Pest Update (July 24, 2013)

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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.

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Timely Topics

Plant development

The hydrangeas are in full bloom, very typical for this time of year. They do not look too happy about flowering during the heat (though this last week of cool, moist weather has dramatically improved them) and since hydrangeas are known as “water pigs” – keep the hose on them!

E-samples

Lots of fruit questions in the last week! Here are the most common e-samples that came in during the past week regarding apples.

Apple maggot injury is beginning to show up across the state. The apple maggot is the most common insect pest of apples in South Dakota. The exterior of the infested fruit has a dimpled, lumpy appearance. The flesh has brown trails and often has a mushy texture. The larvae can be found in the fruit in late July into August. They are creamy white and legless and leave brown trails through the flesh. Once the larvae are in the fruit there is nothing that can be done. The maggot lives in the fallen fruit for a couple of days before crawling out and burrowing into the soil to pupa. Promptly picking up and disposing of any fallen fruit will help to reduce next year’s infestation. The other treatment is to spray the developing fruit to kill the adults before they lay eggs but these treatments should have been started at the beginning of July.

Apple scab is the most common disease of apples and crabapples in South Dakota. The disease occurs on leaves, blossoms and fruit. Infected leaves often are distorted and contain lesions. The lesions begin as velvety brown to olive spots that turn black. Infected leaves may begin dropping by midseason and in severe infections the entire tree may be defoliated by mid-August. Fruit infection is similar to the leaf with the fruit developing lesions that become brown and corky. Fruit cracking may also occur as a result of the infection. The disease overwinters primarily in the fallen leaves with the spores released during cool, rainy days in May and early June. Removing infected, fallen leaves in autumn provides limited control the next year as the spores can travel from other trees within 500 to 1000 feet and even missing a few infected leaves can result in new infections.

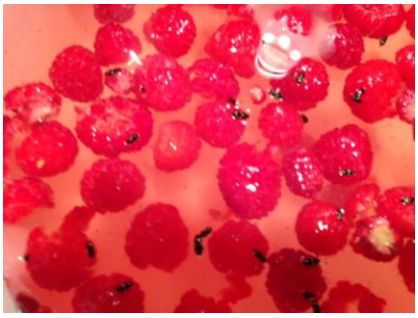
Cedar-apple rust is appearing on apple trees. The disease infects the leaves and the fruit. Infected leaves develop pale, yellow spots on the upper leaf surface. These spots enlarge and turn orange. The infected leaves often drop prematurely, though rarely does the disease result in as severe of defoliation as apple scab. Infected fruit may develop similar spots, typically near the base of the fruit though fruit symptoms are rarely seen in South Dakota.

The disease, as with many rust diseases, must alternate between two different hosts to survive. Cedar-apple rust alternates between apples (and crabapples) and several species of junipers (though not the true cedars such as American arborvitae *Thuja occidentalis*). The fungus appears as a gelatinous orange-red mass with horns on junipers. This occurred about a month ago and the picture to the left shows the fruiting bodies on juniper. One means of breaking the cycle is to remove any eastern redcedar (*Juniperus virginiana*) or Rocky mountain junipers (*Juniperus scopulorum*) within *2 miles.* This is probably not practical in most instances. Fungicide sprays are generally the best options. The leaves are vulnerable to infection about 4 days after they begin to expand while the fruit can become infected from the pink stage of the flower dubs till they fully open. There are limited numbers of effective fungicides available for the home orchard to manage this disease and they seem to come and go every year so I will wait till next spring to discuss fungicide options.

Fruit cracking is a problem we often see at this time of year on tomatoes but not usually apples. However when we have a summer with high humidity following cloudy, rainy weather (and we have had rain this year), we can experience splitting on apples. The cracks can be very short and narrow to expending almost the from the base to the top and more than a ½ inch deep or more. Usually russets are common on cracked fruit as well. There is nothing that can be done to prevent this problem but it seems to be less of an issue on trees that are healthy so managing soil fertility and mulching to reduce competition should be part of orchard management.

And a few questions on raspberries…

Anthracnose on raspberries is a common problem, particularly with the black and purple, but I still find it every year on red raspberries (especially when we have a cold, wet spring like this year). The disease can girdle the canes by midsummer resulting in crisp, dry leaves and berries. Canes that survive are often stunted. The disease overwinters on old canes so one of the simplest means of management if you are growing fall bearing is to cut all the canes to the ground, and I mean ground, in the fall or late winter and in the spring just as the buds of the new shoots are showing spray with lime sulfur. This is called a delayed dormant spray since you are waiting for the buds to just begin to open. Spray too early and it's not effective, spray too late (when the new shoots are ½ inch long) and you can burn the foliage.



Picnic beetles in the raspberry fruit. There is nothing like picking a raspberry and finding a small beetle in the "cup." Actually there is something else and that is the crunching sound as you eat the beetle in the cup of the raspberry. This insect is the picnic beetle, a small beetle that loves fermenting fruit (and potato salad at picnics) and raspberries are one of their favorites. The beetle can quickly ruin a ripe raspberry as the burrow around inside the fruit. There is little that can be done to stop these insects. You cannot spray since you are spraying fruit you are about to eat. I generally see picnic beetle become a problem when you are not picking the fruit often enough – pick all the fruit as it ripens, daily or twice a day if needed. The beetles are attracted to over-ripe fruit and by picking the fruit as it ripens you are eliminating the attractant.

Giant willow aphid is beginning to show up across the state. These large (3/16 inch) gray insects can be found in dense clusters on the 1 to 3 year old stems of willows. These insects feed on the sap of the tree which may result in stunted shoots or even some dieback though willows generally are not harmed by the feeding. The populations are largest in mid to late summer but most of the feeding injury occurs in the spring. The only problem now is the honeydew, the sticky material that the aphids excrete. The best management is to treat in the spring by applying a soil drench of an insecticide containing imidacloprid as the active ingredient to kill the aphids as they begin to feed. Killing them now may be fun, but smashing them will leave a brown stain.

Samples received

Corson County **What is this shrub that is growing in the drainage ways?**

This is the succulent hawthorn (*Crataegus succulenta*), a tall shrub/small tree found native to the region. The leaves were infected with hawthorn-quince rust and I suspect this is the reason for the poor appearance to the plants.

Day County **What is wrong with these plants?**

The one bag was filled with aphids (and even a few fall webworms) and the population is certainly high enough to cause the browning of the leaves but will not harm the plant (treatment is the same as mentioned for the giant willow aphids mentioned under e-samples. The other cottonwood sample shows symptoms of shoot and leaf blight. This is a common fungal disease of aspen, but also cottonwoods, and can result in blackening and curling shoot tips as well as browning of the foliage. It is too late for any control this year and generally I do not recommend any treatment as our spring weather is not cool or wet enough to allow the disease to develop. More interesting the bag appears to contain the larvae to the poplar leaf curl midge. Keying larval midges is not easy and I am attempting to rear them out to adults as well as sending them on to people familiar with this insect. It has been reported in other states but this will be the first find in South Dakota if it turns out to be this insect.

Minnehaha County **Is this a cotoneaster and the problem fireblight?**

Yes to both. The plant is hedge cotoneaster (*Cotoneaster lucida*) and the blackening tip is due to fireblight. The best means of managing this disease in cotoneaster is to prune the shrub to within 2 inches of the ground this winter. This usually eliminates disease in the plant and the new shoots sprout and grow every quickly.