



Tree Pest Alert



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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

Cooler temperatures are now the norm. We will still see a few days in 90s this fall, but the trend is for cooler weather. Here are the accumulated Growing Degree Days-base 50 (GDD) for communities across the state. This has slowed with the cooler weather.

Aberdeen	2,680
Beresford	3,140
Chamberlain	3,200
Rapid City	2,590
Sioux Falls	3,150

Precipitation has been above normal for the past 30 days in much of the state. This has not eliminated the drought intensity in much of eastern South Dakota. The region around and between Brookings and Sioux Falls received less than a third of normal precipitation. They are still under severe drought.

Fall color change on conifers

I am receiving calls about yellowing foliage on arborvitae, pines, and spruce. The yellowing of the interior needles in the fall is normal. Evergreen does not mean "forever green."

Pines and spruce shed their oldest needles at this time of year. These needles often change color from their normal green to reddish brown to yellow prior to being shed. If we have a sunny fall, which is occurring in much of the state, these soon-to-be-shed needles can turn a golden yellow.



Arborvitae also go through a color change at this time of year. The color change on these evergreens appears more as strips or ribbons running through the plant. Not just the interior foliage becoming yellow.

Treatments to Begin Now

Water

As mentioned in previous *Pest Alerts*, now is the time to water your trees and shrubs to improve winter survival. The desiccation injury we saw on birches and maples last spring – dead tops – was due to these trees going into the 22-23 winter dry.

Timely Topics

Emerald ash borer update

Emerald ash borer sampling continues in Sioux Falls and Canton. Most of the larvae are in their third instar, but we are seeing fourth instars feeding in the galleries beneath the bark. But feeding is almost done for the year.



The fourth instar larvae will burrow deeper into the sapwood in October. There are even a few already beginning to burrow into the sapwood – going to bed a little earlier than the rest. The larvae form a cell in the sapwood to spend the winter. They do not resume feeding in the spring but become pupae, then emerge as adults.

Chestnuts versus buckeyes

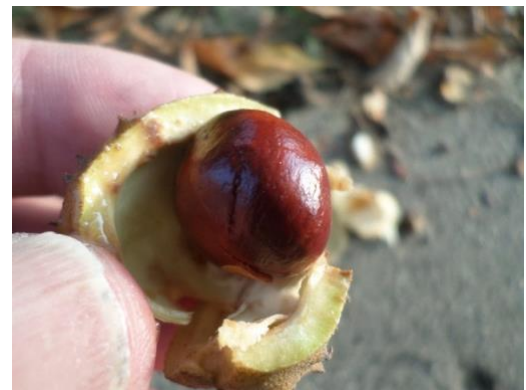
This is the time of year when I get lots of questions about eating those ‘chestnuts’ that are falling everywhere. First, these are *not* chestnuts. The American chestnut (*Castanea dentata*) is not adapted to our growing conditions; the furthest West that I have found one is at the Hodgson Arboretum at the University of Minnesota Experiment Station in Waseca, Minn. (a nice little arboretum, well worth the drive over if you are in the area). There is also a small one in Brookings County that dies back to the ground every year.

At the top of the column is a picture of a chestnut fruit and nut. Notice the long spines on the fruit which are excellent protection from squirrels gathering the nuts too soon. There are few American chestnuts anywhere due to the disease Chestnut blight which entered the country from Asia in the late 1800s and almost eliminated the species – once one of the most common trees in the Eastern Deciduous Forest – within 50 years.



The Chinese chestnut (*C. mollissima*), which is resistant to the disease, is not hardy here. I do not know of any in South Dakota or western Minnesota. The ones planted at the Minnesota Horticulture Research Center near the Twin Cities have been short-lived.

What people bring or send in as chestnuts are capsules (fruit) or black shiny seeds from the buckeye tree (*Aesculus glabra*). Buckeyes have very tiny spines on an otherwise smooth fruit. This is a common tree in our region since squirrels plant them for free in every garden.



The seeds contain the poisonous glycosides aesculin and saponin aescin. Ingesting the raw seed can result in muscle twitching, vomiting and abdominal pain, diarrhea, and death. The raw nuts, tender shoots and leaves, particularly wilted leaves, are also toxic to horses and cattle (rabbits too, but they are smart enough not to eat them).

Squirrels seem to do fine eating the raw seed and it contains a sweetener that (at least to a squirrel) is sweeter than sugar. The nut can be made safe for human consumption by roasting and leaching. They were used as a starchy food by Native Americans, but I do not recommend even trying to do this.

E-samples

Ash seed weevils

I receive calls every late summer about tiny worms dropping from ash trees. These are the larvae of the ash seed weevil (*Lignyodes*). The adults, as with all weevils, have a unique bend snout with antenna. The adults are flying in mid-summer. They deposit eggs into the seeds.

Adults are rarely seen or noticed. The fallen larvae that litter gutters and sidewalks in late summer are the ones people see. These white, leg-less larvae are smaller than rice grains. Once they reach the ground, they burrow into the soil to spend the winter.



Ash seed weevil can destroy most of the seed crop. This is only a concern for those that collect ash seed – not that many are still in that occupation.

Bucks rubbing trees

Dale, from Lewis & Clark Recreation Area, sent this picture of a linden trunk scraped by a buck. The rubbing begins in mid-September as the bucks lose the velvet coating on their antlers. The coating becomes a little itchy in the fall so deer speed up the shedding process by rubbing the velvet off. The rubbing also leaves a scent that deer use to mark territory.



Almost any small tree will do for a rub, but there are some preferences. The bucks like to rub trees that already have a fragrance to the wood so young pines, cedars and sumacs are favorites. They also like young trees with smooth bark so aspen, linden and maples are common rub trees.

Sometimes the scraping just shreds the outer most layer of bark, as appears in this instance. These trees usually recover from this light injury as the cambial tissue was not affected. But if the deer rubs deep enough to expose the white sapwood, the tree's recovery is in doubt. If the sapwood is exposed for more than two-thirds the circumference of the trunk, the tree will not recover.

Stinkhorn appearing on lawns

This unusual mushroom is appearing in lawns across much of the state. They are easy to spot as the horn-like (or male anatomy-like) mushrooms can become six inches or more tall. The tip or cap to the mushroom is covered with a foal-smelling slime – hence the name “stink.” If you put your nose close to one, you will be sharing space with lots of flies.



Samples received/Site visits

Clark County, Dogwood sawflies

The foliage in half the dogwood hedge was reduced to ribbons of leaf veins and petioles along mostly bare branches. The few leaves that remained on these bare branches had large notches like someone took a big bite out of them.



The insect responsible for the bites was on the underside of the leaves. This is the dogwood sawfly (*Macremphytus*). The larvae look like caterpillars but do not become butterflies and moths. They become wasps. The adult wasps are not a concern to us. They do not sting. Instead, they use their ovipositor to saw small slits in the leaf veins to lay eggs.



Once the eggs hatch the larvae will feed in groups, comping through a leaf right now to the veins before moving to the next leaf. They can reduce the foliage in a dogwood shrub to lace in a week. Treatment is when the larvae are first beginning to feed – now it is a little late.

Minnehaha County, May 2022 Derecho aftermath

We are still seeing the aftermath of the storms that swept across the state in the spring and summer of 2022. This was a visit to look at a leaning tree surrounded by mushrooms.

The tree has a 10-degree lean, with a mound of raised soil on the opposite side of the lean. The tree canopy was mostly bare and was filled with recently dead branches. The tree owners said it was a healthy and straight tree before last year's storms.



The mound of soil was covered with small mushrooms with tan-brown caps. These are inky caps, a general term to describe a large group of mushrooms that liquify into an inky goo at maturity. These mushrooms feed on decaying plant material such as decaying tree roots.

The high winds pushed the tree enough that roots on the windward side were uprooted and snapped. The loss of the roots meant less water was absorbed by the tree and this resulted in a canopy decline. The severed roots are decaying and become a food source for the fungus.

Putting this all together means that the stability of the tree has been compromised. It will not recover. Since the tree is over a busy street, removal is the best option.

Yankton County, Buckthorn identification

I have been receiving samples (and pictures) of this plant accompanied by the question "Can we eat the fruit?" The short answer is NO!



This plant is the common buckthorn (*Rhamnus cathartica*) easily identified by the single thorn at the tip of each twig. The dark purple to black berries found on this tall shrub in late summer and fall should not be eaten or used in jams or jellies. Eating the fruit will result in sudden and explosive diarrhea.