

Pest Update (Feb 16-22, 2017)

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

Email: john.ball@sdstate.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.

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Timely Topics

What about winter watering? Our South Dakota winters often come in bursts; cold, snowy weather followed by mild and dry. This is an especially common pattern in the Black Hills where temperatures often stay in the 40s and even 60s for a considerable time period (as seen during the past several weeks). A common question from homeowners during the mild, dry spells is whether they should be watering their lawns, trees and shrubs.



Mild winter temperatures can result in injury or death to landscape plants. This is even more of a concern if the late summer and fall were dry, a pattern we experienced this past year and have seen before. Several years ago we had a mild and dry winter that was preceded by a dry fall. The following spring many homeowners noticed some of their trees and shrubs were not leafing out. These plants had dehydrated during the warm, windy winter months. The problem was not unique to evergreens though these are very sensitive to water loss during the winter. The buds of deciduous plants were killed and many birches, lindens, and maples suffered extensive dieback.

The plants susceptible to winter drought injury include new lawns seeded or sodded after this past Labor Day, as well as trees and shrubs planted after that date. Plants exposed to wind or receiving reflected heat from buildings are also at risk for becoming dehydrated during the winter.

Preparing for winter begins in autumn with watering during a dry August and September. Planting beds should also be mulched while the soils are still warm to provide an insulating layer and hold soil moisture. Dry, bare soils are prone to cracking during dry winters and these openings can expose and kill roots. While winter is here (and seems to be ending) there still steps we can take to help our landscape plants.

Watering can be beneficial, but only if the upper 6 to 8 inches of the soil are not frozen. If you cannot push a screwdriver easily into the soil it's probably too cold to absorb water. This should not be a problem in much of the state as soil temperatures are already in the mid-30s. However, only water when the air temperature is above 40°F and water during mid-day so it will soak in before night. If the water puddles and freezes, discontinue watering as the soil is frozen and cannot absorb it. A film of ice covering lawns and groundcovers can suffocate the plants and result in more disease problems.



Plants are not losing water at a very high rate during the winter so watering does not have to be very often. Lawns may need to be watered every few weeks during the winter, and again, only if the soil is not frozen. Shrubs that were planted last fall may need only a few gallons of water once a month and for newly planted trees most will need only 5 to 10 gallons at watering.

Small evergreen groundcovers and shrubs that are not already covered with a protective layer of snow can be helped by placing a loose layer of brush over them. Small arborvitae, boxwoods, yews and wintercreeper euonymus can be covered with pine boughs, a perfect use for those discarded Christmas trees lying in the yard. The boughs do not have to completely cover the plants, only enough to block some of the sun.

If the late winter turns cold and snowy, as it often does during March, then nothing further will need to be done to help the plants. But if we continue to experience warm, dry winter weather, while it is nice for people, it can be tough on plants and watering may be advised.



Will this warm weather harm trees? Most of our winter injury to trees does not occur during an extremely cold January. At that time of year many of our hardy trees and shrubs can easily tolerate temperatures of -35 to -40°F. The 'winter' injury we see on the Northern Plains usually occurs in fall and late winter due to seasonal fluctuations where we have a few days or more of warm temperatures followed by very cold

temperatures. A thaw in February of a few hours has little effect on the cold tolerance of trees, but a thaw lasting several days or longer can stimulate dehardening. What this means is the tree can no longer tolerate extremely cold temperatures. If we have a week or so of mild temperatures (as we have been experiencing across much of the state this past week), water begins to increase in some plant tissue and a subsequent cold period can result in rapid freezing of this tender tissue and plant injury.

This past two weeks I have seen silver maples beginning to break bud along with elderberries (as seen in the picture) among other shrubs. Unless we stay relatively warm the remainder of the winter, an unlikely event, this tender tissue will freeze when exposed to the more typical cold of March.

E-samples



The warm weather has resulted in an early sap flow from maples. People are already beginning to tap trees in southern part of the state. You do not have to tap the tree to see sap flowing from maples. The sap will also seep out from any wound on the tree, such as cracks, old pruning wounds, and cuts where squirrels have nipped the bark to lap up the

sweet sap. I received this picture of flies that were crawling on the bark of a

maple tree and the tree owner wondered what was the cause of this attraction. The most common flies found on maples are the scavenger flies (Sepsidae). These are the flies found buzzing around dog poop in the summer, but they seem to like tree sap at this time of year. However there are numerous fly species as well as beetle and butterflies that are also attracted to the sweet sap.

Possible pine wilt samples. A producer south of Sioux Falls called about some pine trees that died last fall and he was concerned the surrounding trees in the belt might be dying. He noticed that the bark was peeling and breaking off from the healthy trees. I asked for some pictures and the trees are Scotch pines (*Pinus sylvestris*), a fairly common tree used for windbreaks and as an ornamental. A characteristic of mature Scotch pine is the bark turns almost orange on the upper trunk and branches and flakes off in small strips.



The flaky bark is normal but the reason for the trees rapidly dying is most likely pine wilt disease. I also received these pictures from out near Sturgis that shows the same problem – a Scotch pine that turned brown relatively quickly last summer and fall. Obviously a picture and description is not enough to determine whether the pine wilt nematode is the responsible agent for the decline and a follow-up will be made for sampling these two trees. However, pine wilt is becoming a very common disease in the southern 2/3s of the state. The only areas not impacted yet by the disease are north of Highway 212. The disease is fatal to Austrian and Scotch pine, but not ponderosa pine



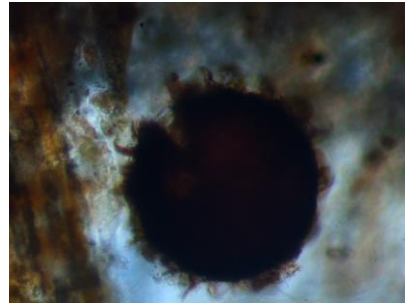
Samples received/site visits



Edmunds County **What is causing the blackening of these needles?**

This is a follow-up to the sample from a couple of weeks ago. The ponderosa pine foliage was infested with brown spot needle blight (*Mycosphaerella dearnessii*). The disease is common on ponderosa and Scotch pine on the Plains but occasionally can be found on other two-needle pines.

The disease presents symptoms that may be confused with dothistroma needle blight; random yellow to brown spots along the needle with the base of the needle remains green. The conidia exuded in sticky masses from the needles and these resin soaked spots often appear dusty. The infection may be limited to the lower whorls of branches, particularly in trees that are crowded. Another good reason for adequate spacing in windbreaks. The most common treatment is an application of a fungicide containing chlorothalonil as the active ingredient and labelled for brown spot. The first application is made when the new needles have expanded to half their mature length and a second application made about three weeks.



Minnehaha County

What is happening to our spruce trees?



I was called to look at a spruce that blew over in the strong winds that came through the state last week. Most trees fall from being uprooted during a rain. Saturated soils have less resistance and entire root systems are pulled up out of the ground. The problem here was not saturated soils resulting in less resistance, but a rotted root system. While spruce does best in moist soils, they do not like 'wet feet.' The spruce is in the drainage for the neighborhood. This was the first home build and all



the remaining homes are sited on slightly higher ground with the water shed onto this property. I have seen this occur in a number of developments so you never want to be the first home build in the new subdivision.

The solution? Remove the declining spruce, berm the soil and plant trees, such as European alder (*Alnus glutinosa*) that are tolerant of wet soils.

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