Pest Update (June 6, 2018)

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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.

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

The black locusts are in full bloom throughout the state and that coincides with the emergence of the emerald ash borer. You can find more information on adult emerald ash borer under Emerald Ash Borer Update in this issue.

We also have Miss Kim and late lilacs in bloom and the catalpas look like they will be flowering soon. We are just about where we should be for woody plant development for the growing season.

Treatments to do now

Dothistroma treatments should 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 some of the discolored needles we are seeing on pines this year. 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.

Timely Topics

Emerald ash borer update

Emerald ash borers are emerging now. I received this great picture of a beetle in a bag from Kristi at Arbor Care in Sioux Falls. The emergence will probably peak in late June and then slowly taper off until about Labor Day. The adults emerge through a D-shaped hole they cut through the bark. Once emerged the adults feed on ash leaves (but will also feed on other tree leaves) but really its more nibbling on the leaves than chewing them. The extent of defoliation is so limited that most people will never even notice the feeding.

You probably will not see the adults either. The adult beetle is about 5/16 to 7/16-inch long, torpedo shaped with a metallic green covering. If you are lucky (or unlucky if its your tree) you might see one walking on the bark. They prefer to be out during warm, sunny days, usually between 10 am and 3 pm.

The most common host is the tree the beetles just emerged from. Emerald ash borer is a lazy insect and will not fly far if it does not have to. Most are content to stay close to home, wandering no farther than about 100 yards from the tree they emerged from. They can travel up to 10 miles if they must fly that far for food. This is one reason that communities do not try to remove every ash surrounding an infestation during the summer. You always miss a few infested trees and the beetles emerging from them are forced to migrate. Keeping the trees during the summer is a good means to slow the spread as these nearby trees (and the tree they emerged from) will be the likely candidate to lay the eggs on.

The female borer lays about 50 to 90 eggs, but one at a time rather than as a mass. The eggs are laid in bark crevices, often near when a branch is attached to the stem. The adults prefer to be in the sun, so you often find the infestation starts on the south side of the canopy.

One way to monitor for emerald ash borer is placing purple panel traps in ash trees. These are not used to control the population – you never can catch enough to stop an infestation – but to determine the extent of the population, essentially where they are at in a community. You can expect to see these in ash trees across the state this summer – and quite a few in Sioux Falls to map out the spread of the infestation.

Herbicide

I have been receiving numerous pictures of trees that appear to have been subjected to herbicide drift. Unfortunately, this is a common occurrence and not unique to South Dakota.

The typical scenario is an applicator sprays an adjacent field to a home. The homeowner either notices some damage to their trees or are concerned that some damage may occur. The applicator and landowner decide to wait until next year to see how the trees look. A year later the trees do not look too good, so the homeowner wants money to pay for the damaged trees.

The applicator believes the trees were damaged by the winter or other agent and doesn't want to pay.

A year after the application it can be very difficult to match symptoms to a past application or even find traces of the herbicide in the plant tissue. And even if the herbicide is there, perhaps it was the result of drift from another application, unrelated to this one. It's never a wise idea to wait to see what may happen.

If somebody is concerned that their trees may have been impacted by drift, a complaint should be made within 30 days of the application or the first appearance of damage (the sooner the better, preferable within days of the application). The complaint is made through Ag Services, South Dakota Department of Agriculture. They can be contacted at 605-773-4432. A pesticide complaint can be filed on line at:

www.state.sd.us/eforms/secure/eforms/E2093V1-PesticideComplaint.pdf.

Tent caterpillar are almost finished feeding for the season in the southern part of the state. The tents have become discolored and tattered, long discarded as a home for the caterpillars. The foliage on the twigs near the nests are reduce to the single midrib with the surround tissue missing. The few caterpillars wandering about are usually over 2-inches long with most now on the ground looking for a place to pupae (they emerge as adult moths in late summer). Spraying at now is really revenge spraying. The damage is already done and killing a few caterpillars, while entertaining, will have little benefit in reducing the possibility of damage next year.

E-samples

Aphids everywhere! I have received picture of aphids on many different trees in the past week. While just about every tree or shrub species can have aphids, they are not the same aphid. The aphids on the cherry are not the same ones on the quaking aspen.

These sucking insects are very small about 1/16-inch but feed in colonies so are easy to spot in young trees. Aphids also cluster on the new growth of the trees, near the tips, as they are looking for the most nutritious tissue. At the end of their abdomens are two protruding tubes called

cornicles which secrete a defensive fluid. The fluid aphids are most known for is honeydew – a stick by-product of their absorbing a tremendous amount of sap for food. This undigested material is excreted from the aphid and rains down on leaves, decks and cars. Sometimes you can find more than just aphids in the colonies. There can be ants which treat aphids as “cows” milking them for the sweet honeydew.

The best treatment for aphids is to let their numerous natural enemies do their work. Aphids are the perfect snack for many insects, ladybird beetles, lacewings, and parasitic wasps, and these can bring a population down.

If you really feel the need to spray, use insecticidal soaps as these are very effective on aphids but do not little harm to their natural enemies. Systemic insecticides can also be used but these need to be applied before we see the aphids as they can take 30 days or more to be absorbed throughout the tree and by then the aphids are usually gone. Insecticides containing acephate or Malathion are also common sprays and can be effective but will kill the natural enemies.

Taphrina disease on chokecherry

The blisterlike deformation and curls on this chokecherry leaf are probably due to *Taphrina*. This is a very primitive ascomycete which has species responsible for peach leaf curl (*T. deformans*) on peaches and plum pockets (*T. communis*) on plums.

Taphrina species infect the leaves, flowers, or fruit. The infection on the leaves results in these puckers and curls. These deformations also turn yellow and red as the season progresses. The shoots may also become deformed.

This diagnosis is based on symptoms, not signs, and we can investigate further. However, regardless there are no treatments for this disease once symptoms appear. I have only seen this disease on chokecherry a few times.

Dying ash in Sioux Falls. No, this is not the emerald ash borer at work. This is a Fallgold black ash (*Fraxinus nigra* ‘Fallgold’). This cultivar became poplar back in the 90s for its excellent yellow autumn foliage color. Unfortunately, this species and cultivar are plagued with a multitude of pests including the cottony ash psyllid. It also has a canker disease that shortens its life and we have lost many of these trees in the past decade in Sioux Falls. I am surprised that someone still has one. Removal is the best option as

there are no treatments for the canker (and no one wants to spend any time on finding treatments as the species is very susceptible to emerald ash borer).

Sample received/site visits

Davison County **What is wrong with my tree?**

Absolutely nothing (and wise readers will know the tree owners had bought the house over the winter). This is the variegated Norway maple (*Acer platanoides* 'Drommondii'). This is a popular tree due to its green leaves with a white margin. Unfortunately, some shoots do not form variegated leaves and if these are not pruned they will dominate and shade out the variegated ones. Eventually the tree will only have green leaves. This one might be too late to save the variegation as most of the upper canopy has already reverted to green leaves.

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

No, the minor woodpecker pecks are due to searching for our native wood borers. The reason for the dieback may be the dense population of oystershell scales (*Lepidosaphes ulmi*). There are many declining ashes in Pierre where almost every branch is covered by these scales. The young have now hatched beneath the female scales and are crawling out to the newly expanding shoots to feed (hence the name "crawler").

The most common treatment is to apply horticultural (summer) oil when all the crawlers have hatched out and have moved to the shoots to feed. This has already occurred. While the crawlers are easily killed by many insecticides, these same chemicals also kill most of the natural enemies of the scale.

Summer oils are very effective at killing the settled crawlers but have minimal impact on their predators and parasites. The summer oils can be phytotoxic if misapplied. Do not apply oils when the foliage is wet, or the relative humidity is above 90% or either event is predicted to occur within 2-days of application. Also, do not apply when the air temperature is above 85^{o}F. Even if applied properly, oils may injury maples and walnuts so avoid any drift on these species.

Commercial applicators can also use dinotefuran as a soil treatment. This insecticide is absorbed into the tissue and kills the crawlers as they feed. This is the only effective systemic treatment, other systemic active ingredients such as imidacloprid are not useful in managing armor scale populations.

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