South Dakota State University Extension

Tree Pest Alert

December 10-17, 2025 (biweekly October-March) Volume 23, Number 39

In This Issue

Samples

John Ball, Professor, SDSU Extension Forestry Specialist & South Dakota Department of Agriculture and Natural Resources Forest Health Specialist

Email: john.ball@sdstate.edu

Phone: 605-688-4737 (office), 605-695-2503 (cell)

Samples sent to: John Ball
Agronomy, Horticulture and Plant Science Department
Rm 314, Berg Agricultural Hall, Box 2207A
South Dakota State University
Brookings, SD 57007-0996

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

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

Plant development for the growing season

We have entered the deep freeze of winter. Some East River communities saw temperatures plunge to -18°F. The Black Hills was our warm spot with daytime highs of 50 to 55°F on some days and nights usually no lower than the single digits.

The cold temperatures have stopped the accumulation of growing degree days (GDD base-50). We accumulated only 4 to 10 GDD during the past two weeks in Chamberlain and Rapid City. The other communities on the list below did not accumulate any GDDs.

Here is the current GDD accumulation for communities across the state.

Aberdeen	3061
Beresford	3673
Chamberlain	3735
Rapid City	3084
Sioux Falls	3624

The forecast shows a warming trend with temperatures in the 40s to 60s over the state during the next two weeks. This is great for us, not so good for our trees. Woody plants are like some folks – set in their ways and do not like sudden changes.

Woody plants operate on a strict timetable. Wake up in the spring, grow all summer, go to bed in the fall, and sleep all winter. The timekeepers for these events are not the same.

Getting ready for bed in the fall is triggered by decreasing day length and exposure to below freezing temperatures. Waking up in the spring is triggered by a set number of hours of exposure to near freezing or freezing temperatures (chilling requirements) and then warm temperatures.

Trees are now in their sleep mode. Once they have fulfilled their chilling requirements, exposure to warm temperatures is enough to start the waking process. They gradually lose their tolerance to extreme cold during this process.

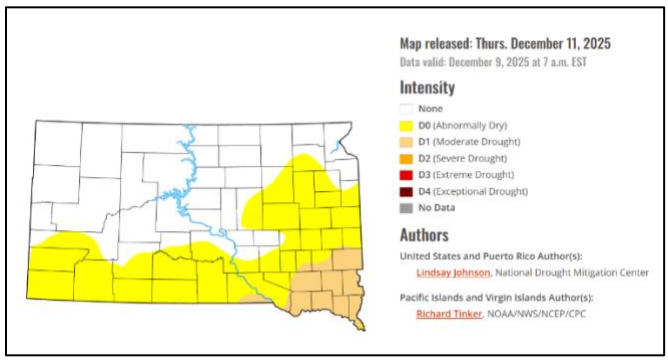
So, if the trees have fulfilled their chilling requirements, warm weather – such as we will see later in December – can be damaging. Fortunately, winter has just started so trees are not programed to wake up yet. The warm weather will not cause them to break dormancy or lose tolerance to cold.

But warm temperatures may result in desiccation injury to their buds and shoots. The foliage of evergreens can also be affected. This is why anti-desiccants (anti-transpirants) are a popular tree treatment in the Rapid City to Spearfish area where winter temperatures are often in the 40s to 60s. These are films of waxes, latex or even plastics that cover the foliage, buds and terminal shoots and reduce water lost during winter warm spells.

Drought monitoring

We are still sliding back into drought. A little more than half the state is drought free. Another 40 percent of the state is classified as “Abnormally Dry.” The southeastern corner of the state, about 7 percent, is classified as “Moderate Drought.”

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



Treatments to Begin Now

Get the deer protection on

Deer are browsers and they do not mind making your landscape or windbreak into their lunch. The best means of preventing deer browsing is fencing but this is usually impractical if protecting shrubby or a line of evergreens.

Fencing can be used to protect a fruit tree in the yard. The fencing is woven wire supported by t-posts. The wire must be at least five feet high. This only protects an isolated tree and is installed just outside the canopy (called a micro-enclosure). If protecting a grove of trees, the fencing must be at least eight feet tall. The best fence system is a four-foot fence placed four feet out from the eight-foot fence.

Spray treatments to deter deer work either to frighten the deer or make the plant unpleasant to eat. The contact repellents sprayed on the plant have an unpleasant taste and odor to discourage browsing. A common active ingredient is thiram. This is a fungicide that has a very unpleasant taste (to a deer), so they avoid the treated plants after a small nibble. But the whole plant must be covered otherwise a smart deer will nibble on any shoots that were missed during the spray.

Repellents containing putrescent egg solid as the active ingredient also can be effective. These work on fear (smells like predators) so are an area repellent. The repellent should be at least 35 to 40% egg solids. The rotten egg smell is enough to discourage deer from hanging around (or people!).

Timely Topics

Emerald ash borer update

We continue to monitor larval development of emerald ash borer (EAB) from Dakota Dunes to Milbank. All the larvae examined are in their overwintering J-shaped form. We will not see any further changes until they start waking up next April.

Oh Deer!

Deer are nature’s weed-whackers. But they are fussy weed-whackers with preferred tastes. If preferred food sources are not available, however, deer will sometimes eat anything, or at least nibble on it. Woody twigs and buds are not nutritious enough in themselves to sustain

deer during the winter. They will paw snow to reach more suitable food. But if the snow is deep, twigs and buds may be the only choices.

Spruce, for example, is not considered a preferred food source for deer – more starvation food. But several years ago, during a winter with heavy snowfall that restricted deer movement, deer stripped spruce out of shelterbelts in eastern South Dakota.

Deer do prefer some woody plants over others. Some of the ones they find most palatable are:

Acer saccharium – silver maple
Cornus – dogwood AKA deer candy
Malus – apple and crabapple
Populus – quaking aspen
Salix – most willows
Sorbus - mountainash
Taxus - yew
Thuja occidentalis – American arborvitae
Tilia americana – basswood

There are also some plants that are rarely browsed. There are no deer-proof plants as they will at least nipple on almost any woody plant. There are at least several plants listed below that someone has had browsed by deer in their yard. With that said, here is the list of *rarely* eaten plants:

Berberis thunbergii – Japanese barberry
Betula nigra – river birch
Betula paperyrifera – paper birch
Buxus microphylla – Korean boxwood
Caragana arborescens - Siberian peashrub
Catalpa speciosa – northern catalpa
Cercis canadensis – eastern redbud
Cotinus coggygria - smoketree
Ginkgo biloba - ginkgo
Philadelphus coronaries – sweet mockorange
Picea – spruce
Pinus – pine, except ponderosa pine
Platanus occidentalis – sycamore
Potentilla fruticosa – potentilla
Robina pseudoacacia – black locust
Syringa – lilacs

Again, this is not a perfect list. Deer do not have to eat a plant to damage it. Deer will rub on almost any woody plant. Some of the listed plants such as forsythia, lilacs and viburnums are considered “deer proof” but are favorite foods of rabbits!

E-samples

Tree trunk cracked during cold weather

This crack appeared during the return of mild weather following the subzero temperatures of last week. While it opened following the abrupt temperature change, the callus tissue along the edge of the crack is an indication that it started long ago.

These vertical cracks are also called frost cracks. The genesis of the crack is either a wound – such as being hit by a lawn mower – or a weak branch union. The defect often occurs years or decades before the crack is noticed.

The start of the crack begins deep inside of the tree where the original defect began. The rapid temperature change from warm to cold to warm causes uneven expansion and contraction of the trunk which causes the crack to propagate to the surface.

The crack may increase the risk of tree failure. The tree’s risk should be assessed by a professional arborist trained in this field. The crack cannot be easily repaired. The best option is removing the tree if the likelihood of failure is high.

Watercore in apples

Watercore was discussed in the October 29-November 5 *Pest Alert*. The appearance of a translucent, water-soaked center to the fruit is due to a disorder called watercore This is caused by the accumulation of fluid filled with sorbitol, a sugar alcohol. This soaks up water and gives a glassy appearance to the interior of the apple. There is no outward appearance of the disorder.

The sugar-alcohol content leads to browning of interior flesh. It also results in fermentation of the core. Not appetizing to people but hornets like sweet, rotting fruit.

The reasons for watercore are not entirely clear. It is more common in later ripening fruit cultivars. It is also most common in over-ripe fruit. This is another reason to pick apples when they are ripe.

Samples received/Site visits

Lincoln County, Banded ash borer adults in green firewood

Most borers do not overwinter as adults but there are some exceptions. One is the banded ash borer (*Neoclytus caprea*). The adults are about 3/4-inch long, black to deep brown with yellow marking on the wing covers (elytra). The marking at the top of the elytra almost forms a circle.

This common (and native) wood borer infests recently dead and dying ash trees. If the infested tree is harvested in the fall and split as firewood, it can be filled with banded ash borer pupae and adults. When this wood is brought into the house during the winter, the adult beetles -thinking its spring – will emerge. They will mostly hang out on the windows – a source of entertainment for any cat. They cannot attack wood furniture or flooring.

Lyon County, Smooth patch disease of bur and white oaks

I rarely see this disease west of the eastern border with Minnesota, but the disease is quite common in that state. Infected trees have abrupt changes in bark texture from rough furrows to smooth patches.

The sloughing of the rough bark is due to an infection by a fungus, most commonly *Aleurodiscus oaksii*. The fungus is a saprophyte, living on dead corky bark, so the condition is not threatening to the tree.

Smooth patches are most noticeable during the winter. Bright sunlight shines through the bare trees which shows the contrast between the light-gray smooth bark and the normal darker brown bark.

Minnehaha County, False-cypress winter color

Some of our evergreens are not known for good winter color. False-cypress (*Chamaecyparis*) is a mixed bag. Some cultivars such as ‘Golden Mop’ (*Chamaecyparis pisifera* ‘Golden Mop’) have the evergreen foliage turn a brighter yellow, almost gold. But others such as the threadbranch cypress (*Chamaecyparis pisifera* ‘Filifera’) pictured below may turn a dull bronze. Either way, the color change is normal and no concern.