Pest Update (December 5-12, 2019)

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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.

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 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.

Plant development for the growing season

The growing season has ended but there are still a lot of trees filled with leaves. You can find maples with almost as many leaves on them now as the past summer. These are mostly Norway maples or State Street maples (pictured) that were caught by the quick transition from fall to winter and had not completely prepared for the cold. I expect we will see some cold injury on these trees come

spring. These trees may have shoots that die back a foot or two. Unfortunately, this happens with some of our introduced trees, mostly the East Asian and European species, that do not expect the abrupt seasonal fluctuations common with our continental climate.

Timely Topics

Honeylocust (*Gleditsia triacanthos*) pods are dropping everywhere and the long, slender dark brown pods are quite a contrast with the white snow. Honeylocust hold its' pods until late fall and winter where they begin to drop on the snow. The pods continue to drop throughout the winter. They are an annoyance to us but most wildlife are happy with the abundant crop this year. Honeylocust pods are a legume and the pods have a sticky honey-like substance between the seeds that contains a high amount of sugars. This makes the pods a favorite food for deer, rabbits and squirrels. Livestock such as cattle, goats, and sheep will also forage on the pods and there are honeylocust cultivars – Millwood is one – that are grown for their sweet and nutritious pods.

Not every tree produces sweet pods, but the sweetest ones are trees that produce the long, branched thorns. The pods are thought to be a common forage for mastodons (the extinct mammal, not the heavy-metal band) and the thorns, which occur along the lower 20 feet of the trunk, would discourage other critters from gathering the pods (mastodons could still reach the pods with their long proboscis).

There are many honeylocust cultivars available that are described as 'seedless'. These cultivars should be called 'fruitless' as they do not produce pods, not just seedless pods. Honeylocust can be fruitless as the species is polygamous, producing male (staminate) flowers, female (pistillate) flower and flowers containing both stamens and pistils all on the same plant (called perfect). The staminate flowers predominate on most trees with a few fertile flowers (perfect or pistillate).

If the cultivar is selected from a male tree, the clones should be male so no fruit. But there are many 'seedless' honeylocust that are covered with pods this winter. Mother Nature is not easily fooled and while we might try to produce seedless cultivars of honeylocust and even maples, over time these trees start producing female flowers. Maybe a just few scattered throughout the canopy by the time they

are 20 years old but once the trees mature often these same seedless trees produce an abundance of fruit. Not every tree, but enough that no one should assume seedless trees will always be seedless.

E-samples

I received several pictures of discolored pine in windbreaks. Needle discoloration is common on Scotch pines at this time of year – they naturally turned a yellowish-green – but not Austrian or ponderosa pine. The first picture is a 20-year old grove of Austrian pines outside of Pierre. The note mentions the color changed started in August. This most likely is pine wilt disease. We are seeing more instances of Austrian pine taking two years to decline from this disease.

The second picture is from near Madison and these look like ponderosa pines. This species is not affected by pine wilt (though it can harbor the nematode) but we are losing mature trees to diplodia tip blight, a common fungal disease of Austrian and ponderosa pines throughout the state. This disease is becoming a more serious problem in our area (as well as northern Europe) due to the warmer May and June temperatures that reduce tree resistance and favor the fungal development.

Pictures are not enough to be certain of the diagnosis of either problem so will follow up with a site visit and report in a future *Update*.

Samples received/site visits

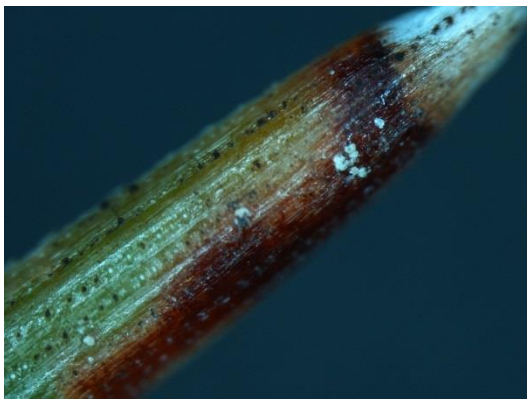
Custer County **What is causing the little pines to turn color?**

We are more vole damage on junipers and small pines. Almost every common juniper and seedling or sapling ponderosa pine in some spots in the Black Hills have damage. I am also seeing cedars (juniper) in western windbreak with the same symptoms. All the affected evergreens are covered with yellowing and browning needles on the shoot tips. If you follow each of these shoots to the soil line you will also find that these shoots had been girdled by voles (picture next page).

Vole injury can be easily separated from rabbits by the gnaw marks. The gnaw marks from voles are irregular and at various angle, quite different from rabbit which tend to cut everything off at a very regular angle, almost 45-degrees. Voles can become a problem with cedar (juniper) plantings as these evergreen plants provide good hiding cover for them. Voles also take advantage of the protective cover from weed barrier fabric and populations tend to increase in ornamental plantings and tree belts with fabric. Tall grass between rows also provides hiding cover and mowing low, particularly in the fall, is a common means to reduce movement of voles from row to row.

The best management tactic for voles in small plantings is to trap them out. Mouse traps with peanut butter can be used. For larger plantings, windbreaks, vole populations can be reduced with toxic baits but this is best applied in bait stations rather than placing pellets in holes. Placing the baits in holes, rather than stations, is time consuming and voles are very sensitive to disturbances in their tunnels and may avoid the baits. Bait station also reduced the risk to nontarget critters.

Toxic baits are generally on the restricted pesticide list but some are available under general use. Baits are most effective when used in early spring when other food sources are limited. Baits must be frequently check and replenished as it often takes several feedings to kill. Some baits also have a bitter flavor so it's best to increase the attraction to the stations with a few days of placing oats or other grains to get the voles use to coming to the stations for food. There are also vole repellents but these provide only short-term protection.



Custer County **Is this dothistroma or diploida on this ponderosa pine?**

It may be neither. While these are the two most common foliage or shoot tip diseases of ponderosa pine, they are not the only ones. There were some possible fruiting structures coming from the stomatal bands that we are going to investigate. Further details will be in a future *Update*.

Pennington County **Is this an avocado coming up in the yard?**

Now this is an unusual question! First, no. Avocado trees (*Persea americana*) are not even close to be hardy in South Dakota. They can tolerate temperatures down to about 26^{o}F and we have those temperatures for three quarters of the year. Avocado trees also produce simple, elliptic to ovate, entire leaves that are about 5- to8-inchs long, whereas the leaf that was mailed is a compound leaf. The leaf that was sent is about a foot long, pinnately compound with 15 elliptic to lanceolate, serrate leaflets. The leaf was fairly crunched together so crumbled when pulled apart, but it appears to be a sumac tree (*Rhus*) instead.

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