Pest Update (October 7-14, 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.

Timely topics

Fall color

We have entered the autumn color period so here is some insight into this seasonal phenomenon. First, the color changes begin in response to the shortening days and the cooler temperatures. The leaves stop producing chlorophyll (the green color) and some trees species at the same time begin producing anthocyanin (the red-purple colors). Yellows (carotene and xanthophylls pigments) also begin to appear, not because the tree is beginning to produce them – in fact they are always present – but as chlorophyll disintegrates these pigments are unmasked.

Trees noted for their brilliant red fall color includes red and sugar maples (as well as the freeman maples as the picture of the Sienna Glen maple shows), serviceberry, sumac and red oaks. Some shrubs, such as burning bush (*Euonymus alata*) pictured to the left, also have excellent color. Trees that have bright yellow fall color include ginkgo, quaking aspen and sometimes even honey locust as well as 'Harvest gold' Mongolian linden. Catalpa, sycamore, black locust and even green ash have little color change.

Fall color is best when we have combination of dry, sunny and cool weather during autumn. Rainy, cloudy weather will reduce the intensity of fall color. If we are now entering a dry period in eastern South Dakota we might see some nice fall color. However the winds we are currently experiencing may result in a lot of leaf raking by the end of week as the leaves are falling quickly!

Fall color on evergreens

Pines and spruce also have an autumn color change to their foliage. At this time of year, pines have their three-year old needles turn yellow before being shed; with spruce it is their five to seven year old needles. The color change and shedding is sometimes greeted with alarm by homeowners who believe their tree is dying when it is just a normal seasonal process.

E-samples

I have had e-samples and samples from people wondering about insects “raining” down from their ash trees. The small white legless larvae people are finding beneath their ash trees or, their gutters as they are cleaning out fallen leaves and seeds, are the ash seed weevils (*Lignyodes bischoffi*). These are insects that spent their larval stage feeding inside of ash seeds during late summer. Usually you cannot find anything distinguishing about infested seeds. The only clue the seed was infested is a small hole where the larvae emerged. The larvae emerge from the seed in the fall while the seed is still hanging on the tree hence the “raining” of insects. Once the larva is on the ground it overwinters either in the soil or the litter layer. Pupation occurs in the spring and the adult weevil emerges in mid-summer with the females laying eggs on the newly-formed seeds. Once the larvae hatch they hollow out the seeds as they feed. There is one generation per year and no treatments are recommended or needed.

Fall color is occurring on arborvitae. Pines and spruce have their older needles turn yellow (or sometimes brown) before falling. Usually this normal fall needle drop is easy to tell as it is the interior needles that are coloring and dropping. Arborvitae have the yellowing occur more randomly, almost ribbons of yellowing foliage throughout the entire shrub though still more concentrated in the interior foliage. I have received several samples of normal foliage color change on arborvitae from concerned homeowners wondering if their tree is diseased. This is normal fall color change.

I received this very interesting picture of a subterranean termite from Aaron, the city forester in Aberdeen. There are several types of termites, dampwood, drywood and subterranean. The subterranean are the only ones that are commonly found in South Dakota. Even the subterranean termite is far less common in our state than the states to the east and south. The subterranean termite builds its nests in the soil or root flare of wet, rotting trees and construct tubes to allow them to move to wood in structures and trees. The mud tubes are

about ¼ to 1 inch wide and can be found along or in cracks of a home's concrete foundation connecting the soil with the wood framing.

The subterranean termite can be a very destructive insect if it reaches a home foundation and often the damage goes undetected until too late. Usually the exterior surface of wood is not damaged though it may be hollowed out by the activity of the insects. Damaged wood sounds hollow and tapping with a screwdriver can be a means of detection though homeowners concerned about termites should contact a professional to survey rather than rely on their own efforts.

Termites can be separated from ants through two characteristics. Termites will have beaded antennae while the antennae of an ant are elbowed. Ants have a constricted waist while termites are broad.

Samples received/site visits

Brookings County **Is this the emerald ash borer?**

A homeowner was splitting ash wood for firewood and noticed creamy white larvae and galleries in the wood. He wondered if they were the emerald ash borer (EAB). Fortunately no. The larvae had burrowed into the wood much deeper than emerald ash borers as EAB tends to remind just beneath the bark. The larvae were also too wide and did not have the characteristic bell-shaped segments that occur with EAB. The insect was our native ash/lilac borer.

Brule County **What is this plant and can you eat the fruit?**

This is the shrub (or small tree) nannyberry viburnum (*Viburnum lentago*). The shrub, known for its white flowers and good red fall foliage color. The fruit is edible and is known as wild raisins as its better as a dried fruit then eating fresh off the plant.

Clay County **Can you identify this tree for me?**

This is a mulberry (*Morus alba*), an introduced tree from Russia that is common throughout the state. The female trees produces a small raspberry-like fruit in

the summer. I usually get several sample each fall on this tree due to the three different forms to the foliage.

McCook County **The needles on this spruce are turning yellow.**

The only problem I could find in the sample was spruce bud scales. The reddish-brown, gall-like scale insects are about ¼ inch in diameter and are usually found at the base of the twigs. They resemble buds, hence the name spruce bud scales. They remove sap from the branches and this feeding can result in yellowing needles that drop prematurely. The eggs hatch about the end of June and that is when treatments are applied to kill the newly hatched crawlers.

Pennington County **Does this tree have dothistroma needle blight?**

The classic symptoms to dothistroma is banding of the needles but there are many other possible causes for needle banding from brown spot disease to de-icing salt applications. The needle tissue beyond the band for needles infected with dothistroma also turns brown within a few weeks after the bands appear and that was not the case with this sample. I was also not able to find any fruiting structures of this fungus on the needles either. They can be a little difficult to coax out so I will try again but this does not appear to be a needle blight infection.

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