

Pest Update (March 18, 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

Its maple syrup time again!.....	1
E-samples	
Cedar-apple rust.....	3
Samples received	
Bon Homme County (mulberry wood identification).....	4

Timely Topics

Winter may be mostly behind us now but it is looking like we are in for a late spring. The buds are still tight on many of our early blooming shrubs but with the weather warming rapidly we may see some early spring flowers.

It is maple syrup time!

The syrup season has begun! Sap really begins to run when the day temperatures are about 45°F, the nights between 15 and 25°F and the soils are

moist (better still if snow covered). It looks like we will have these conditions for the entire state for the next week or two though the snow is disappearing very quickly so tap now since the season might be short.



The best candidates for tapping are sugar maples but these are few and far between in South Dakota. Sugar maple, as the name implies, produce the sweetest sap and this sap may contain anywhere from 2 to 6 percent sugar. The general rule for boiling down to a syrup for sugar maple is a ratio of 30 to 35 to 1, meaning 30 to 35 gallons of sap will boil down to 1 gallon of syrup. Other maple species often produce sap not as sweet and it will take more sap to produce the same quantity of syrup. Silver maples, for example, may require 35 to 50 gallons of sap to make 1 gallon of syrup (though there are silver maples in our state with as sweet of sap as sugar maples) and the sap is usually cloudy. Boxelder, another maple species found in the region, has a ratio anywhere from 40 to 80 gallons of sap to a gallon of syrup. There are some “sweet” boxelders out there, sweet enough that the Lakota tapped these trees, but there are also a lot that have sorghum-like flavor.

Regardless of species, the best tree to tap are large, healthy, open-grown trees. The tree needs to be at least 10 inches in diameter (measured at 4.5 feet above the ground) and larger is even better. It should be in a sunny location so the tree had the opportunity to make plenty of sugar the previous season. The tree must also be free of large dead limbs and trunk decay. Trees with large dead limbs attached to the trunk and other signs of rot such as cavities and hollow branch stubs should not be used as drilling holes in these trees may increase decay.

Commercial spouts, called spiles, can be purchased on-line or you can make your own. Copper and plastic are common homemade material but keep in mind that any material must be food-grade and copper can be toxic if left in the tree longer than the sap season. The homemade tap can be made by cutting 5/16 to 7/16-inch tubing into a 3 inch length. Drill a hole of equal diameter about 2 inches into the tree, slanted slightly upward as you drill in for better flow. The wood coming out of the hole should be cream or white color indicating it is in the sapwood, not dark which means the hole went too deep and entered discolored wood. Tap the tubing about 1 ½ inch into the hole. A ship auger bit on a carpenter brace is the best drill to use but any electric drill with a wood bit will work. The hole should be placed about 3 to 5 feet above the ground and the



number of taps that can be placed into a tree is based upon the tree's diameter. A 10-inch diameter tree can have a single tap; a 20-inch diameter tree 2 taps but never put more than two taps regardless of the tree's size. Do not place taps in a tree less than 10 inches in diameter. Also do not tap within 6 inches to the side of where you tapped the year before and never place a tap above or below a previous tap. Tapping too close to the previous year's tap or above or below may lead to tree decay.



Place a food-grade bucket (plastic or metal) beneath the tap. You'll probably have to hang the bucket from a nail and put a cover over most of the bucket to reduce debris from collecting in the sap (but be sure the sap can drip into the bucket). The sap flow may be over several hours during a day and it should be removed daily or more frequently as the sap can spoil if left in the warm sun. Once the sap begins to flow it may continue for anywhere from two to six weeks. The early season's sap is light and mild. As the season progresses the sap becomes darker and stronger flavored. The season ends when the buds are beginning to expand, the sap become cloudy and develops a "butterscotch" off-flavor. Once the

season is finished, remove the spout from the tree. Do not place anything into the hole and do not use the same hole or drill one directly above or below it the following year.

During the sap run a tap may produce anywhere from a quart to a gallon or more of sap per day, though on cool day none may run and on a sunny day you might get even more. A single tap may produce from five to twenty gallons of sap during the season. Most trees are not going to produce enough sap to make much maple syrup and boiling it down is not an easy task. The best use for the sap may be for your coffee or cooking. The raw sap can be kept for a day or two in the refrigerator. I like to use it for my coffee water in the morning. The raw sap, run through a cheesecloth, adds just enough sweetness for my taste and even gives a slight maple flavor to the coffee (and it's another excuse to drink a quart or more of coffee a day).

E-samples



"When do I treat for cedar-apple rust?" is a well-timed question. Cedar-apple rust is a common disease on many apple and crabapple cultivars. The disease results in bright yellow-orange spots on the upper surface of the leaves. Leaves that become heavily infected will fall prematurely. The disease can also infect the fruit and these apples become pitted and

also drop early. The disease is called cedar-apple rust as the fungus spends half of its life on a “cedar” (juniper) and the other half on an apple or crabapple. If an area has only apple or crabapples, the disease cannot survive. This is the reason for the recommendation to remove any cedars (junipers) such as eastern redcedar and Rocky Mountain juniper from the vicinity of the apple trees. Unfortunately removal should be of *all* these junipers within 2 miles so it is rarely practical. The disease can be treated with a fungicide to reduce its impact. The most common fungicides contain chlorothalonil, myclobutanil or propiconazole as active ingredients and these are available in a number of products sold in South Dakota. Not all are labeled for use on edible crops so read and follow labels very carefully. Also Captan, a very common fungicide sold in the state is not effective against cedar-apple rust. The first fungicide application is sprayed on the apple or crabapple when the gelatinous tendrils begin to appear on the junipers as these tendrils release the spores that infect the developing apple leaves. This usually occurs in early to mid-May. Applications are repeated every 7 to 10 days for a total of four applications.



Samples received/site visits

Bon Homme County FL500001 **What is this wood? It is very dense and hard?**



This is mulberry (*Morus*), a small tree common to most of South Dakota. It is very abundant in the southeast. While most people know mulberry from its fruit that they either enjoy (think of a bland raspberry) or despise (since the fallen fruit is a mess and stains sidewalks), the wood is probably its best value. Mulberry is a heavy, dense wood with some of the highest heating values, right up there with oak and honeylocust. The wood is also an excellent smoking wood, similar to apple, and is one of the best for grilling chicken or pork.

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