Pest Update (September 7, 2016)

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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 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

There's gold in them thar wood. Many folks complain about Russian-olive (*Elaeagnus angustifolia*). It is invasive in many areas of the state, crowding out native vegetation along streams and river. It also is a thorny tree and seems to take a poke when you get too close. It does not seem there is much good about the tree….until you talk about the wood. The heartwood color ranges from a yellowish-brown to almost a golden brown. The outer sapwood is a much lighter yellow-white. The wood has an attractive grain, particularly around knots. The wood is similar to ash in weight and hardness. It is used is a range of wood produces from pens to plaques to gun stocks. Once sanded and stained it can look a lot like walnut. It is great wood!

The problem with Russian-olive is it's a small tree that produces lots of low branches and usually a fairly crooked trunk so it hard to cut a long, straight board from it. However, if you can find a straight log, about a foot in diameter and at least 8 feet long there can be some real value with the rough cut boards worth $8 per board foot. There is about 40 board feet in a 12 inch diameter log that is 8 feet long so the boards may be worth $300 or more.

Every late summer I receive calls, e-samples and samples of fallen yellow walnut leaves. This is the common fungal disease, walnut anthracnose (*Ophignomonia leptostyla*). The symptoms, brilliant yellow leaves with brown spots, do not present in our state until about Labor Day. The infected leaflets begin to drop to the ground individually, rather than the complete leaf and every fallen leaflet will have small lesions, from pinhole to pencil size, each with a brown ring around them. The disease is not a major threat to walnuts as the leaves do not begin to be affected until late summer, usually just before they begin to fall. However, the same is not true of the fruit. The fruit can also begin to fall prematurely and the ground beneath many walnut trees is covered with fallen leaves and shriveled nuts.

There is not much to do about the disease. A common recommendation is to rake up and destroy the fallen leaves and nuts since the disease overwinters in this tissue. Unfortunately, unless you rake up your yard, as well as that of every walnut owner within several blocks, you are not likely to achieve much control of the symptoms next year. The addition of nitrogen fertilizer (21-0-0) in late spring, after full leaf expansion, will often decrease the severity of the disease. Mancozeb may be applied at bud-break and repeated for several more applications about two weeks apart, but may only be applied to walnuts where the nuts will not be harvested.

Herbicide injury and trees. A producer has an established windbreak of trees about 10 to 15 feet tall that were exposed to drift from an adjacent pasture sprayed with Transline. This herbicide (active ingredient Clopyralid) is used to manage broadleaf weeds in grazed areas and forest sites. The herbicide can be applied over tolerant tree species such as chokecherry, cottonwood, redcedar, green ash, maples, ponderosa pine and white spruce with little to no injury (though avoid spraying during active growth of these trees). However, it is deadly to legumes so honeylocust are easily injured and killed. This was precisely the pattern in these rows. The only species that had died back was the honeylocust. The other species were fine. The point here is that not all tree species are affected by herbicides equally.

E-samples

Is this the emerald ash borer? Is this why may tree is dying? Not likely, we are seeing lots of samples of two common ash borers in our state this year, the redheaded ash borer and the clearwing ash borer.

The clearwing ash borer (*Podosesia aureocincta*) often tunnels near the base of the tree and is easily identified by the presence of sawdust around the trunk. The carpenterworm (*Prionoxystus robiniae*) can cause similar symptoms though it is more common in smaller diameter green ash.

The other insect (picture to the left is a branch from the tree pictured on the previous page) is the redheaded ash borer (*Neocylytus acuminatus*) or its close relative, the banded ash borer (*N. caprea*). These are very common borers though they restrict their activity to dying or dead ash trees. When these insects are found in a tree, it is indication that the tree is a zombie, the undead, not a healthy tree. We typically do not recommend treatments for these insects but instead find the underlying reason the tree is dying and is attractive to the borer.

What is this strange plant? This was the question asked about a plant found in a Minnesota woods. This is the Ghost plant, *Monotropa uniflora*, which received its name from the translucent white stems and leaves. This is an interesting plant as it grows in very dark environments, ones too low for much photosynthesis to occur. However, that is not a problem for this plant as it is one of the non-photosynthetic plants. If you are a plant, you have to get your energy source from somewhere, the sun usually, but for Ghost plant, it's a fungus. This plant is a parasite of mycorrhizal fungus that are attached to trees. This makes a unique link – tree manufactures food through photosynthesis – it shares this food with its mycorrhizal fungi – which provides it to the Ghost plant! These plants are typically found in dense, moist forests and should be left there. Take pictures, not plants, as the plant is not likely to survive in an urban landscape. There is also a related plant, the Pinedrops (*Pterospora andromedea*) native to dense pine forests of the Black Hills.

Samples received/site visits

A note about samples. Samples are a big help for answering questions about tree problems. However, they need to be packaged properly to ensure that the sample arrives in good condition. Leaves and other tender material can be placed in a plastic bag, but do not add water or a wet paper towel! This additional moisture makes it almost a certainty that the bag will filled with mold when it arrives.

Instead, please a dry paper towel around the sample before placing in the plastic bag. This will absorb the extra moisture from the live material.

Clay County **What is causing this silver maple leaf to have these spots?**

This is tar spot (*Rhytisma*), a common foliar fungal disease of red and silver maples (an occasionally the Freeman maples). The disease results in these black, almost tar-like, patches on the leaves. While the disease appears unsightly, it rarely causes serious harm to the tree and treatments are rarely recommended (and any would have to be applied in the spring at leaf flush). We did not see much of this disease this year except in the humid, southeastern part of the state.

Hamlin County **What is wrong with my maple?**

It was difficult to tell with all the mold in the bag, but it was still easy to note that the leaves were abnormally small and the twig growth for 2016 was much reduced from 2015. This reduction in growth may be due to abiotic factors such as stem-girdling roots or construction to name two. The reduction could also be due to verticillium wilt, a problem we seeing on lots of maples this year. A better sample, or a site visit, will be needed to diagnose this problem.

Minnehaha County **Why do the leaves look so bad on this variegated Norway maple?**

This is a problem with the variegated Norway maple, they can scorch very easily. I recommend planting this cultivar in a light shade and moist soils to reduce this problem but by mid to late summer the continuous exposure to our bright sun tends to result in browning margins of the leaves regardless of site.

Minnehaha County **Please identify this shrub.**

This is the prickly-ash (*Zanthoxylum americana*), a thorny shrub common to woodlands. It is not a true ash so will not be attacked by the emerald ash borer (unfortunately). The thorny stems and tiny shiny black seeds are good identification clues at this time of year.

Minnehaha County **Is this pine wilt?**

Yes, the disease pine wilt which use to be restricted to south of I-90, and mostly along the Nebraska border, is becoming common as far north as Hwy 212. This wilt disease, caused by the pine wood nematode, *Bursaphelenchus xylophilus*, is killing Austrian and Scotch pine at an alarming rate in recent years. While there are no practical means of protecting mature pine shelterbelts, there are very effective injections to prevent infection in individual trees. The injections are not

therapeutic. The insecticide/nematicide Greyhound (abamectin) provides excellent protection (however that does not mean perfect, figure 3 or 4 trees out of every 100 injected might still become infected). The treatment may run several hundred dollars and must be done by a commercial applicator.

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