Pest Update (March 26, 2014)

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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/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 product identified in this publication.

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 and unless it warms up very quickly we might see everything start just a little late this year.

It is maple syrup time!

The syrup season has begun. While we have not had a lot of warm days yet there has been a few, just enough to get the sap trickling. The sap really begins to run when the day temperatures are about 45^{o}F, the nights between 15 and 25^{o}F and the soils are moist (better still if snow covered). It looks like we may have most of these conditions throughout the state later this week and into next.

The best candidates for tapping are healthy, open-grown, mature (larger than 18 inches in diameter) sugar maples but these are few and far between in our state. 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 is a ratio of 35 to 1 for sugar maple, meaning 35 gallons of sap will boil down to 1 gallon of syrup. Other maples are generally not as sweet and require more sap to produce the same quantity of syrup. Silver maples may require 40 or 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). Boxelder, another maple species found in the region, has an 80 to 1 ratio, not very high in sugar but sweet enough that the Lakota tapped these trees.

Silver maples will probably be the most available tree to tap for most and these can be fine sap producers if the right tree is selected. The best 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. The tree should also be in a sunny location so that it 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 3/8-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 (diameter measured 4.5 feet above the ground) 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 cause 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 for a day.

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 over, 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 single tap may produce about a quart or two of sap per day, though on cool days none may run and on sunny days you might get almost a gallon. A single tap may produce about 5 to 10 gallons during the season. Most folks are not going to produce enough sap to make 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 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).

What to do about rabbit damaged trees

Now that the snow is disappearing many people are noticing the extent of rabbit damage that occurred on their favorite trees and shrubs. The woody plants that have experienced the more damage are the traditional favorites of rabbits, apples

and crabapples (*Malus*) and burning bush (*Euonymus alata*) aka 'Rabbit Candy.' Damage from rabbits is usually either the entire shoot cut off cleanly at an angle or the bark cleanly scrapped around the lower trunk.

If the trunk has been chewed less than 1/3 the way around, the tree should survive the injury (it is the distance around that is important, not the length). If the trunk is chewed more than 2/3's the way around (as seen in this picture), it may be best remove the plant as these injured stems often decline and die within a few years.

E-samples

Banded elm bark beetle found in a hybrid elm. I got a picture sent in by Dave, a service forester from the South Dakota Department of Agriculture, of some hybrid elms that the bark was shredded off by woodpeckers. The woodpeckers were apparently searching for small beetles that were beneath bark. Dave sent in some of the insects and they are adult banded elm bark beetle (*Scolytus schevyrewi*). This exotic bark beetle was accidently introduced from Asia sometime during the 1990s, but was not detected in this country until 2003 in Colorado and Utah. It is now found in more than twenty states, including almost all the states west of the Mississippi River. The most common host is Siberian elm (*Ulmus pumila*) but it can also be found infesting American elm (*U. americana*) and Japanese elm (*U. davidiana* var *japonica*) as well as many of the hybrid elms, particularly those with Siberian elm as one of their crosses. The insect has also been identified as a vector for Dutch elm disease (*Ophiostoma*). We have seen this insect in our state for more than a decade, mostly in West River Siberian elms, but this is one of the few times I have seen it in one of the hybrid elms. These hybrid elms are noted for their resistance to Dutch elm disease but obviously they still can have a few other pest problems.

Leaning pines. I also received a picture of some leaning pines. Apparently a number of the pines in this young windbreak were tilting. While I cannot determine the reason for this from a picture, most likely it is related to the soils, either the soils are poorly drained and the root system is not well developed and anchoring the tree or the combination of wet soils and snow caused the trees to lean during the winter. Staking is probably the best solution.

Samples received

Clay County **This spruce is turning brown. Is this winter injury?**

Correct, the problem is most likely a little winter-burn. This is a common problem with young conifers and the typical symptoms include yellowing and browning needle. This looks to be a mild case of the disorder and the buds appear to be healthy. If that is the case I expect the plant will recover this spring though some needles may be shed.

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