

# Pest Update (September 2, 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

**This is the time of year when I get lots of questions about eating those 'chestnuts' that are falling everywhere. This is one picture of these fruits sent in by a**

County Educator, but I am getting them almost every day. First, these are not chestnuts. The American chestnut (*Castanea dentata*) is not adapted to our state's growing conditions and there are very few in the state. 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 Chinese chestnuts planted at the Minnesota Horticulture Research Center near the Twin Cities have been short-lived.

What people bring or send in as chestnuts are usually nuts from the buckeye tree (*Aesculus glabra*). 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.



**Acorns are beginning to fall and litter the ground beneath the bur oaks in our state** so it's not too surprising if some folks wonder if they can start a tree from them. Actually it is fairly easy to do. First collect the acorns from the ground, not from the tree. They are not usually mature until they fall. However, do not wait too long to gather them as you have a lot of competition from squirrels and birds. Next, examine the gathered acorns and discard any that have small holes (indication of weevil damage) or obvious decay. Place the ones that pass this test into a bucket of water and discard any that float to the top. The ones that are left have a good chance of germinating.

If you have collect bur oaks, plant them out immediately this September into some nice garden soil. Bur oaks, as with many members of the white oak group, begin their germination process during the warm fall. The acorns should be planted at a depth of about three times their diameter and I recommend placing some chicken wire over the acorns to keep the squirrels from digging them up. Water the soil and add a thin layer of mulch or straw.

If you collect good acorns and follow these instructions you might achieve a 30 percent germination rate, meaning 3 trees from every 10 acorns planted.



**What about BOB?** We have a relatively “new” disease of bur oaks that is known as BOB, bur oak blight (*Tubakia iowensis* sp nov). There are a number of *Tubakia* fungi that occur on oaks but Dr. Tom Harrington at Iowa State identified this specific one causing a disease on bur oak. The disease was first noticed on bur oaks in southern Minnesota, Iowa and eastern Nebraska back in the 1990s where it became associated with dying oaks. It has been reported in past *Update*

issues and the disease has been found in most of the South Dakota counties bordering Minnesota and Iowa. The leaf symptoms do not really become noticeable until August so now is the time samples begin to come in.

The most common symptoms associated with the disease are leaves becoming discolored in late summer with purple-brown lesions appearing along the middle vein, yellow wedge shaped blotches on the leaf blade and black pustules at the base of the petiole. The infected leaves tend to persist on the tree throughout much of the winter. The symptoms generally occur on the lower branches but during successive years intensify and eventually cover the entire canopy.



The disease is a leaf disease and infected trees will produce new leaves the following spring. However, infected trees are more susceptible to secondary stress agents such as two-lined chestnut borer and often begin showing extensive dieback after a few years of the initial symptoms and may die if the disease and the secondary stresses are left unmanaged. It is common to see only one or two trees in an oak grove expressing symptoms so there appears to be some variation in resistance to the disease. The disease is also more prevalent on the bur oak botanical variety *Quercus macrocarpa* var. *oliviformis* which is more common to dry, upland sites. This variety is common in eastern South Dakota and produces slightly smaller acorns than most other bur oaks. Since the disease is specific to this subspecies of bur oak, we are not likely to see the disease appearing east of Highway 81.

The disease really needs a wet spring (like we had this year) to get it going. When we experience wet weather during the initial shoot expansion in May the disease proliferates and mature bur oaks can develop symptoms throughout the canopy during August, sometime almost appearing overnight. If we have a series of dry springs, infected trees can make a recovery.

The most common treatment for BOB is an injection of propiconazole, a chemical used to treat oak wilt (Alamo), made during the early growing season (May or June), but at a lower rate than used for oak wilt.. Since the disease has only recently been studied; treatments, rates and timing are still being investigated. An additional approach is to manage the overall health of the tree, reducing the impact of any other stress agents, construction and borers being two common ones.

## E-samples



**Frog-eye leaf spot** is showing up on apple trees (and crabapples) in the southern part of the state. The most common symptoms for this disease are concentric patterns of light brown to tan irregular circles appearing on the upper leaf surface. There will be tiny black dots in the center of these circles and these are the fruiting structures. The disease alone is not a threat to the tree; just discoloration of the leaves, but this is often

associated with black rot, a serious canker disease that can result in branch dieback. Apple trees with leaves exhibiting these symptoms should be examined for small dark cankers on branches and if found, these infected branches should be removed.

## Samples received/site visits

Brown County

**the berries be used for jam?**

**A person wants to know what it is and can**

The plant is called hedge cotoneaster (*Cotoneaster lucida*). The fruit, a berry-like pome, is regarded as poisonous and eating the fruit can result in intense nausea and vomiting.

Lake County

**leaves are turning brown on the margins and there is some distortion.**

**What is wrong with this leaves?**

This is the fungal disease ash anthracnose. This is usually the most common disease we see on ash and during years with wet springs, like this past one, I get a lot of samples all summer long. Ash anthracnose is a disease that we rarely recommend fungicide treatments as it usually does not occur on the same tree



each year, at least with the same intensity, and the tree can often easily recover from the stress.

Todd County

**What might be wrong with these cedars? Some started out green this spring but then rapidly declined.**

Dieback of cedars has also been associated with a number of other stressors ranging from cedar bark beetles (look for small holes, about the size of a pencil-point on the trunk) to being girdled by the fabric (check to see if the fabric is imbedded in the trunks) and the past drought. We still see an occasional cedar dead in a row and one of the more common reasons is slight differences in soils which allow this microsite to dry out more than the rest of the row.

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