

Pest Update (January 9, 2013)

Vol. 11, no. 1

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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. **Walnut samples may not be sent from any location – please provide a picture!**

Available on the net at:

<http://sdda.sd.gov/Forestry/Educational-Information/PestAlert-Archives.aspx>

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 product identified in this publication.

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Welcome to another year of the *Pest Update*. The publication will be published twice a month during the remainder of the winter and move to weekly as the growing season begins. A big **thank you** to all the readers who sent in samples, pictures or questions during the past year, I could not do this publication without your help.

Rabbits are out in force! You may have noticed the bark missing from the lower trunks of young trees. When I walked through several shelterbelts last



week every tree and shrub was cut off at about 1 foot as cleanly as if someone came by with a pair of hand pruners. Rabbits can chew bark off of larger trees up to a height of 18 to 20 inches above the snow line (under the snow line the chewing is usually done by voles or mice) and the damage is most common to trees such as crabapples, apples, honeylocust and maples. Shrub damage is usually

entire twigs or stems cut cleanly at a 45-degree angle. You'll often find small brown droppings on the snow near these plants. What to do to avoid this problem? The best method is to remove any hiding cover; brush and woodpiles are perfect habitat for rabbits and should be removed. Valuable shrub beds can also be fenced off but the fence, typically chicken wire, must be at least 3 feet tall – *above the snow line* – and tight with the ground. It is probably a little late to begin thinking about fencing. However, it might not be too late to apply some repellents during some of the warmer January days.



Repellents work one of two ways, either as odor, usually mimicking the odor of a predator (usually the urine), or taste/irritation such as capsaicin (think of hot peppers). Usually repellents based on odor are more effective than taste/irritation but not always so it never hurts to experiment a little bit.

Finally, don't live trap them. No one else wants them either and most animals that are released in unfamiliar territory have a very short life span.

Imprelis and tree injury update



There have been a number of properties in the Black Hills region that had trees affected by Imprelis. This herbicide was applied in 2011 to residential and commercial turf (including golf courses) to control weeds. Unfortunately the herbicide application also resulted in injury to trees on these treated sites. DuPont claims that most of the injury has occurred on Norway spruce and eastern white pine but in the Black Hills, Black Hills spruces and blue spruces are the most trees damaged by the herbicide. Recent reports from Minnesota indicate that injury has been also found on broadleaf trees including ash, aspen and cottonwoods.

The most common symptoms on evergreens are browning needles and stunted, curled terminals, particularly near the tops of the trees (see picture on preceding page). In many instances you can also find that while the needles are still green on some of the terminal shoot, the buds are dead so no new growth will occur from these shoots. This means that some affected evergreen trees that appear healthy now may still become distorted this spring when these buds fail to open.

The herbicide was absorbed by the trees through the roots so there does not appear to be any injury related to possible drift. Since tree roots can extend out as far as the tree is tall, it is possible for adjacent neighbors to have their trees affected by an application made on someone else's lawn.

E-samples



What was the first sample of the year? **An oak gall.** There are irregular plant growths that are the result of feeding by larvae of some very small wasps. When the larvae begin to feed they secrete growth regulating chemicals that result in abnormal growth of the plant tissue. While it makes for a funny looking tree it is perfect for the insect as not only do the galls provide food, they also provide shelter and protection from their enemies.

Twig galls are a common sight on young bur and northern red oaks in South Dakota. There are several different types of twig galls, horned oak gall being the most common (and pictured above). The life cycle of the insects that produce these galls is long and complex, often taking several years and living on two different parts of the tree, the twig where the large galls are produced, and the leaves when smaller, blister-like, galls appear.

While the galls can be unsightly and in large numbers can result in some twig dieback, usually they are harmless. This is fortunate as there are no effective chemical treatments.



Sawyer beetles and pine wilt disease. Another sample came from a recently felled Scotch pine tree down in southeastern South Dakota. The hole and sawdust is due to a sawyer beetle that had infested the tree. We are seeing an increase in pine wilt in the southeastern part of the state with numerous reports of Austrian and Scotch pines turning brown and dying within last summer. Many of these trees, which appeared healthy and green

last spring, are dead this autumn and are covered with brown to gray needles hanging from the twigs. Pine wilt is a disease caused by a nematode (and possibly an associated bacteria). The feeding by the nematode causes the water conducting pores in the tree to collapse resulting in the tree “wilting” very quickly. The nematode is carried by longhorn or sawyer beetles which introduce the nematode to a new host as they feed on the twigs. Stressed and recently killed pines are also attacked by the sawyer beetles which lay eggs on the bark with the larvae burrowing through the trunk as they feed so you can find pines infested with sawyer beetles that do not contain the nematode. Diplodia tip blight is also a common threat to Austrian pines and there are numerous stands of declining Austrian pines in tree belts across the southeastern part of the state and sawyer beetles can be found in these trees.



Pine wilt disease has been a serious problem since first noted in 1979 in Missouri and now this wilt has been linked to the loss of thousands of pines in the central US. The region most affected has been the central Plains from Kansas to southern South Dakota (up to about I-90). The disease has been found in southern South Dakota during the past several decades. It periodically results in outbreaks, with many trees lost in a specific community or county for a year or two. The disease affects exotic pines, Austrian, Scotch and mugo, our native pines, ponderosa pine for example, are not killed by the disease. The disease also appears on older trees and you usually do not see it on pines younger than 10 or 15 years in the landscape as can be noted in this picture.

The management of this disease centers on promptly removing and destroying any infected pine tree. This removal and destruction can take place any time during the autumn or winter but should be completed before the end of April as this marks the time when the sawyer beetles may begin to emerge from the dead, infected tree and move to a new host. The infected wood should be either burned or chipped to kill the beetles before they emerge, merely removing the bark from the wood is not sufficient to kill the insect or nematode. The infested tree should also be cut as flush to the ground as possible as the nematode and sawyers can survive in stumps. They can also survive in firewood for a time so recently killed trees should not be cut into firewood and stored. The disease can be spread by chips, but only if the chips are fresh and placed against the trunk of a healthy pine tree. Storing the chips for 6 weeks will dry them sufficiently that the danger of disease transmission is minimal. There is also a pesticide that can be injected into a healthy tree to prevent infection, however, due to the expense,

about \$200 a tree, and the need to inject the chemical every three years, it is best limited to high-value Scotch pines in a residential landscape.

Pine wilt is not the only serious disease to affect pines in our state. Diplodia tip blight and dothistroma needle blight are two other diseases that appear in the area and require other treatments to protect trees. It is important to identify what disease is affected the pine before treatments are initiated.

Samples received

Davison County: Blue spruce exhibiting premature needle drop



We receive a blue spruce sample from Davison County that noted the tree owner just noticed the discoloration and needle drop a few weeks ago. There were no symptoms or signs that appear to be associated with the most common pests of blue spruce – spruce spider mite, spruce needleminer, or canker. I will stop by this month to look at the trees and try to determine the agent or agents involved in the decline. My guess is this is site/soil

related, many blue spruce problems generally are related to these stressors, but will know better when I see the site.