

# Pest Update (March 1-8, 2017)

Vol. 15, no. 5

John Ball, Forest Health Specialist SD Department of Agriculture,  
Extension Forester SD Cooperative Extension

Email: [john.ball@sdsu.edu](mailto:john.ball@sdsu.edu)

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

Samples sent to: John Ball  
Plant Science Department  
rm 230, 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 dying plants or insects from other states. If you live outside of South Dakota and have a question, instead please send a digital picture of the pest or problem.

## Available on the net at:

<http://sdda.sd.gov/conservation-forestry/forest-health/tree-pest-alerts/>

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 and the label is the final authority for a product's use on a particular 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.

## Timely Topics

How to germinate acorns?.....	1
What is coming out of my stored firewood?.....	2
E-samples	
Ponderosa pine shedding bark – it's closer to sugar time!.....	4
Red ring rot in white spruce.....	5
Samples received / site visits	
Minnehaha County (declining spruce).....	6

## Timely Topics

### How can I germinate the acorns I collected?

I had several call on this in the past week. Germinating oaks from acorns is actually fairly easy to do as long as the acorns were not collected last fall and storage in a shoebox in the warm house. All acorns have to go through a cold period to complete germination and most will not germinate if kept warm for the winter. You might just want to discard those and go out to collect some acorns

from the ground around the tree this week. You might not have a lot of luck as there is considerable competition from squirrels and blue jays.

Once you have the cold treated acorns, examine them closely and discard any that have small holes (indication of weevil damage) or obvious decay (soft discolored spots). Place the ones that pass this test into a bucket of water and discard any that float to the top. The ones that are left have a good chance of germinating.



Bur oak acorns should have been planted last fall. Bur oaks, as with many members of the white oak group, begin their germination process in the warm fall soils. However if you did not get around to planting till now (assuming the acorns were not kept above freezing this winter) you still may have some success with bur oaks. Plant the acorns at a depth of about three times their diameter and I recommend placing some chicken wire over the

acorns to keep the squirrels from digging them up. Water the soil and add a thin layer of mulch or straw.

Red oaks and other members of the red oak group such as pin oak, begin their germination in the spring so these can be planted – after the screening mentioned above – into good garden soil as the soils warm this spring. This is probably still a month or so away so just store them in a cool, dry area until then. Once the ground can be worked follow the same planting instructions given for bur oaks.



If you collect good acorns and follow these instructions you might achieve a 30 percent germination rate, meaning 3 seedlings from every 10 acorns planted. However, if acorns were kept in a warm location during the winter, expect less than 1 seedling for every 50 acorns, probably not worth the effort.

**The firewood we stored in the basement has sawdust piles on the floor. Why is this happening?**

There are a lot of insects that make their home in dead or dying trees and when these trees are harvested for firewood they will continue their development in this new home. Some insect will even attack recently felled trees. Typically it is the larval, the immature stage, that is burrowing through the tree when it is cut and split and surprisingly many species can exist and even thrive in a piece of drying

split wood. They continue feeding for a few weeks or months, and occasionally years, but eventually form a pupa, the resting stage, and then emerge as adults.

The first time most people are aware their firewood is infested is when they notice small piles of sawdust around and beneath the stack of wood. This sawdust, usually a mix of insect poop (called frass) and wood, is created by the larvae as they feed and tunnel through the wood. If the wood is stored in the house you sometimes even hear the chewing sound of the insects. The other time people notice something is in their firewood is when the adult insect emerge. If firewood is brought into the warm house during the winter – even stacked in the cellar or basement – the larvae may complete its development, pupate and emerge as an adult in the house.



The most common insect to infest trees harvested for firewood, particularly pines in the western part of the state, are the long-horned beetles, with some referred to as sawyer beetles. The light colored, grub-like larvae are often more than an inch long at maturity and can be as thick as a pencil. The adults are usually about an inch long, black or mottled gray and an antennae (at least for the males) that is as long as the body. Occasionally,

mostly with hardwoods, smaller metallic or flat-headed borers can be found in the wood. The larvae of these borers are much slenderer than the long-horned beetle but are also white and legless. The adults are usually less than an inch long, very slender and many have a bronze coppery metallic color. There are also many other insects that can be found infesting firewood as well as their predators and parasites, some that appear almost wasp-like.



The biggest concern is whether these adult insects will now attack wood inside the house, furniture, flooring and studs. While we do have problems with power post beetles (see picture to the left). These are generally the result of using wood, studs and flooring, which are already infested with these beetles. Fortunately, with only a few exceptions, insects emerging from firewood will not find a home in kiln-dried wood and are just a nuisance

buzzing around the house. They will not attack people or pet. The firewood

should not be sprayed as the insects are already inside and the pesticide will not harm the adults as they emerge. Also you should not be burning pesticide-sprayed wood in the home fireplace. Since there are a few insects that can become problems in the home, it is always best to have the insects identified.

The only real concern is stacking firewood split from dying trees near healthy trees of the same species. Mountain pine beetle, pine engraver beetle, two lined chestnut borer and bronze birch borer are four good examples of insects that can survive in firewood for a season and emerge to attack nearby standing trees. Firewood should be placed in an open, sunny area so it will dry rapidly; creating an environment that is not favorable for larval development, and stored off the ground to keep the wood from gaining moisture.

Finally remember that the primary movement of the emerald ash borer is through firewood being carried from one location to another. Now-a-days it is a good idea to buy your firewood at the campground when you go camping, rather than bring some along. You never know what may be hitchhiking in the firewood you bring!

## E-samples



**Ponderosa pine bark peeling – it's almost sugar time.** Dave, one of the service foresters with the Department of Agriculture, sent me this picture of a ponderosa pine in the Black Hills that is shedding its bark. This is a common occurrence for ponderosa pines as they mature. They shed their rough black bark and the trunk reveals this yellowish bark. The difference in appearance between trees with these two bark patterns is so noticeable that they were once thought to be two different species, the blackjacks, the blacken bark, and the yellow bark trees, the yellow barks.

The yellow barks are the same trees, just a little more mature. The bark shedding begins anywhere from 30 to 100 years depending on the tree and site. Not only does the tree look different at it changes color, its smells different! If you stick your nose in the crevice of a yellow bark on the south side during a warm spring day it will smell like butterscotch or cinnamon (depending on the tree and the nose).

Not only does the tree smell nice once this color change occur, its tastes better! This is why squirrels often chew on the bark of a tree beginning the color change. A source of sugar in the Black Hills 100 years ago was from the yellow barks. If the bark is carefully pulled away in the spring, the inner bark, the thin layers on the inside of the bark, can be peeled away and dried. Once dried, it can be

ground into a powder and used as a sugar substitute. This inner bark, also known as the phloem, can have a high sugar content in the spring and was the common source for a sweeter across the western United States.

If you walk in the Black Hills and see an old tree with a long scar on the south side, it might not be an old fire or mechanical wound, it might be an old 'sugar' tree. Some pines are sweeter than others and the native people would return to these trees every spring to scrape the bark a little further along the edges. There have been a few studies out in the Interior West where they have identified and marked these sugar trees. One project in Montana has identified more than 100 sugar trees, some which were peeled as long ago as the 1600s.

Last weekend I demonstrated the technique out in Mission and shown how easy this can be done. However, the best and easiest time to 'sugar' a pine is just before the buds open, usually May, as this is when the bark peels the easiest and the tree is at its sweetest.



**Red ring rot on white spruce.** Nicole, a forest health forester with the SD Department of Agriculture, send me these pictures and a sample of a declining white spruce in the Black Hills. The problem appears to be red ring rot (*Porodaedalea pini*). This is a decay fungus that occurs on firs, Douglas-fir, spruce and occasionally even pines across the West. It is more common on spruces in the Black Hills than pines.

The name 'red' comes from the reddish stain of the early decay stages. This decayed wood forms a well-defined ring in the heartwood, hence the word 'ring'. The decay is usually along the lower trunk and even to

the larger roots so infected trees often fail near or at the base. The decay is not restricted to the heartwood and can move into the sapwood on a living host. This means living infected trees can fail and may even fall in an unpredictable way while felling.

The symptoms and signs of an infected trees are punk knots, swollen, resinous, knots along the lower trunk. If you cut into these, you often find reddish brown tissue soaked in resin. Another common symptom is canopy decline and the abundance of cone production. These are indicators of a stressed and weakened tree, an ideal environment for the decay to develop.



## Samples received/site visits

Minnehaha Country

### Why is this one spruce tree declining?



This was an interesting stop. A row of spruce trees, all about 12 feet tall, but only one was looking poorly. This one was beginning to lose the foliage on the lower branches and the shoot extension was much less than that on the other trees. I could not find any signs or symptoms of a pathogen. Needlecast, a fungal disease caused by *Rhizosphaera* or *Stigmina*, were possible pathogen, and I did see these diseases on the Colorado spruce. *Cytospora* canker, a fungal disease that kills the lower branches, is occasional seen on young spruce trees, but generally does not present symptoms until the tree is about 20 feet tall (or 20 years old).

The most likely cause for the decline? This one spruce at the end of the row was in a slight depression, almost a tea cup, and several of the downspouts from the nearby large two-story house drained into this depression. All spruce, but particularly Colorado spruce, do not perform well in wet or poorly drained soil. The solution here? Turn the downspouts to another location.



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.