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 had been mild for much of the past week. This has changed with the beginning of summer. There will be a few hot, humid days but temperatures are forecast to drop to the 70s and the rain will return.

The warm weather has accelerated the growing degree day (GDD-base 50) accumulation. Many sites added another 100 GDD or more during the past week. Here is the current GDD for communities across the state.

Aberdeen	835
Beresford	1071
Chamberlain	1051
Rapid City	809
Sioux Falls	1025

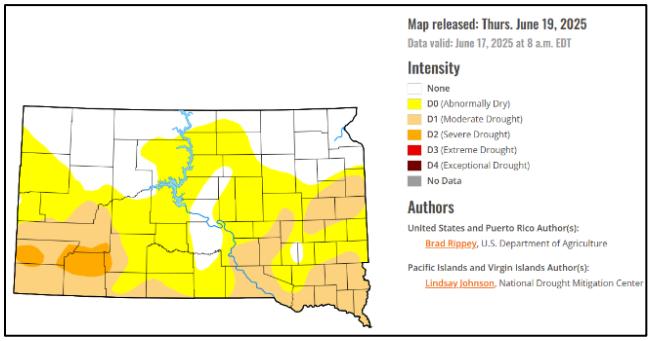
Japanese tree lilacs (*Syringa reticulata*) are in bloom in the northern part of the state. There are many of these small trees blooming in Milbank. Since these are cultivars – many of these trees are the cultivar Ivory Silk – they have a pleasant fragrance. The species can have an odor that is described as privet-like.

Common privet (*Ligustrum vulgare*) is blooming in Brookings. This hedge plant is planted for its ability to respond to frequent shearing, not for its flowers. The panicles of white flowers have a strong, pungent odor – not a flower to place in a vase!

Drought monitoring

Many areas of the state received rain during the past week but some of the southeast was skipped. The light rains during the past week have continued to reduce the drought intensity. About 30% of the state is no longer classified as drought. Another 40% of the state is classified as “Abnormally Dry.” Only 3% of the state, Custer and Oglala Lakota Counties, is classified as “Severe Drought.”

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



Treatments to Begin Now

Apple maggot

Symptoms of an apple maggot infestation are a dimpled, lumpy appearance to the surface of the apple. Inside the mushy flesh, the apple will contain the brown trails of the larvae, hence the other common name “railroad worms.” A sure sign of the pest – an unpleasant one if you happen to find one, or half of one, while eating the apple – is a small (1/4 inch), creamy white and legless larva in the fruit. The adults, resembling houseflies with banded wings, are beginning to fly and depositing eggs on the developing apples.

Once adult emergence from the soil begins (900 GDD), egg-laying on apples begins and continues for about a month. The larvae burrow immediately into the apple and feed for several weeks or more before dropping to the ground (usually in the infested apple). The apple maggot pupates in the soil and remains there until now when it becomes an adult fly.

Treatment for homeowner apple trees is either carbaryl (Sevin) or Malathion applied starting now with repeated applications every 7 to 10 days for three or four more times. Apple maggots tend to emerge from the soil after a 1/2-inch rain so some producers time applications with rainfall, but this is not necessary for home production.

Another means of managing the maggot is to place 3-inch diameter bright red balls in the tree - about two in semi dwarf trees (about 10-15 feet tall) and five in standard size trees (about 20-30 feet tall). Each ball is covered with sticky material to trap the adult fly. These are sold as red sphere traps.

The female apple maggot always flies to the biggest, brightest apple to lay her eggs and these balls will be the biggest, brightest “apples” in the tree. You cannot eliminate the pest by using this control, but the population can be significantly reduced.

Another control measure is to spray Kaolin clay on the fruit. The clay is not a true pesticide, but it irritates the adult apple maggots, and they fly to other fruits. The clay must be reapplied if we have heavy rain. Many summers you can expect to make several applications during the season. It may not require as many this dry summer. The clay is sold as ‘Surround At Home®.

Timely Topics

Emerald ash borer workshop June 25 in Bismarck ND

There will be an EAB workshop held on Wednesday, June 25 from 8:30 am to noon at the Sertoma Community Center, 300 Riverside Park Road, Bismarck, North Dakota. The workshop will cover EAB history, life cycle and habits.

It will also explore effective strategies for protecting ash trees, covering both community-wide approaches and individual tree management. There will be an outdoor hands-on tree injection demonstration. ISA CEUs are available. There is no cost to attend.

Register at: Bismarck Emerald Ash Borer Workshop

Emerald ash borer updates

Adult emerald ash borers (EABs) are still emerging from their ash hosts from Union to Grant Counties. Peak emergence – where half have emerged for the season – is at 1000 GDD. Littleleaf lindens (*Tilia cordata*) bloom about that time. These trees are blooming in Sioux Falls.

Since the beetles can live several weeks, this means there will be plenty of adult insects laying eggs for a while. It is still a good time to protect trees from becoming infested by EAB.

EAB confirmed in Watertown, South Dakota

Last week EAB was confirmed in Watertown. The city forester noticed trees in the northeastern area of the community that had extensive blonding and woodpecker

drills. Many of these trees also had trunks lined with thick watersprouts. These are all common symptoms associated with EAB infestations.

The trees also had numerous D-shaped exit holes where the adults were emerging. We were able to capture some adult beetles and identify them as EAB. These trees also had a dense pattern of serpentine galleries beneath the bark.

This is one more county with a confirmed population of EAB. The other counties are Brookings, Grants, Lincoln, Minnehaha, and Union.

EAB management workshops in Watertown (June 26) and Milbank (June 30)

The two recent back-to-back confirmations of EAB in Milbank and Watertown has generated many questions from ash tree owners in these communities. There will be two public information meetings on the insect and its management to help people make decisions on what to do with their ash trees.

Foresters from the South Dakota Department of Agriculture and Natural Resources and the South Dakota Cooperative Extension will discuss how to identify infested trees along with management options.

The state quarantine will also be addressed and the restrictions on the movement of ash wood and all hardwood firewood out of the county. There will be time for questions after the presentations.

Thursday, June 26, 6:30 p.m. Watertown
The meeting will be held at the Codington County Extension Complex, 1910 West Kemp. Please enter the building through entrance I at the south end.

Monday, June 30, 6:30 p.m. Milbank
The meeting will be held at the Visitor Center, 1001 East 4th Ave in Milbank.

E-samples

Crown rust

I am receiving more pictures of crown rust (*Puccinia coronata*) on common buckthorn (*Rhamnus cathartica*). The disease causes yellow to orange spots on buckthorn leaves and petioles which are very noticeable. This was a sample brought in while I was at the Pierre Regional Extension Center (previous page). The homeowner wanted to know why the leaves in their hedge were covered with these orange spots. Common buckthorns were commonly used as a hedge plant. It also invades hedges when birds deposit their seeds.

The mild, wet weather we have had the past month was perfect for the development of the disease. I am also receiving pictures of some of the buckthorn cultivars. This is a picture of Fine Line® buckthorn (*Rhamnus alnus* 'Ron Williams') with the leaves covered with rust.

Fine Line buckthorn is a popular shrub with a narrow, upright form. The fine, feathery foliage is like another cultivar, the cutleaf glossy buckthorn (*Rhamnus alnus* 'Asplenifolia'). This cultivar is also susceptible to rust.

European elm scale

This soft scale has been in the Pest Alert a couple of times this season but had to include this picture that recently came in. The stem is covered with European elm scale (*Eriococcus spurius*). The oval, brown scales with their white waxy fringe are hard to miss!

This is a common scale insect on American elm. The sessile adults (pictured) and their mobile crawlers suck sap from the leaves and twigs of elms. Soft scales feed in the sugary sap of the inner bark.

Sucking insects – aphids and scales – that feed in the inner bark excrete copious amounts of a sticky liquid called honeydew. This sugary liquid becomes colonized with sooty mold which leaves a black, powdery film on the leaves and shoots. Many elm tree owners notice the blackening trunks and shoots before they see the scales.

We are approaching the end of the spring treatment window. The next opportunity for treatment is this fall. There are many treatment options but the use of insect growth regulators such as Pyriproxyfen (commonly sold as Distance®) is becoming more popular. An article in the May 2025 issue of Arboriculture & Urban Forestry notes that the European elm scale is showing resistance to many neonicotinoid insecticides such as Imidacloprid and Dinotefuran.

Oak galls secreting honeydew

A question was sent about the black, powdery film on the leaves and shoots of a young bur oak. The culprit is the rough bulletgall wasp (*Disholcaspis quercusmamma*). The feeding by the immatures of this insect causes woody, brown, pointed galls to form on the shoots.

The galls leak a honeydew-like substance that becomes colonized by sooty mold. This leaves a black, powdery film on the honeydew. The sugary honeydew attracts yellow jackets and other hornets. This may provide some protection to the gall wasps – like a tough big brother.

Plum pockets

Unlike Hot Pockets, plum pockets are inedible. 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 flesh and seed disappear. This is a fungal disease *Taphrina communis*. The disease begins as a small blemish on the developing fruit and ends with the fruit becoming hollow and spongy.

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.

Samples received/Site visits

Brookings County, Ash flower gall mite

The irregularly branched, fringed burl-like masses on the ash shoot are causing some unneeded concern. These are ash flower galls caused by the ash flower gall mite. The mite only feeds on the staminate (male) flowers that appear on ash. Since no one wants ash seeds, most of our cultivars produce only staminate flowers.

The mite does not harm the tree, only its appearance. The green galls turn black by fall. They stand out on a bare winter tree.

Custer County, Pine engraver beetles

The pine engraver beetles (*Ips pini*) are still in their first generation happily munching away in the fresh inner bark of recently fallen branches and limbs. The egg galleries created by the females have been constructed and eggs laid along their length. We found eggs hatching with very tiny larvae beginning to crave their own paths.

These larvae will feed for a couple of weeks then enter their resting stage, the pupae, before emerging as adults. If there are not green, fallen branches, these adults may attack standing trees. Fortunately, the rains have improved the health of the Black Hills ponderosa pines and made them less susceptible to attack.

Pine trees are most susceptible to attacks by the pine engraver beetle when the April to June precipitation is less than 75% of the average for this period. Most of the Black Hills is over the average precipitation for this period.

Grant County, A reverting dwarf Alberta spruce

One of the more interesting “What’s wrong with my tree?” visits is for reversion. This is a dwarf Alberta spruce (*Picea glauca* ‘Conica’) with unusual branches near the top. Except the unusual branches are normal, the dense, dwarf shoots and needles that compose the reminder of the shrub are the mutation.

The original dwarf Alberta spruce was a sport – a branch with dense, dwarf shoot and needles. This natural mutation was discovered in 1904 as brooms on some dwarf white spruce growing near a rail station near Lake Laggan, Alberta. The attractive, conical form was thought to have ornamental value, so specimens were collected and taken back to the Arnold Arboretum near Boston. It has been vegetatively maintained through cuttings. But sometime a shrub will have some branches revert to a normal white spruce.

If these “normal” branches are not pruned, their faster growth will eventually outgrow the cultivar. The solution is to prune out the normal shoots.

Jackson County, Banded elm bark beetles and American elm

One of the best indicators of an ash tree infested with emerald ash borer is blonding. Woodpeckers have developed a real taste for emerald ash borer. This insect lives just beneath the bark, so it is easily reached by the birds and after a few years there usually are a lot of larvae so plenty to eat.

Woodpeckers will scrap off the outer layer of bark in their search for this insect. This action reveals the lighter color bark beneath, a process called blonding. The blond bark will also have drill holes where the birds pecked through to strike a larva.

When I found the tree, it was presenting extensive blonding along the branches and trunk. Fortunately, it was not an ash, but an American elm (*Ulmus americana*). Woodpeckers will search for more than just emerald ash borers in ash trees. Any insect that is just beneath the bark, and in large numbers, is a target for these birds.

The American elms that line the streams throughout central South Dakota are often easy to spot – the trees are dead, and the canopies filled with blonded branches. I have looked at these riparian elm trees and have found them heavily infested by the banded Elm bark beetle (*Scolytus schevyrewi*).

This Asian bark beetle was first discovered in Colorado and Utah in 2003. It was found in South Dakota by 2005. This bark beetle is attracted to stressed elms. The long-term drought in south-central South Dakota has provided an abundance of hosts. The beetle can also serve as a vector for Dutch elm disease (*Ophiostoma*) so once a tree is attacked it quickly dies.

The infected trees can spread Dutch elm disease via root grafts to other elms. Between the beetle and the fungus, most of the elms along a stretch of a creek or river die within a few years. Landowners can slow the spread by promptly removing dead and dying elms and disposing of the wood – burning is best – during the winter. This will kill the overwintering beetles.

Minnehaha County, Woolly elm aphid

The curled American elm leaves were from the feeding by the woolly elm aphid (*Eriosoma americanum*). A close relative, the woolly apple aphid (*E. janigerum*) can cause similar damage to elms.

These aphids begin sucking sap from the leaves as they open. They also inject a toxin into the foliage. This toxin causes the leaf to curl and twist. The woolly elm aphid feeding causes the margin of one side of the leaf to curl completely over so that it almost appears as a gall.

If you pull open the curl, the interior is filled with fuzzy white aphids. The winged form of the aphid is appearing now, and these are taking flight to the alternate host, serviceberry. They feed on the serviceberry roots for several generations and another winged generation of adults will fly back to the elm in fall to lay eggs in bark crevices. The eggs overwinter and after hatching, the young aphid crawls out to a leaf and begins feeding.

The aphid does not cause any serious harm to the elm host. They detract from the tree's appearance and the sticky honeydew produced by their feeding is an annoyance but no harm to the tree's health.

Treatments are generally not needed and at this time of year are ineffective as the insect is leaving the elm.

Turner County, Cottony maple scale on basswood

Cottony maple scale (*Pulvinaria innumerabilis*) is very noticeable during June. The adult female scales – the only one out now – are small (1/4 inch), flat oval brown insects that lack legs, wings, or antennae. They are just beginning to develop their white cottony eggs masses called ovisacs.

These egg sacs expanding from beneath the shell look like Jiffy Pop. But rather than containing popcorn, these sacs release tiny mobile crawlers starting about a week ago. The young crawlers migrate to the leaves to feed. They feed by sucking sap from the leaves and excrete a sticky, sweet substance called honeydew.

Cottony maple scale infests more than just their namesake - maples. Buckeyes (*Aesculus*) and lindens/basswood (*Tilia*) are also common hosts. Many injectable systemic insecticides cannot, and should not, be used on lindens because of their flowers which are extremely attractive to bees and other pollinators.

If the tree is small, insecticidal soaps are effective. But read and follow the label very carefully as soaps can be phytotoxic if used improperly. Maples and buckeyes can be treated with insecticides containing Dinotefuran that are labelled for this use. These may be applied as a soil drench or injection.

Foliage applications of insecticides containing Bifenthrin or Permethrin, and labelled for this use, can be applied once lindens/basswoods have finished flowering.

Union County, Herbicide injury to honeylocust

This spot was to look at declining trees in a large lawn. There were different trees species on the site – ash, basswood, honeylocust and silver maple. The honeylocusts were almost bare with twigs laced with hanging dead foliage. Some of the basswood had wilting leaves but the ash and silver maples were fine.

The pattern was suspicious, even more so since the lawn was almost weed-free. When I asked what herbicide was used, the reply was 2,4-D. I asked to see the labelled and it did not contain 2,4-D. Instead, it had Aminopyralid and Florpyrauxifen-benzyl.

The label had a common restriction associated with these active ingredients – do not use within the root zone of desirable trees. The root uptake of this herbicide can affect some tree species. But it also added a special caution for use around leguminous trees such as honeylocust. The label even had instructions on how to use this herbicide to kill woody brush such as honeylocust!

The basswood will recover but the honeylocust may be lost. Always read and follow the label!