



Tree Pest Alert



February 15-22, 2023

Volume 20, Number 4

In This Issue

Plant Development.....	1
Treatments to begin now.....	1
Timely topic.....	2
Emerald ash borer update.....	2
Update on catalpa seed germination.....	2
Norway spruce – another alternative evergreen.....	2
E-samples.....	3
Critters gone wild! More rabbit and deer damage.....	3
Windbreak redcedars split by snow.....	3
Samples received/site visits.....	4
Codington County (rabbit damage on burning bush).....	4
McCook County (squirrel damage on hackberry).....	4

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 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

The South Dakota Department of Agriculture and South Dakota State University are recipients of Federal funds. In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability (Not all prohibited bases apply to all programs.) To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW Washington, DC 20250-9410, or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

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

Plant development for the growing season

We are starting late winter roller-coaster weather; warm and sunny one day, snow and sub-zero temperatures the next. These fluctuations are tough on plants, they cannot come inside to wait it out.

While there are no visible changes in the appearance of woody plants as they await spring, they are slowly losing their winter hardiness. Trees that could easily survive -30°F in early January, might suffer injury at -15°F now.

We may see a few days of dips in the minus teens his week. If so, expect to see some tip dieback and delayed leaf-out this spring on some of our marginally hardy trees such as red maple (*Acer rubrum*). Many cultivars of this species can tolerate -28°F in early January but only -12°F by mid to late February.

Treatments to Begin Now

Use caution removing snow and ice from trees

The heavy snows and ice are leaving many evergreens with bent boughs. Josh, a SDDANR urban and community forester out in Rapid City, took this picture of a spruce bending under the weight of snow. Tree owners should be careful trying to rid the evergreen branches of this weight.



Heavy snow and ice can break branches but so can people beating them. The best way to remove snow from evergreens is place a broom or rake on the underside of a branch and push upward with a few strokes to shake the snow free. Assuming it is a small evergreen trees, less than 10 or 12 feet tall, start at the top and work your way down.

If ice is covering the branches it is best just to let it be. Trying to break the ice off the branches is likely to result in a lot of broken twigs and shoots. Do not spray water on the ice. Any ice that melts is will just refreeze and possibility add to more ice buildup.

Timely Topics

Emerald ash borer update

No, do not panic. Emerald ash borers are not emerging in mid-winter like an abominable snow borer. We are forcing emergence under some controlled indoor conditions to study adult development. These borers are just waking up a few months early because of the warmth.



The infested logs, about 2 to 3 inches in diameter and 10 to 12 inches long, each had three or four adults emerge. This is a good reminder to never move firewood or tree debris, branches and trunks, out of the quarantine counties; Lincoln, Minnehaha, Turner and Union. All it takes is one small infested branch to start a new infestation somewhere else this spring.

Update on catalpa seed germination

I had a catalpa capsule (pod) submitted as a sample earlier this year (January 15-22 issue). I mentioned that the seeds are easy to grow into a tree. They only require a few weeks of exposure to the cold to germination. No other treatment is necessary. If three wafer-like seeds are planted in a small pot, they will germinate in about three weeks or so.

I planted three seeds each in several pots and set the pots in bright indirect light. Right on schedule, all the seeds began to germinate. Each pot now has three small catalpas sprouting. The germination of catalpa is always good, but this time it was 100 percent.

I will let them grow for another week then decide which of the three in each pot I keep and cull the other two. It will be mid-May, after the danger of frost has passed before I can move the trees out to a spot in the garden.



Norway spruce – another evergreen choice

Spruce are valuable yard and windbreak trees. They have an attractive form and provide a dense screen. Colorado blue spruce, our most popular spruces, is also plagued by numerous pests from canker diseases to insects that burrow through the needles. It is a nice tree for about the first 20 years but often begins a slow decline from that point (and sooner if spaced in a belt less than 16 feet apart).

White spruce, what we called a Black Hills spruce, is often a better choice. This tree is widely used but people are always looks for more options. One spruce that is receiving more interest is Norway spruce (*Picea abies*).

A mature Norway spruce has a distinct appearance. The tree has a slender, pyramidal form with branchlets hanging from the upright branches. Norway spruce also has long cone, four or more inches long. These are the cones on the pendulums of old grandfather clocks some might remember.



The tree can be found throughout eastern South Dakota from Aberdeen to Dakota Dunes and then out in the Black Hills. There are some nice specimens in Rapid City. The growth rate is similar to white spruce, it grows faster than white spruce on good sites, but slower on

droughty soils. Expect about 1 foot of growth per year for the first 20 years or so. The mature height of Norway spruce is about 40 to 50 feet.

This European tree is native across most of Scandinavia and into central Europe. There are also a few (planted) trees in Nuuk, the capital of Greenland! While it will take cold, it does not perform well where exposed to desiccating winter winds.

I have seen it used in windbreaks from Brookings south. There are a few belts that are more than 50 years old and the trees are still going fine. But this tree is not recommended for planting in open, exposed sites north of Brookings. Hansen in his 1930 bulletin *Evergreens in South Dakota* mentioned the tree did not tolerate drying winds.

North Dakota released a hardy cultivar, the Royal Splendor® Norway spruce (*P. abies* 'Noel') that is less sensitive to this winter injury. It may be a better choice for ornamental landscapes in the northern half of South Dakota. The cultivar is also listed as deer resistant – a valuable characteristic this winter!

E-samples

Critters gone wild!

The pictures keep coming in of damage to trees and shrubs by rabbit and deer. The first image is a small maple tree girdled by rabbits. Maples are one of the favorite browse foods for bunnies. The inner bark is sweetens as we get closer to spring and it is only covered by a thin layer of bitter bark in young trees.



Once the rabbits have chewed completely around the stem, the tree is not likely to live. It probably will sprout back from the base but if it is a fruit or ornamental tree, the roots are not the same tree. This means the new tree that grows from the roots will not be the same tree that was planted.

If the stem is girdled completely around the trunk to a length of a few inches or more it is probably best to remove the young tree and plant a new one this spring.

Josh, the SDDANR forester that also sent in the snow bent evergreen discussed earlier in this issue, also emailed this timely picture of deer rub. I say timely as the

stone mulch bed is in the shape of a heart – happy Valentine Day!

Deer rub young trees with smooth bark during late fall through the winter. The bucks begin rubbing the stems of young trees in fall to remove the velvet. They also rub in the winter to mark territory.



The preferred trees are small trees, 1 to 3 inches in diameter, and have smooth bark. Unfortunately, the thin bark on these young trees is easily scraped away. This exposes and often kills the underlying tissue that functions as the circulatory system; moving sugars from the leaves to the roots and water from the roots to the leaves.

If the trunk is just lightly scrapped, the exposed wood is not white but green, and there are loose fibers, the tree may recover. It might be best to just wait and see if the tree recovers this summer. Nothing to do until then. Do not sand the wood down to remove the fibers or use a knife to cut away any loose bark – just let it be and see what happens.

Windbreak redcedars split by snow

I received some pictures of an 8-year-old redcedar windbreak by Wessington Spring. The young trees were buried by heavy snow. This resulted in a lot of breakage; some have their trunks split to the ground.

The question was whether the trees could be saved. It depends on what is meant by save. The trees may survive the damage but they may be left permanently deformed.

Evergreens such as redcedar do not have the ability to sprout back from broken branches as do deciduous trees. They also cannot sucker up from the base if the trees are cut back to the ground.

If a long, live branch is below the split trunk, it may be trained into a new leader. Cut the trunk off cleanly just above the branch then carefully bend the branch to in an upward position. It will have to be staked this year to hold it upright.



This fall, the bent branch may be assuming the role of the leader and continue to grow upward in the years to come. However it might still remain a branch and just form a more upright, but spread out like a shrub.

Samples received/Site visits

Codington County, Rabbit damage on burning bush

The favorite winter food for a rabbit is burning bush (*Euonymus alata*), aka winged euonymus or rabbit candy. The thin layer of inner bark is sweet tasting to a rabbit. They will shred off the corky outer bark to expose this thin, tasty layer and carefully browse it off leaving the white wood picked clean – kind of like eating corn on the cob.



Since they browse on the inner bark and avoid the sapwood, water will still move up the stems in the spring. But the inner bark moves the sugars from the leaves down to feed the roots. If the inner bark is removed completely around the stem and over a long distance, a few inches, the roots will slowly die and with that the leaves will wilt this summer.



This shrub has so much damaged done it is not likely to survive. Each stem has been girdled completely around their trunk and over a distance of six inches or longer.

McCook County, Squirrel damage on hackberry

The question was about all the twigs falling from their tree. The tree is a hackberry and is a favorite for gray squirrels. These aerial rodents will browse the inner bark and this damage often girdles branches. But right now, they are nipping branch and twig tips.



The snow beneath some hackberry trees is littered with small twigs that have an angled cut at their base. Why they do this during late winter is unknown. It might be as simple as a means of getting the dried fruit hanging from the twig tips. Squirrels do feed on the fruit.

Regardless, the damage is not enough, even if the ground is covered with twigs, to do any harm to the tree. Just let the squirrels have their fun.