Pest Update (July 4, 2018)

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John Ball, Forest Health Specialist SD Department of Agriculture,
Extension Forester SD Cooperative Extension

Email: john.ball@sdstate.edu
Phone: office 605-688-4737, cell 605-695-2503
Samples sent to: John Ball
Agronomy, Horticulture and Plant Science Department
rm 230, Berg Agricultural Hall, Box 2207A
South Dakota State University
Brookings, SD 57007-0996

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.

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 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

We are right on schedule for plant development this year, maybe even a little ahead due to the hot weather. The smoke trees are blooming in Brookings just about on schedule. During cooler summer they often bloom in the middle of July.

Timely Topics

Aphids, aphids and more aphids.

Aphids seem to be the major cause for concern this past week. This is not too surprising as they are also some of the most common pests in the ornamental landscape. Fortunately, they tend to be more of an annoyance rather than a life threat to trees so rarely are treatments necessary.

Aphids are small pear-shaped insects, about 1/8-inch long. They have a pair of pipe-like cornicles protruding from the abdomen that emit an alarm odor to communicate danger to the “herd.” Some adults have clear wings. Aphids are colorful insects with species ranging from yellow, to orange, green, red, and black. Some aphids also have their bodies covered with waxy threads and these are known as “woolly aphids.”

Aphids live in colonies, so you rarely find an aphid, you find a cluster of them on the underside of a leaf or along a shoot. Almost all the aphids you see during the growing season are females. They reproduce asexually, and even give birth to live young rather than an egg. Each female can deliver three to five daughters per day and each daughter becomes an adult in about 10-days, so populations can increase very rapidly.

Aphids feed by sucking sap from tender shoots and leaves. They are generally concentrated on the newest growth – the most nutritious – so can be found on branch tips. If the colonies are large enough, they can remove enough sap so that the leaves become yellow and wilt. The infested leaves often curl, providing protection for the aphids that are inside.

Aphids also produce honeydew. This is a sugary liquid that is excreted by the aphids as they feed. It rains down from the tree canopy and leaves everything beneath the tree covered in a light sticky film – it's hard to clean it from a car windshield. This sugary material serves as a food source for a sooty mold which leaves the honeydew film covered with a black, powdery material.

This honeydew is also attractive to ants and when you find ants crawling along the shoot tips you usually can also find aphids. The ants collect the honeydew from the aphids (hence another name for aphids – ant cows) and will protect their herds from predators.

Everything likes to eat aphids, so the ants have their work cut out for them. Lady beetles, lacewings, hover flies, and other insects find aphids tasty snack. The best treatment is often no treatment and just let the natural enemies do their job. If you want to help reduce the aphid population, a jet of water from the hose will usually dislodge many of them and since they do not fly, and are easily crushed, you'll kill quite a few and have minimal impact on the beneficial insects.

Emerald ash borer update

The emerald ash borers are still flying in the Sioux Falls. We are just beyond the peak flight time and some of the earliest eggs should have hatched by now. Beginning next week, I will be updating on larval development in infested trees.

The trees that have been infested for several years or more are clearly presenting symptoms of the repeated attacks. The emerald ash borer emerges as an adult in June or July and will often lay eggs on the same tree it emerged from. It may take four or five years of repeated attacks to finally kill a tree.

Tree that have been attacked for four years usually have more than half the crown dead and there are numerous sprouts coming up near the base. These are trees that are beyond the stage for treating and instead will be removed and the wood destroyed this fall after the flight period has ending and all the insects are inside the tree.

E-samples

Dogwood sawfly (*Macremphytus tarsatus*) is feeding on redosier dogwoods. They are almost completely defoliating some shrub beds. Sawflies feed in colonies so they can usually go through a shrub in a few days or a week. Often the damage goes unnoticed until its almost too late for treatments.

The larvae are about 1/2-inch long at this stage and have a white powdery appearance. They will go through several color changes as they develop. They feed in small colonies along the margins of the underside of the leaves, feeding on everything but the major veins, a type of damage referred to as skeletonizing.

In another month or so the larvae will drop to the ground and overwinter in logs, landscape timbers or other protected locations. The following spring the adults – a small wasp-like insect -begin flying about the time the leaves have expanded.

The insects can still be treated with a foliar application of Carbaryl (Sevin) or Malathion. However, this window is rapidly closing as once they reach about 1-inch long they are finished feeding and the only value to a spray then is revenge, not treatment.

Maple velvet erineum gall mites (*Aceria aceris*) are feeding on maple leaves in eastern South Dakota. These are eriophyid mites, but the plant injury is not the typical gall but instead patches of dense, hair-like mats (erinea) on the underside of the leaves that range from a bright red to a pale green. The upper side of the leaf will appear slightly blistered.

The injury to the tree is minimal and there are no effective treatments. A dormant oil application made just before bud break in the spring may kill some of the overwintering adults before they move out to the foliage.

Crown rust (*Puccinia coronata*) is appearing on buckthorn (but who cares!). This fungal disease begins to show up about every year around the beginning of July. The symptoms start out as dark spots on the leaves that turn yellowish green then almost an orange. The disease really causes little injury to the buckthorn and the alternate (and overwintering) host is generally cereal crop stubble.

There are no treatments as no one wants buckthorn around anyway. It is a European plant brought here as a tough hedge plant. While it certainly is tough, the seeds are spread everywhere by birds and now this tall shrub/small tree has invaded about every windbreak and riparian area of the eastern half of the state.

Sample received/site visits

Davison County **Is this emerald ash borer?**

No, this is the yellow spotted jewel beetle (*Buprestis confluenta*) also known as the green metallic wood borer. The adults are about 3/4-inch long with yellow flecks on the wing covers that may be wide spread to almost confluent. The under-color is a coppery brown. The larvae feed in dying cottonwoods, aspens, and poplars. The insect is found throughout the state.

This is one of the most common insects reported as emerald ash borer and it is a close relative, at least in the same family, Buprestidae. However emerald ash borer is narrower, shorter (less than 1/2-inch long) and coppery without spots.

Lawrence County **Is this pine wilt disease?**

No, while Austrian pine, along with Scotch pine, is susceptible to this disease these are not the typical symptoms. Generally, the entire canopy of the infected tree turns yellow to brown at this time with dead needles hanging on the tree until fall.

This may be diplodia tip blight, a fungal disease that is common across the United States on Austrian pine. While it usually is associated with stunted branch tips, not the dieback of entire branches, it can cause cankers

in larger limbs. The cankers can girdle the limb resulting in its death.

This symptom pattern, where limbs are individually killed, rather than most of the branch tips stunted by the pathogen seems to be more common in the western part of the state than the east. We are investigating this further and will report back.

Minnehaha County **Is this pine wilt disease?**

No, at least not in the core that was submitted. Pine wilt nematode can be extracted from cores, but it is usually easier with cross-sections of the trunks taken from the lower whorls of branches. Either this tree is not infested, or the nematodes may not have been in the sapwood that was collected in the coring.

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