

Pest Update (September 23-30, 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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Timely topics

Chestnuts versus buckeyes

This is the time of year when I get lots of questions about eating those 'chestnuts' that are falling everywhere. First, these are *not* chestnuts. The

American chestnut (*Castanea dentata*) is not adapted to our state's growing conditions and the furthest west one that I have found one growing is in the Hodgson Arboretum at the University of Minnesota Experiment Station in Waseca, Minnesota (a nice little arboretum, well worth the drive over if you are in the area). There is also a small one in the eastern side of Brookings County but that is it as far as I know.



This is a picture of a chestnut fruit. Notice the long spines on the fruit which are excellent protection from squirrels gathering the nuts too soon. There are few American chestnuts anywhere due to the disease Chestnut blight that entered the country from Asia in 1904 and almost eliminated the species – once one of the most common trees in the Eastern Deciduous Forest – within 50 years. The Chinese chestnut (*C. mollissima*) is even

less hardy and I do not know of any in South Dakota or western Minnesota. The ones planted at the Minnesota Horticulture Research Center near the Twin Cities have been short-lived.



What people bring or send in as chestnuts are the nuts from the buckeye tree (*Aesculus glabra*). It has very tiny spines on the otherwise smooth fruit. This is a common tree in our region since the squirrels plant them for free in almost every garden. The nut contains the poisonous glycosides aesculin and fraxin. Ingesting the raw seed can result in muscle twitching, vomiting and abdominal pain, diarrhea and death. The raw nuts, tender shoots and

leaves, particularly wilted leaves, are also toxic to horses and cattle (rabbits too but they seem to be smart enough not to eat them). Squirrels seem to do just fine eating the raw nut and it apparently contains a sweetener that (at least to a squirrel) is sweeter than sugar. The nut can be made safe for human consumption by roasting and leaching and they were used as a starchy food by Native American but I do not recommend even trying to do this.

Lightning struck trees

The summer storms not only brought rain, but lightning. Rick, a South Dakota of Agriculture forester, went out to inspect a large white poplar that was recently struck by lightning. I also visited the tree this past week. The question from the tree owner, and it is always the same question; "Will the tree live?" Unfortunately

this is not an easy question to answer as there are a number of factors that must be considered.



First, trees are typically struck as they are the tallest object in the local environment. You often see list of trees that are more frequently struck by lightning and these trees do not have any particular characteristic in common except they tend to be the tallest trees. It is not that some trees have more minerals in them or their wood holds more moisture.

Second the path of the electricity is generally along the bark, not in the tree. It was once thought that the high heat boiled the water in the sapwood causing the tree to explode. Instead, most of the bark and wood splitting is from the shock wave that streams down the outside of the trunk. This does not mean that trees do not suffer internal injury from a strike,

just that the force come from the outside (bark) in (sapwood) rather than the other way around. The shock wave can, and frequently does, loosen bark, pull wood fibers apart and injure the phloem and other vascular tissue.

Finally, most tree survive lightning strikes just fine. About a quarter of the strikes leave no evidence of their passing. The most common symptoms of a strike is split or torn bark running down a limb or trunk and foliage wilting along the affected branches. If the visual injury is minimal, the tree may survive just fine from the strike. However, if there is a long and wide path of torn bark and a major portion of the canopy wilts within days of the strike, the damage may be more severe including root loss. These trees may gradually decline and die within a few years. Only time will tell.



Trees that have been struck should be examined by an arborist to determine if the tree has been so weakened by the strike that it should be removed. Professionals should also be called in to prune any broken branches or those with wilted foliage. The only other treatment is to keep the tree healthy, this means watering during periods of dry weather and keep on the lookout for borers that might take advantage of the tree's weakened condition.

E-samples



One nice part to writing the *Update* is someone is always sending something new or different. This past week was no exception. I received a picture of a completely defoliated redosier dogwood and a picture of the critter responsible for the defoliation. This is not a caterpillar, though it certainly looks like one. This is the dogwood sawfly (*Macemphytus*) and sawflies are wasps as adults, not butterflies and moths. Sawflies get their name from the fact the adult female “saws” small slits in the foliage to lay eggs. The eggs hatch in the summer and young larvae begin to feed on the leaf. The early instar larvae of the dogwood sawfly are covered with a white waxy covering but the later instars

are black and yellow. Sawfly larvae feed in colonies so they can strip a plant before anyone even knows they were there. The larvae are already beginning to drop to the ground and pupae. There is no value in spraying now and they do not necessarily show up on the same shrubs from one year to the next.



Samples received/site visits



I had an interesting disease show up (and on my own campus). **This is a smokebush (*Cotinus* spp) that is infected with verticillium wilt.** This vascular disease appears to be expressing symptoms more this year than in past years, perhaps due in part to the cool, moist weather we experienced for much of the summer. I have received numerous samples of catalpa (and some maples) that have shown signs of

infection. Smokebush (sometimes called smoketree) are also susceptible to the disease though I rarely see an infected plant. Verticillium wilt is a soil-borne fungus that affects a wide range of hosts but maples and catalpa are the primary woody plants that are affected by it in our region. The disease results in leaf curling and drying, also wilting, followed by branch dieback and sometimes the death of the entire tree. Many infected plants will only have a branch or two express symptoms and the disease does not spread out from there. Other times

the complete tree wilts and dies the same summer. We are going to prune out the dying branches and see if the shrubs recovers next spring – stay tuned.

Clark County

What are these white bumps on the pine needles?

This is a very heavy infestation of pine needle scale on a mugo pine. Heavy infestations such as this can leave the needles with almost a “snowy” appearance. The best treatment is an application of insecticidal soap (there are several brands available) made in late May, about the time honeysuckle is blooming, and a second application made in mid-July. This will kill the crawlers, the young scales before they settle and develop their hard white shell.

Grant County

What is wrong with this bush?

This is hedge cotoneaster and the dieback is due to the bacterial disease called fireblight. This is a very common problem with hedge cotoneaster and the best control is to prune the plant, or entire hedge, to within 3 inches of the ground during the winter. This usually eliminates the infection and the plants recover.

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