

Pest Update (June 3, 2015)

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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/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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Plant development

The colder weather is slowing plant development but we are still way ahead of last year. The pagoda dogwoods (*Cornus alternifolia*) are in full bloom in Brookings. This occurs somewhere between May 15 and June 15 depending on the spring temperatures.

Pest treatments to be done now

Dothistroma treatments should also be started now. This is a very common disease of Austrian pines this year (also ponderosa pines in East River shelterbelts and the Black Hills) and is responsible for most of the discolored pines we are seeing. The symptoms are dead needle tips beyond the yellow to tan spots. The spots have now enlarged to form brown to reddish brown bands and sometimes fruiting structures can be seen in the bands. The infection this year is so bad that the entire needle may be discolored. The treatment is a copper fungicide applied now as the candles are expanding and repeated in late June and again in mid-July. There are a number of copper containing fungicides available such as Camelot for those individuals who have to spray several or more trees.

Timely Topics



Herbicide injury to windbreaks

I was out looking at windbreaks this week and was asked about what wrong with the foliage on these Siberian elms (*Ulmus pumila*). Siberian elm was once a very common windbreak tree on the Northern Plains. It is adaptable to a wide range of site conditions and has a fairly rapid growth rate. Unfortunately, it also is frequently injured by extreme temperature fluctuations in the fall or spring. While the tree is hardy to our midwinter temperatures, it goes into dormancy late in the fall and “wakes up” early in the spring making it vulnerable to sudden temperature drops. The famous Halloween Freeze of 1991, where our mild fall suddenly became winter resulted in the

dieback and death of thousands of Siberian elms across the region.

The tree is also very susceptible to herbicides. Drift from herbicides containing aminopyralid (such as Milestone™) or 2,4-D or both (ForeFront®) can result in distorted leaves, usually cupped and bend. Chronic exposure to these active

ingredients can result in dieback. However, dieback is common on Siberian elms due to canker diseases and environmental stresses so it is often difficult to determine the role of these stresses in the decline of a tree.



The question I was asked regarding these trees was whether an herbicide application made last summer was responsible for the decline of these trees. This is a frequent question and a difficult one to answer. The typical scenario is an applicator sprays a field. The adjacent landowner either notices some damage or is concerned that some damage may occur. The applicator and landowner decide to wait till next year to see how the trees look. A year later the

trees do not look too good so the landowner wants money to pay for the trees. The applicator believes the trees were damaged by the winter or other agent and doesn't want to pay. A year after the application, it can be very difficult to match symptoms to a past application or even find traces of the herbicide present in the plant tissue. And even if the herbicide is there, perhaps it is the result of drift from another application, unrelated to this one.

If a landowner is concerned that their trees may have been impacted by drift, a complaint should be made within 30 days of the application or the first appearance of damage (the sooner the better, preferable within days of the application). The complaint is made through Ag Services, South Dakota Department of Agriculture. They can be contacted at 605-773-4432. A pesticide complaint can be filed on line at:

www.state.sd.us/eforms/secure/eforms/E2093V1-PesticideComplaint.pdf.

Silver and Freeman maples looking a little thin



Many of our silver (*Acer saccharinum*) and Freeman maples (*A. x freemanii*) are looking a little thin at the tips of the canopies. The foliage in the lower, interior of the trees is dense but when you look up at the tops of these trees, the leaves appear fewer and there is a noticeable gap at the base of the new shoot.

This is not an insect or disease problem but the combined action of two different agents 1) frost and 2) heavy seed crop. The late frost we experienced in early May resulted in freeze injury to leaves as they were expanding. Maples, particularly silver, red and their hybrid, the Freeman maple, were just

leafing out during this time period so they took the brunt of the damage. Trees such as basswood which leafed out earlier so their leaves were already fully expanded, and trees such as bur oak, which still had its leaves in the buds, were spared. The frost injured maple leaves have black margins. These damaged leaves are beginning to fall. The trees are beginning to put out new leaves and within a month, the damage will be less noticeable.



There may still be visible gap beneath the foliage on the tips of the shoots. This gap is where the flowers and fruit occurred on these maples. This spring a fairly heavy seed crop occurred on maples and the “helicopter” seeds were observed by many and these seeds are now littering the ground, sidewalks and gutters. Many of the more commonly planted Freeman maples such as Autumn Blaze^R (*A. x freemanii* ‘Jeffersred’) generally produce few flowers or

only male flowers but not always. Even on trees that are considered males, seeds can occur in some years.

E-samples



Maple bladder galls are beginning to appear on silver maple leaves. The galls are due to a very small eriophyid mite. The mites overwinter under the scaly bark of the trunk then move to the leaves as they begin to open. The mites feed on the underside of the leaves causing a pouch or bladder to form. Eggs are laid in this bladder and the young mites live and feed within this protective structure. The galls turn color during the season from green to red to black and usually the color is what catches the eye of the tree’s owner. The mites and the galls do not harm the tree, the leaves are still able to manufacture food, so no management is needed. Besides, once the galls are noticed, it would be too

late for any treatments as nothing can remove the bumps (unlike pimple treatments for acne plagued teenagers!).



I received a call about **peach leaf curl**. This is a disease that shows up in a few samples each spring, especially if the spring has been cooler than normal with average to above average precipitation. Infected leaves develop wrinkles and often have a reddish cast to them. The disease only affects the young leaves as they

expand in the spring. The foliage that forms after these infested leaves drop do not become infected. Control is relatively easy; a single application of lime-sulfur made in the fall after leaf drop or just before the buds expand in the spring. Do not use lime-sulfur once the buds start to expand or the tree is in leaf as the spray will injury the foliage.



Spruce gall adelgids are not as frequent of an occurrence as in the eastern United States, but I still get an occasional sample or picture. The galls caused by the feeding by the nymph adelgids, an insect similar to an aphid, are often described as “pineapple-like.” The nymphs feed in their home until late summer where they become adults. The females lay eggs on the same tree or an adjacent one as she is a very poor flier so stays close to home.

The eastern spruce gall adelgid is found on Norway and Black Hills spruce in our state. A related insect, the Cooley spruce gall adelgid, forms galls on Colorado blue spruce. A dormant oil can be applied in the fall to kill the gall adelgids, but there is usually no need to

treat as the damage is minor.



We are seeing a lot of **vole damage** from this winter, particularly West River. While there “runways” are common in grass and create some minor damage in lawns, voles (small mouse-like animals) are not usually a problem with woody plants unless they are short on food. This must be the case this winter as I have received numerous calls and emails about bark being stripped around the bases of small evergreens. 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 plants provide good cover for them. Voles

also take advantage of the protective cover from weed barrier fabric and populations tend to increase in 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. The baits are placed in bait stations to reduce the risk to non-targeted animals. Also placing baits in holes, rather than stations, is time consuming and voles are very sensitive to disturbances in their tunnels and may avoid the baits. 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 only provide short-term protection.

Samples received/site visits

Faulk County (an update)

What is wrong with this seedling?



We were not able to find any signs or symptoms that are associated with insects or pathogens. This is not too surprising as the demise of most seedlings is related more to cultural practices (planting, etc) or environmental stresses (drought, etc). When we cut into the roots, they appeared to find, still showing white tissue but there was no root growth this spring. For

whatever reason, the roots failed to grow, which caused desiccation and browning of the foliage. The most common reason I have seen this problem this spring is trees planted early, before the rains came, and not watered so the roots never established.

Stanley County

Were these trees planted too shallow?



This was an unusual problem. Eastern redcedars planted last spring (2014) that were falling over since the roots were above ground. Generally we see problems with planting too deep, but not too shallow. It appears that the trees were planted a little high in some instances. The upper most woody root should be placed just beneath the soil surface and, as can be seen in the picture, these roots were above the soil line. If a few string-like roots are at the soil level or even above, this will not create a problem. However, if the woody roots are too high, the trees will usually survive but may fall over or lean excessively. An additional factor was the

producer was watering with a hose that did not have a breaker at the end and the force of the water was scouring some of the soil around the base of the trees.

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