

Pest Update (August 23, 2017)

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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.

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Plant development for the growing season

We are beginning to see the signs of autumn. There are a few trees that are noted for their early autumn foliage color but this is not always a good sign. We are seeing premature foliage color due to aphids and drought among other causes.

Emerald ash borer - Update

This summer's confirmation of emerald ash borer in Buena Vista County in Iowa, a mere 80 miles from South Dakota, has heightening concern about its eventual presence in South Dakota. The day is certainly getting closer. Confirmed infestations are found in the Omaha, Nebraska and Minneapolis-St. Paul Minnesota metro areas and now in about half the counties of Iowa. The most ominous finding with the Alta Iowa discovery is that it was about 100 miles from the closest known population in Iowa.

The *Update* will provide weekly information on the location of emerald ash borer confirmed in South Dakota or a bordering county of an adjacent state. ***At this time no emerald ash borer infested trees have been identified in the state or an adjacent county of a bordering state.*** The nearest infestations are highlighted in red; the Twin Cities of Minnesota; Buena Vista County and the counties in central Iowa and the Omaha-Council Bluff area of Nebraska and Iowa.



New infestation confirmed in Minnesota, some false claims in Iowa

This week there was a **new infestation confirmed in Welcome (Martin County) Minnesota** southwest of the Twin Cities and near the Iowa border. There have been a few reports by tree owners of emerald ash borer in the Iowa counties bordering South Dakota. ***These have all be proven false.*** As mentioned in last week's *Update*, our region is cursed with a lot of poor looking ash trees, made even worse with the intense drought.

Timely Topics

At this time of year I often receive requests on how to grow trees from seed. The most common request is **how to start walnuts from seed**. This tree is actually fairly simple to grow from seed; squirrels do this routinely with great success considering the number of walnuts that germinate in gardens and other prepared

soils! The trick is to think like a squirrel. Harvest the seeds as soon as they drop and plant them this autumn while the soils are still warm. The seed will not initiate growth this fall, but germination next spring improves if they are exposed to several weeks of warm temperatures before enduring the winter cold. The planting site should be well-drained. A patch in the garden is probably the best spot and after planting cover the soil with a light mulch, straw or leaves that will not mat such as oak leaves (do not use maple or basswood leaves, nor grass clippings as these tend to mat). The only trick is removing the husk of the fruit to find the seed.



First, begin gathering the nuts as soon as the first few start dropping from the tree. Once they begin to drop naturally, shaking branches with a long pole can encourage more to fall; however, do not pull the nuts off the branches. Also do not wait too until they have all fallen on the ground and dried. The walnuts should be harvested while they are still firm but green. Once they dry and harden they are near impossible to crack. The next step, after

gathering the walnuts is to change into clothes you don't plan on keeping as well as wear an old pair of gloves. Now find a hard surface to hammer open the husk. You might not want to use your sidewalk or driveway as the removing the husk will create a dark green, oily stain that does not easily wash off from most surfaces. Some people cover the surface with thick cardboard to reduce staining; others use the neighbor's driveway. Once the husk has been hammered apart and the seeds extracted, let them dry for a day or two (and place them where the squirrels cannot find them) then plant. A good rule is to plant the walnut seed at a depth equal to three times its diameter. Finally sit back and wait till spring, and if the squirrels have not found your seeds you will probably be rewarded with 50 to 80% germination.



Dicamba in trees. We are seeing more samples coming in that are showing symptoms associated with dicamba herbicide. Not all samples have been tested but those that have contain diacamba in the leaf or needle tissue. Dicamba is a broadleaf herbicide that is in a number of field and turf herbicides. The issue with this herbicide is not only drifting onto foliage but applications to the soil. Dicamba will remain active in the soil for an extended period and is easily absorbed by tree roots.

Dicamba is not to be used near trees. Labels sometimes state that it should not be applied within the dripline of a tree, meaning beneath the canopy. However, tree roots extend much farther out than the average canopy and a much safer approach is not to apply any dicamba within a distance equal to 2 x the tree's height. This means no dicamba applications within 40 feet of a 20-foot tall tree. Also this "2 times" recommendation is to reduce contact in the soil, it does not reduce exposure to aerial drift.

I received emails from tree owners who applied a broadleaf weed control product in their lawn this summer thinking it only contained 2,4-D (which drift can cause leaf cupping and curling) and then, after their trees have started to die, notice dicamba was also on the label.



Dicamba accumulates in shoot tips so spruce and other sensitive tree often have their tips droop before dying and falling off. Sometime the damage occurs before the shoot expands so the only symptoms are dead buds. If the new shoots do expand they are often twisted, curled and discolored.

Dicamba is not the only possible agent for this symptom pattern so some investigative work is needed before determining this as the cause. However, we are seeing this herbicide showing up more in samples.

E-samples



Cicada killers are after more than just cicadas! Diane sent me this picture of cicada killers "attacking" some fallen fruit. While cicadas are the main meal (as discussed in an earlier *Update*, the female cicada killer stings cicada to use them as a meal for her young) apparently the adult female will also stop for a liquid and sugar snack on fallen fruit. Cicada killer do not have a very potent sting and are not a threat to people. However,

yellowjackets also swarm around fallen fruit and this are a major threat to people. Remember unlike bees, a yellowjacket can keep stinging you! So never fight a wasp over fallen fruit, it is not worth it.



I have received pictures of willow scab (*Venturia saliciperda*). This is a very common foliage disease that appears in late summer on willow trees across the state. The disease is closely related to apple and pear scab and the typical symptoms are discolored and falling leaves as well as tip dieback. This disease has similar symptoms to black canker (*Glomerella miyabeana*), a willow twig disease that can also cause the leaves to wilt and the shoot tips to die back. The two diseases are difficult to separate but the willow scab infected leaves will usually have “tufts” of spores on the underside of the leaf, generally along the midvein. These two diseases are often found in association with one another and when they occur together the disease is just simply called

willow blight. These two diseases are common problems when the spring weather is moist, a condition typically of a few areas in eastern South Dakota this year.

Samples received/site visits



Kingsbury County What is wrong with these trees. They have been told its mites or drought.

The drooping candles seen in this picture of spruce are commonly associated with herbicide. The submitted sample was of spruce shoots where the tips were dead but all the older needles were fine. Has any herbicide been used in the lawn or adjacent field?

McCook County What is causing this deformed growth on the walnut leaflets?

These knob-like bladders on the upper leaflet surface are the work of an eriophyid mite, *Eriophyes brachytarsus*. There is no effective treatment for this mite and we rarely see it. Supposedly the mite is found in the western states but there have been occasional reports from as far east as Ohio.

Pennington County

Is this tip blight on this pine?

Not only dilopdia tip blight but dothistroma needle blight as well. There is no law that a tree can only have one problem and this sample proves the point. Fortunately treatment fungicides and timing are similar (though dothistroma treatments continue longer into the summer) so treatment is relatively easy.

Stanley County

This black walnut has pale, curled leaves, what might be the problem?

Apparently the week for walnut samples! The symptoms are due to an aphid infestation. Aphids are sap-sucking insects that produce honeydew, a sticky substance, as they feed. This material is often colonized by sooty mold, a black fungus. The easiest treatment for aphids is a soil drench of a product containing imidacloprid applied this fall. The pesticide will kill the aphids as they feed next year.

Turner County

What is causing these black smudges on the leaves?

This is developing tar spot, a fungal disease of maples – see the information in last week's *Update*.



Turner County **What is causing the tips of these spruce to discolor and die?**

We found some fruiting structures on the spruce sample and wanted to identify them first but they do not appear to be the problem. Instead the curling of the tips is most likely to be due to herbicide.

Union County

These are Black Hills spruce that were planted in 2016. They lost 2 of the 20 trees that were planted.

Only losing two trees is actually fairly good. I often see a failure rate for seedling spruce of 20% or more. The short needle length and stunted growth on the seedlings submitted as a sample are common symptoms of transplant/drought shock. I was not able to find any signs of a disease or an insect problem.

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