

Pest Update (July 17, 2019)

Vol. 17, no. 22

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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 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.

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Plant development for the growing season

We are right on schedule for plant development this year, maybe even a little ahead now. The summer-flowering billard spireas (*Spiraea x billardii*) are in full bloom along with our other summer favorites, Ural false-spirea and smokebush.

Timely Topics

Japanese beetle adults feeding on leaves now



Japanese beetle (*Popillia japonica*) adults are out feeding in communities across South Dakota. I was able to find adults feeding on grape leaves this weekend in Brookings. The Asian insect was first found in New Jersey in 1916 and spread all the way to South Dakota by 2007. It is now found in scattered communities across the state. It is also present in North Dakota, Minnesota, and Nebraska.

The adult beetles are about 3/8-inch long with a dark metallic green head and metallic tan wing covers. There are also several other closely related insects, the rose chafer (*Macrodactylus subspinosus*) to name one, that look similar, but lack the white tufts of hairs along the lower abdomen. The females lay eggs on grasses during mid-summer. The eggs hatch in about two weeks and the larvae burrow into the soil.

The Japanese beetle larva is a C-shaped grub that feeds on grass roots though they have been found feeding on the roots of container nursery stock. During hot, dry summers, the severing of turf roots can add to the water stress and large dead patches of turf can develop in grub infested soil. Skunks, moles and shrews find the grubs tasty so heavily infested lawns will also be torn up at this time of year as these animals search for the insect.

While the larvae are a concern to anyone that likes turf, the adults can defoliate trees and shrubs. The defoliation is not complete, instead the adults feed on the soft tissue between the veins leaving a lace-like appearance to the foliage. Japanese beetle adults do not feed indiscriminately but prefer certain hosts. The trees that are their favorites include American elm (*Ulmus americana*), buckeye (*Aesculus*), linden (*Tilia*), apple and



crabapples (*Malus*), birch (*Betula*), cherry and plum (*Prunus*), Norway maple (*Acer platanoides*) and walnut (*Juglans nigra*). The two favorite shrubs are hydrangea (*Hydrangea*) and rose (*Rosa*).

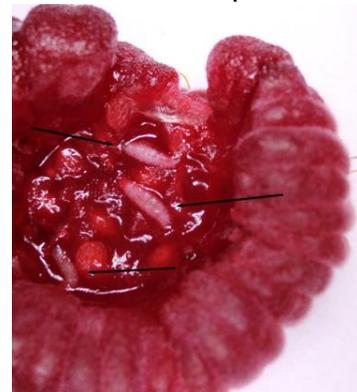
The most common treatments for the adults are foliar sprays of insecticides labelled for control of Japanese beetles and containing acephate, carbaryl or imidacloprid as the active ingredient. A soil drench of an insecticide containing imidacloprid may also be used but should be applied in the spring before adults are found feeding on the leaves.

Spotted wing drosophila is infesting fruit in South Dakota.



The spotted wing drosophila (*Drosophila suzukii*) is a small vinegar fly that was first discovered in the United States in 2008 and since that time has moved throughout the country and into our state. It is a very tiny fly, a small fraction of an inch, so cannot fly far. How did it get everywhere so quickly? You guess it – people and their vehicles.

This fly is a problem with small fruits, in our state the currants, elderberries, grapes, raspberries and strawberries. It also will infest aronia and cherries. It is becoming a major headache as the female cuts into the ripe fruit with a saw-like ovipositor to inject the eggs beneath the thin skin of the fruit. The eggs hatch in one to three days and the larvae quickly swarm the inside of the fruit rendering it into mush. There is nothing worst (well one thing) than collecting a tray of raspberries, placing them in the frig and the next day having nothing but a tray of slime. The “one thing?” Biting into the fruit and noticing an off-taste and texture and realizing you ate a fruit filled with these worms! Yum! You might not notice them at all and according to the literature eating them is not harmful to humans – just gross.



The short life cycle means that there are multiple generations per year so this insect can easily, and quickly, destroy a crop. Since the insect attacks only ripe fruit, fruit that will be harvested very soon, there are fewer insecticide options available to producers and home fruit growers. The insecticides are applied to kill the adults before they lay their eggs. Once the eggs are inserted into the fruit there are no effective treatments. Insecticides containing spinosad or Malathion, to name two possible treatments, may be used but applicators must follow the label as to crops, intervals between treatments and interval before harvest.

The best way to tell when the insect is in the area (other than find damaged fruit) is monitoring with traps. The insect overwinter in the leaf litter beneath windbreaks.

Most do not survive the winter as temperature below about 20°F are fatal, so it takes a while for the populations to rebound each year. This means we usually do not see the insect until late June to mid-July depending on the summer temperatures, so June-bearing strawberries and summer raspberries often escape infestations. It's the day-neutral and fall-bearing raspberries that are damaged the most.

The insect will also feed on non-crops hosts such as common buckthorn and chokeberry. Producers that have their small fruits surrounded by windbreaks containing these and other fruiting plants such as snowberry may be creating a reservoir of the pest.

Photo credit for SWD: Mary Roduner, former SDSU Extension Consumer Horticulture Field Specialist.

A sad tale of planting too deep



About 24 years ago I watch a crew plant a bare-root green ash on campus with a pole-hole auger. The tree was being planted about 18-inches too deep! I mentioned that this would probably kill the tree, but they said it would be fine.

And it was, for about 24 years. Ash is tough and being a floodplain species is tolerant of soil being placed over the collar, but 18-inches is too

much. I have kept watch on this tree over the decades and it seemed to be doing fine, perhaps just a little less shoot growth than the other ash.

This weekend it fell over. You can easily see the soil line on the trunk and how much soil had been placed over it. The roots were mostly decayed, and the wood crumbled easily when touched.



Planting too deep does not mean the tree dies right away.

E-samples

Sucking insects are becoming the concern as we enter the summer heat. Each year at about this time the volume of calls increase with the question; “Why is my tree weeping?” or “Why is it sticky beneath the tree?” This material is honeydew, a fluid excreted by sap-sucking insects, either aphids or soft scales, as they feed on the tree. These insects suck the sap from tree leaves, twigs and branches and



their utilization of this sap is very poor. Only about half the ingested nitrogen is absorbed, along with some of the sugars, the rest is excreted from the insect. The honeydew is a food-source for ants and you'll often find trees with sticky leaves also covered with ants. These ants protect the aphid from predators and parasites as they move their 'herd.'

The honeydew also serves as a food source for sooty mold, a fungus that forms dark colonies on the sticky material. Neither the honeydew nor mold harms the tree, though the mold can slightly reduce photosynthesis. The real problem is the sticky material covering decks and other surfaces. Usually a mild soap and warm water solution is all that it takes to remove the honeydew and mold from outdoor furniture and cars. Sometimes plastic and treated wood will require a household bleach and water solution, usually a 1:4 ratio, to clean the sticky material away but always use caution when applying bleach and test a small area first.



I am getting a lot of calls regarding trees and shrubs with distorted, cupped and/or curled leaves. The most common woody plants afflicted with these symptoms are lilacs (including Japanese tree lilac), green ash, hackberry and lindens. The tell-tale clue is the curled petiole (leaf stalk). This is a common symptom for growth regulator herbicide exposure.

The culprit is not 8-legged, 6-legged or even 4-legged – it's 2-legged. You guessed it – people. In fact, primarily guys who appear to have nothing better to do on a hot, windy day than to spray their lawn with 2,4-D. I have seen several of these individuals out spraying their lawn in 95°F heat (where the herbicide volatilizes even better, any temperature over 80°F increase the risk of non-target plant injury from herbicide drift) with a 10 to 15 mph wind (which can carry the herbicide several home yards away without any difficulty). This is not the best time to try and spray the weeds in your lawn and it is about the worst time to spray woody plants. Remind these weekend weed warriors to put the sprayer away until fall.

Samples received/site visits

Brown County oak leaf?

What is this woolly mass on the bur

This is the woolly oak gall, formed by a very small cynipid wasp. The name woolly oak gall is a generic term that describes the gall, rather than the insect that causes it as there are cynipid wasps in three different genera *Andricus*, *Callirhytis* and *Macrodiplosis* that create similar “woolly” appearing galls. The gall wasps also have a characteristic known as heterogamy, meaning there is an alternation between generations and these differences also relate to the galls they each form. One generation will form these globular “fuzzy” galls, the next will form numerous small hardened bumps on the upper leaf surface (with an indentation on the lower side) that often look more like a disease than a gall.



Fall River County

Catalpa decline



Two catalpas in a planting of three were presenting severe dieback. The dieback was only at the top and affected branches were dead all the way to the trunk. This is winter kill. Catalpas are marginally hardy to much of South Dakota. While they can tolerate our cold winters, they have difficulty with the seasonal temperature fluctuations that occur in autumn and spring.

We lost about all the catalpas in Brookings six years ago when we experienced a late spring cold snap. The spring cold (remember the snow in May) was enough to kill the tops out of catalpas in your area. Just prune out the dead and establish an upright watersprout as a new leader.

Jones County

Bumps on a hackberry leaf

The galls on the hackberry are due to the hackberry nipplegall maker, a small psyllid (an insect) that looks like a miniature cicada. The insect overwinters on the bark and then moves to the leaves to lay eggs. After the eggs hatch the nymphs feed on the leaves and these galls form around them. The galls are unsightly and often result in some of the leaves falling prematurely but



they do not really harm the tree – just make it look ugly. There is no effective control of this insect.

Tripp County

What is wrong with this cotoneaster hedge?

There were some oystershell scales (a sucking insect) on the stems, but the blacking and wilting tips are symptoms commonly associated with fireblight. This is a bacterial disease that occurs frequently on hedge cotoneaster. The best treatment for the disease is to rejuvenate the entire hedge, cutting all the shoots down to 2- or 3-inches above the ground this winter. This usually eliminates the disease. You do not need to treat your pruners with disinfectant between cuts at that time as the disease is dormant.

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This publication made possible through a grant from the USDA Forest Service.