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 inclusion 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

Spring weather is alternating between warm and cold, wet, and dry. A typical South Dakota spring. But it is nice to see the rain and warmer weather after a long, cold winter.

Here are the growing degree days (GDD-base 50) for communities across the state.

Aberdeen	218
Beresford	422
Chamberlain	389
Rapid City	307
Sioux Falls	387

Common lilacs (*Syringa vulgaris*) are flowering in the southern half of the state. We typically see them begin to flower about 320 GDD.

The Ohio buckeye (*Aesculus glabra*) flowers are just beginning to open.

Despite the rains, dry conditions persist across much of the state. Except for the west-central and northeastern parts of the state, the state is classified as either abnormally dry or moderate drought.

Treatments to Begin Now

Clearwing ash borer

This was the most common borer in ash before the arrival of emerald ash borer. The significant difference is that the clearwing ash borer is a native insect so can only successfully attack stressed trees.

Treatment with an insecticide containing Permethrin as an active ingredient can begin now. The lower six to ten feet of the ash trunk should be sprayed to protect susceptible trees. The insecticide will kill the adults as they are walking on the bark to lay their eggs.

The adults with their banded abdomen and smokey brown wings resemble wasps. A clever way to get birds and people to leave you alone! Fortunately, the borer lacks a stinger so are only a threat to ash and lilacs. People are safe.

The insecticide will also kill any newly hatched larvae before they burrow into the wood. Systemic treatments are ineffective so injecting a pesticide or pouring one around the soil are not practical means of managing this borer.

The adults are usually out flying about a week or so after Vanhouttee spireas begin to bloom; the shrub is just starting to flower now. You will also know the adults are flying when you see the pupa skins sticking out of the emergence holes on infested trees.

All ash trees do not need to be sprayed, just ones that are showing signs of stress from drought or other stressors. A healthy ash tree usually is not susceptible to this borer.

Lilacs that have canes less than one inch in diameter at the base are also not susceptible to this borer, but it is common in the older canes of mature lilacs.

Pine needle scale

The white bumps on pine needles are the immobile stage of the insect called pine needle scale (*Chionaspis pinifoliae*). This is a common pest of mugo pines, but can also be found on Austrian pines, and occasionally, Scotch pine and even Colorado spruce.

All the scales seen on the needles are now dead. But the scales that are on the newest needles, the ones formed last year, have eggs beneath the shell of their dead mom. Once the eggs hatch, the first nymph stage is mobile, a common characteristic of armored scales.

These nymphs are pinkish red, turning a tannish brown as they settle and begin to feed. The nymphs feed with their piecing-sucking mouthparts by sucking the contents of ruptured cells. This is a different feeding site than the soft scales that piece the phloem cells to extract nutrients from the sugary sap. The soft scales produce honeydew.

There are two generations per year in the region with the first-generation crawlers hatching at 300 GDD, about the time common lilac is in full bloom. The first-generation hatch over a brief period, only about a week or two. The second-generation crawlers begin hatching at about 1400 GDD, about a week after Ural falsespirea begin to bloom. The second-generation crawlers hatch over a longer period, often several weeks.

Treatments start at about 350 to 400 GDD as the crawlers are beginning to settle. We should be there by next week in much of the state. The most common treatment is a foliage spray of horticultural oil. The oil will suffocate the young crawlers but have minimal impact on the many insects that feed on the scale. Oils can damage needles if misapplied so read and follow label directions exactly!

The other option is a foliage spray, lower trunk spray, or soil drench with an insecticide containing dinotefuran as the active ingredient and labeled for scale.

Timely Topics

Emerald ash borer update

We are continuing to monitor insect development during our surveys. The insects are in either the prepupa or pupa stage with the majority as pupa. The pupae are beginning to darken and develop recognizable features such as wing covers (elytra) and eyes.

Emergence is still expected to start in about two weeks as we reach 550 GDD in Sioux Falls. Emergence may begin earlier in Dakota Dunes.

Patches of straw-color needles appearing on pines

It is not hard to notice the pines with straw-colored pines in eastern South Dakota. The discoloration appeared within the last week. Only last year's needles (2022) are affected. The previous year needles (2021 and older) remained their normal green.

These shoot tips presenting with straw-colored needles may randomly appear throughout the tree though usually the upper canopy is more affected than the lower canopy. Scotch pines (*Pinus sylvestris*) are the species most affected but Austrian pines (*P. nigra*), and eastern white pines (*P. strobus*) are presenting with similar symptoms. An occasional ponderosa pine (*P. ponderosa*) can be seen with a few straw-colored needles on their shoot tips.

This is not a disease but a disorder. The causal agent is not a fungus, bacteria, or nematode. We can blame the weather last fall for setting up the problem and winter for creating it.

The warm, dry fall resulted in pines, particularly pines not native to central or western United States, failing to transition to full dormancy before winter. Much of the injury occurred in late fall and early winter during the cold, windy weather.

The sudden appearance of warm weather resulted in the dead needles turning a straw color as the rest of the tree started greening up. The injury has only affected the newest needles. The shoots and buds are unaffected by this winter injury.

The straw-colored needles will soon fall but the buds may still open this spring and new foliage will appear. This will leave the affected trees appearing a little more open than normal, but they may recover in a year or two.

The key to recovery will be reducing stress on these trees during 2023. The trees will require irrigation if the weather returns to drought this summer.

Thrips in apple blossoms

I have received samples, pictures and calls from apple growers and homeowners over the marginal browning of the opening flowers. The petals are stunted, cupped, and have brown to black margins. If an affected flower is opened, numerous small insects will scurry out.

These are thrips. The adult thrips are about 0.03 inches long, light to dark brown with black antennae and two light-colored fringed wings laying across their back. The nymphs lack wings and are yellow. The adults and nymphs feed by piercing tissue and sucking sap.

The adults are attracted to apple flowers (and any dandelions beneath the trees). The primary damage is not the distorted blossoms but to the young developing fruit. The adult thrips puncture the tiny fruit to lay their eggs. The punctures appear as russeted dots with a small yellow halo on the mature fruit.

E-samples

Seeds on silver maples

People are sending in pictures and calling about all the “pods” on their maple trees. These pods are the fruits of a silver maple (*Acer saccharinum*). The fruits are called a samara, a winged seed, about an inch long. They hang in pairs from a slender stalk.

Silver maples flower in early spring and form their seeds very quickly. The dispersal and ripening of the seeds are timed with the receding of the spring floodwaters. The new layer of soil laid down by the retreating water provides the perfect seed bed for this floodplain species.

The seeds will be dropping soon, spinning down on their wings. Another mess to clean up.

Squirrels nipping elm tips

There are many elms that are dropping leaf covered shoot tips. It almost looks like autumn beneath some of these trees!

If you look closely at the base of the severed shoots, they are cut at a 45-degree angle. They did not snap off; they were cut off by squirrels.

Why squirrels do this pruning is open for discussion and there are various theories; the inner bark of the shoot tips are sweet in the spring, the squirrels are nipping off shoots so they can eat the seeds from the fallen tips, among others. They might do it just to annoy us!

The problem with rootstocks

This picture was accompanied with the question; “Why did my peach tree come back as a plum?” The reason is that plums are sometimes used as the rootstock for peach trees. All our fruit trees are grafted. The roots are not from the same tree as the top, the variety that was purchased.

While apples and crabapples are used as rootstock for apple varieties, stone fruits such as peach may be placed on different species – peach on plum for example.

If the fruit tree dies back to the ground, what sprouts back is not from the original variety but from the rootstock. This is one reason any suckers that appear around the base of a fruit tree should be removed.

Samples received/Site visits

Davison County, Pine wilt disease

A sample of a dead Scotch pine was submitted to check for pine wood nematode. This is the microscopic roundworm that is responsible for pine wilt disease. Pine wilt is a lethal disease of Austrian and Scotch pine. The trees will appear healthy in the spring and usually dead by fall.

The sample was positive for this nematode.

Hughes County, Discolored spruce

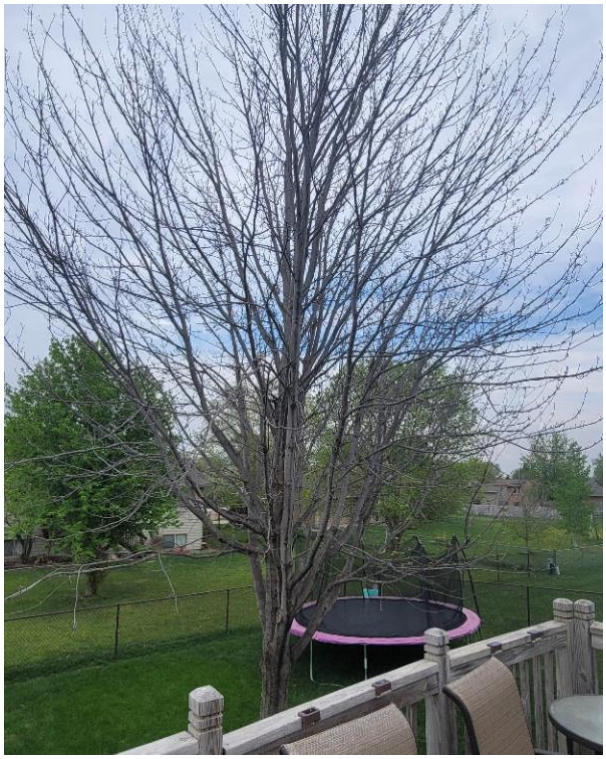
This is a small spruce that has discolored needles. The needle discoloration appeared this spring.

The tree had been putting on excellent growth and the tree owner was watering during the hot weather last summer. I suspect this is the same problem as discussed under **Timely Topics** on discolored pine needles. Spruce needles do not turn straw-colored but more purple.

I have received several samples and questions on small spruce with similar symptoms. I will be following up on this tree with a site visit.

Minnehaha County, Winterkill on maple

I still receive calls to stop by to look at young maple trees that are not leafing out this spring or only the lower third has foliage. Usually when you scrape the bare shoots, the tissue is brown beneath the bark.



This is winter kill. The shoots on these maples died from a combination of a warm, dry fall and a long, cold winter.