at or just beyond this peak throughout the state. Treatments for this pest should be continuing. See the June 18th issue of *Tree Pest Alert* for treatment options.

Timely Topics

Emerald ash borer updates

Emerald ash borers (EABs) are now mostly in the larval stage. There are some adults who are still out. Unhatched eggs still reside beneath the bark scales, but most EABs are now hidden under the bark as larvae.

The warm weather is aiding larval development. The larvae are growing very quickly in the summer heat. We are finding mostly 2nd instars, but 3rd instar larvae are becoming more common. We start seeing 3rd instars at about 1500 GDD.

While insecticide injections will still work at this time, they will be less effective. It can take two or three weeks for the insecticide to be distributed throughout the canopy. This means the larger 3rd instar larvae will have several weeks to disrupt the movement of water and sugars in the tree.

Where and when to treat for EAB

We are receiving more reports of applicators treating ash trees in counties where the insect has not yet been confirmed. The recommendation for treatment is – and this has not changed – is begin treating ash when the insect has been confirmed in your county or within fifteen miles of your location.

Treating an ash tree before EAB has been detected in a location subjects the tree to unnecessary wounding. Injections cause minor injury to the tree, but the benefits of treatment (saving the tree) outweigh the risk (possible decay). But treatments are only beneficial if EAB is in the area!

The optimal time to treat ash is from leaf-out in the spring until late June. The insecticide injected in the tree during this period will kill the adult females as they feed on the leaves and any young (1st and 2nd instar) larvae before they are large enough to injury the tree.

Plant Health Care workshop on common tree pests and their management July 30, 2025

The Dakotas ISA chapter is sponsoring a free workshop on common tree pests on the Northern Plains and their management. The focus of the workshop will be identification of the most common insects, mites, and pathogens, their signs and symptoms, and management.

The program will include lectures, field diagnosis and demonstrations on pesticide delivery equipment including injections for emerald ash borer and Dutch elm disease, among others.

The presenters include John Ball, Forest Health, South Dakota Department of Agriculture and Natural Resources, and Martin Shervey, Forest Health, North Dakota Forest Service. Lydia Kan from Rainbow Ecoscience and Jay Goughnour, from Arbor-jet, will also be presenting and demonstrating some of the latest equipment.

The workshop will be held at the ‘Birdhouse’ located in Wylie Park, 2300 24th Ave NW, Aberdeen. It begins at 9 am and concludes at 3 pm. It will be held rain-or-shine. There will be refreshments during the day, but lunch will be on your own. There will be ISA CEUs available.

The workshop is open to all arborists, conservation district employees, city workers, parks workers and Master Gardeners. For more information, contact John Ball at john.ball@sdstate.edu or by text to 605-695-2503.

E-samples

Cicadas, not EAB

The cicadas are buzzing away in tree canopies as they do every year. While they are common and the sound is well-known, what the insect looks like is not necessarily known.

The insect lives underground for most of its life as a nymph. The last molt of the nymph -the ecdysis – occurs when the nymph leaves the soil to climb a tree or other vertical object. There it will transform into an adult, shedding its old exoskeleton.

These exoskeletons will hang onto the tree for several days or longer. Since ash tree owners are looking at their tree a little more often now, the unfamiliar hanging exoskeletons are being confused with EAB. These were found beneath an ash and were thought to be EAB adults killed by the pesticide injections.

Herbicide injury to spruce

This was another case when a herbicide application is suspected to be the causal agent in the decline of a tree. This spruce is clearly declining and apparently the decline has been only in the last year. The canopy is filled with recently dead branches and twigs.

The rock mulch beneath the tree is suspiciously clean of any weeds. That does not happen unless someone pulls weeds several times a week or applied a herbicide. Most opt for a herbicide.

Dicamba was one of the active ingredients in the herbicide used around this tree. The label clearly notes that the product should not be used “around any desirable tree or shrub.” Always read the label!

Mildew on ninebark

Ninebarks (*Physocarpus*) have become extremely popular shrubs over the past thirty years. The purple eaves of many cultivars contrasted with the light-colored bark that peels off in papery sheets. Ninebarks are also tough shrubs that are adapted to our soil and climate.

Unfortunately, they suffer from powdery mildew (*Podosphaera physocarpi*). This fungal disease lives on the surface of the leaves and causes the infected leaves to have a whitish surface. The infected leaves may become curled and form witches’-brooms. Severe infections can lead to shoot dieback.

The disease requires high humidity but a dry leaf surface. Humid, cloudy, warm days are perfect for the development of this disease. These conditions have prevailed throughout the state this year. It has been a perfect year for mildew on ninebark and lilacs.

Fungicides containing either (or both) chlorothalonil or propiconazole and labelled for this purpose can be used to manage the disease. But the treatments begin in early June and continue every 10 days until mid-summer. It may be too late for treatments to be of much benefit now.

Some cultivars that are resistant to mildew include Little Devil, Summer Wine and Ginger Wine. Resistance does not mean immunity. The picture is a Little Devil with shoot tips infected by the disease – this humid weather has been perfect for infection.

Samples received/Site visits

Codington County, Codling moth injury to apples

This was an apple tree that always had a problem with wormy apples. The culprit in this instance is the codling moth. The clue was the large wound on the side of the apple that was exuding a liquidity, graining substance.

The worm, a codling moth lava, was burrowing its way to the center of the apple to munch on the seeds. At this point there is nothing to be done but pick and dispose of the infested fruit. The damage is done.

Next year, the apples can be sprayed in the spring to protect against becoming infested. The other recommendation is to thin out the apples when they are small, about quarter size. If the apples are touching one another, it provides the perfect hiding place for the larva to begin burrowing into the fruit.

Lake County, The case of the weeping ash tree

The owners of this large ash tree were annoyed by the sticky, black film on their deck and siding. Even more of a concern is they were scheduled to have their house painted and did not want the film to reappear on the sidling.

The black film was honeydew secreted by a sucking insect that became infected with a sooty mold. The branch tips in the tree had rosettes of twisted leaves filled with ash leaf curl aphids. These were producing the honeydew raining down from the tree.

The tree was recently injected as a preventative measure for EAB (which was not necessary as EAB has not been found in the county). The insecticide used to treat the tree, emamectin benzoate, kills more insects than just EAB. It is also effective against aphids.

The tree had just been treated about three weeks ago for EAB. It can take about three weeks for the insecticide to be throughout the tree. The insecticide was now killing the aphids. It was safe to paint the house.

The aphid population was rapidly declining for another reason. The tree also had lady beetle larvae feeding on the aphids. These aphid-killing machines can consume hundreds of aphids during their life. While these were aiding in the control of the aphids, they were also ingesting the same insecticide.

This is a good example of why insecticides must be applied only when needed. They can killed other non-targeted insects.

Minnehaha County, Fungus coming out of the tree trunk

The tree owner wanted to know what was growing out of the trunk of their hackberry tree. The growths are the fruiting bodies, sometimes called conks, of a heart rot fungus. These light-colored conks appear to be Dryad's Saddle mushrooms (*Cerioporus*). These mushrooms are

shelf-like, about two to eight inches wide. They have concentric brown fibrous on the upper surface.

The fungus enters through a wound that exposes the wood. Bark, much like skin for us, protects the tree from infection. Once the spores enter the wood they germinate. The expanding strands of the fungus break down the wood causing decay. The wound in this instance was an old pruning wound.

The best option is to remove the tree, not just the fruiting bodies of the fungus. This is a sap rot fungus that weakens and decays the wood. The decay can extend five to ten feet above and below the conks. The tree is only about fifteen feet tall. The failure of the tree will not cause any property damage.

But the fungus will never go away. It will continue to decay the trunk. Eventually the tree will fail but it may be decades before this occurs.

Turner County, Cottonwoods dropping leaves – petiole galls

Cottonwoods are beginning to drop leaves. This is not an early sign of fall but an insect. Each of the fallen leaves have a small bump on the petiole (leaf stalk). This is the cottonwood petiole gall formed by a small green aphid known as (you guessed it!) the cottonwood petiolegall aphid (*Pemphigus* spp).

The insects begin feeding on the leaves in the spring and the galls form around them. The aphids usually mature by July, and the winged adults emerge from the galls and fly to another host. The alternate host is a plant that is a member of the mustard family. The aphid feeds on the roots.

The cottonwood damage from this insect is annoying to us – who wants to rake in July – but it does not harm the tree. The fallen leaves do not need to be burned; the insects have already left, so leaving these leaves will not increase the problem next year.

An application of dormant oil can be applied on the tree to kill the aphids before they move out from the bark fissures next April. Most people do not bother with spraying, just raking.

Union County, Japanese beetles on roses

Japanese beetles (*Popillia japonica*) are appearing in South Dakota though at lower numbers then we typically see. Still the few adults around stand out on their host plant. They 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.

The adults feed on the leaves and flowers of many plants. Roses are their favorite – especially the flower petals – but hydrangea, and lindens are common woody plant hosts. The feeding rarely kills the host; the adult beetles are like kids that will not eat the crust on bread – they avoid the tough veins - but the lace-like pattern on the leaves is unsightly.

Killing the adults on roses is difficult to do without affecting pollinators since the plants are still in bloom. One insecticide that has the least impact on bees is Neem oil. Frequent applications are needed as it is only effective for several days.

If treating tree leaves, such as this birch, where the risk to pollinators is low, products containing Cyfluthrin, lambda Cyhalothrin or Permethrin as active ingredients can provide two to three weeks of control.