Pest Update (June 10, 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.

Plant development

The warmer weather we are receiving will get even warmer this week with temperatures climbing into the high 80s and even 90s. We are still way ahead of last year in woody plant development and this hot spell in combination with the rains should really advance the season. The Japanese tree lilacs (*Syringa reticulata*) are just starting to bloom in Brookings, about two weeks earlier than last year. However, they bloom even earlier in 2012, about the end of May. South Dakota, the land of extremes!

Pest treatments to be done now

Dothistroma treatments should also be started now. This is a very common disease of Austrian pines this year (also ponderosa pines in East River shelterbelts and the Black Hills) and is responsible for many of the discolored pines we are seeing. The symptoms are dead needle tips beyond the yellow to tan spots. The spots have now enlarged to form brown to reddish brown bands and sometimes fruiting structures can be seen in the bands. The infection this year is so bad that the entire needle may be discolored. The treatment is a copper fungicide applied now as the candles are expanding and repeated in late June and again in mid-July. There are a number of copper containing fungicides available such as Camelot for those individuals who have to spray several or more trees. *Note: This is the most common misdiagnosed tree disease with the majority of samples not having any signs of the disease. Needle banding can occur for many reasons*.

Timely topics

Voles, voles, and more voles!

As discussed in last week's *Update*, we are seeing a tremendous amount of vole damage on junipers and other small trees. Almost every common juniper in the Black Hills has damage. The picture on the left is of some juniper shrubs that are covered with yellow shoot tips. If you follow each of these yellowing shoots to the soil line (the picture on next page), you will also see that these shoots had been girdled by voles.

Vole injury can be easily separated from rabbits by the gnaw marks. The gnaw marks from voles are irregular and at various angle, quite different from rabbit which tend to cut everything off at a very regular angle, almost 45-degrees. Voles can become a problem with cedar (juniper) plantings as these plants provide good cover for them. Voles also take advantage of the protective cover from weed barrier fabric and populations tend to increase in ornamental plantings and tree belts with fabric. Tall grass between rows also provides hiding cover and mowing low, particularly in the fall, is a common means to reduce movement of voles from row to row.

The best management tactic for voles in small plantings is to trap them out. Mouse traps with peanut butter can be used. For larger plantings, windbreaks, vole populations can be reduced with toxic baits. The baits are placed in bait stations to reduce the risk to non-targeted animals. Also placing baits in holes, rather than stations, is time consuming and voles are very sensitive to disturbances in their tunnels and may avoid the baits. Toxic baits are generally on the restricted pesticide list but some are available under general use. Baits are most effective when used in early spring when other food sources are limited. Baits must be frequently check and replenished as it often takes several feedings to kill. Some baits also have a bitter flavor so it's best to increase the attraction to the stations with a few days of placing oats or other grains to get the voles use to coming to the stations for food. There are also vole repellents but these only provide short-term protection.

E-samples

Aphids are appearing on many different tree species now that the weather is warm and wet. These favorable growing conditions have result in lush, tender growth which provides aphids with an excellent food source. Aphids are rarely a serious threat to woody plants. Generally the result of an infestation is some yellowing or curled leaves and sticky surfaces beneath the tree from the honeydew these insects secrete. Almost every insect finds aphids to be the perfect meal so most populations are kept in check by their natural enemies and sprays may kill as many of their enemies as the pest. If management is desired, the best treatment is insecticide soap. This will kill the soft-bodied aphid but have a minimal impact on their pests. The soap must contact the aphids so

those hidden in curled leaves will escape. The longer the soap remains on the leaf surface, the better the control so apply soaps early in the morning or later in the evening. Soaps are phytotoxic to some trees species, most commonly hawthorns, mountainash, cherry and plum, so read and follow label directions carefully. Also hard water, water with a lot of minerals, can also be damaging to tree leaves. Finally, buy insecticidal soaps, don't make your own from detergent. Most dish detergent are very damaging to foliage.

I have received emails regarding the light colored spots appearing on ash leaves. This is **ash rust** disease, not ash anthracnose, a disease covered in previous Updates this year. Ash rust begins a light colored spots that enlarge and become bright orange spots on the petioles and undersurface of the leaves as the season progresses. These enlarge along the midrib of the leaf blade and petiole becoming almost gall-like and further distorting the leaves. These infected leaves usually drop prematurely resulting in another round of telephone calls and emails from alarmed tree owners as their yards become filled with leaves in July and August. The disease, as with many other rust diseases, has two hosts, one is the ash and the alternate host is several grass species. The disease can be managed on the ash with a single application of a fungicide containing myclobutanil made just as the leaves come out.

Cedar-apple rust is beginning to appear on apple and crabapple leaves. Several weeks ago the Update has several issues with picture of the globose galls with orange-yellow horns emerging from them. These galls were on the junipers (cedars) and the spores being released by the horns were carried by the wind to the young, tender apple and crabapple foliage. The spores germinated on the leaves and now the small greenish yellow spots are appearing on the infected foliage. These spots will enlarge during the season to become blotches that are orange-yellow with a reddish band surrounding them. These infected leaves often begin to fall about the middle of August and heavily infected trees may have all their leaves fallen by Labor Day. The fungicide

treatments should have started about a month ago, as explained in previous Updates this season, as they protect foliage from becoming infected rather than curing the disease.

I am receiving pictures of this interesting "blob" on cottonwoods and aspens. This picture came from Bob up in the northwestern part of the state and shows the **poplar bud gall** which is formed by an eriophyid mite. These mites feed on the leaf buds causing a proliferation of cauliflower-like growth that forms a sphere about 1 to 2 inches on the branch. The galls start out dark green and soft and become almost brick red and hard by the fall. The galls do not harm the tree, though some infested branches do become a little crooked at the site.

The **redheaded ash borer** is out flying and has been for more than a month. The long-legged adults emerged from dying and dead ash trees and are now seeking hosts to lay their eggs. Despite the name ash, this insect is commonly found in apple and crabapple as well as several other hardwood species. The appearance of this insect on a dying tree is an indication that the tree is dying, not that the borer is the cause of the decline. The redheaded ash borer preferred declining trees, standing dead trees and even logs over live hosts. The best management recommendation is to spend time investigating why the tree is dying and reduce that stress rather than spray to kill the adult borers.

I received a picture of the **woolly elm aphids** enclosed in a curled elm leaf. This is an interesting insect as it alternates between two hosts, elm and serviceberry (*Amelanchier*). The insect forms cotton-like masses in the curled leaves as well as honeydew so the leaves and anything beneath the tree is covered with this sticky substance. The insect feeds on the leaves of elm, but on the roots of the serviceberry, an interesting change of hosts and parts! The insect usually does little injury to the elms but the sticky honeydew that drips down from the tree is sometimes annoying to people. Treatments are difficult to apply as the aphids are protected from contact insecticides since they are within the curled leaf. Systemic insecticides are very effective, either as soil drenches or trunk injections, but usually need to be applied about a month before you see the insects. If the tree is small enough to spray, an application of an insecticide containing acephate may provide good control. This is a systemic insecticide that will move into the leaf and kill the

aphids as they suck the sap from the tissue. There are few commonly available insecticides containing acephate available anymore. The one I find most in South Dakota is Bonide Systemic Insect Killer.

Samples received/site visits

Codington County **This dying evergreen looked fine this spring, now it is brown. What is the problem?**

The plant is an American arborvitae (*Thuja occidentalis*). This looks like winter desiccation injury. Sometimes the color change does not occur until after the plant resumes growth in the spring. Nothing can be done to repair the damage now except prune away affected foliage. Wrapping arborvitae during the winter helps reduce this problem.

Lawrence County **Is this Dothistroma affecting these pines?**

Yes, this sample did show the signs of Dothistroma but the foliage is also showing symptoms of other stresses and this need to be investigated. We are doing further analysis.

Stanley County **What is this upright and very dense plant?**

This is glossy buckthorn (*Rhamnus frangula*). It is commonly planted in South Dakota as the cultivar Tallhedge (*R. frangula* 'Tall Cole').

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