

Pest Update (March 30, 2016)

Vol. 14, no. 9

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

Email: john.ball@sdsu.edu

Phone: office 605-688-4737, cell 605-695-2503

Samples sent to: John Ball
Plant Science Department
rm 230, 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. **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.....	1
Timely Topics	
Spring fruit tree treatments.....	2
E-samples	
Black knot.....	3
Cedar-apple rust galls.....	3
Juniper pollen cones.....	4
Samples received / site visits	
Stanley County (sowbugs).....	4



Plant development

The forsythia are in full bloom throughout Brookings. Forsythias and corneliancherries were in full bloom at this time in 2012, but in the spring of 2014 they did not bloom till May! Let's hope the weather continues to stay warm.

Timely topics

The coming of spring usually gets tree owners just itching to go out and spray something. However, it is never a good idea to spray just because you have a nice afternoon to get the sprayer out. Amateur orchardists are a dedicated group and they definitely want to get ahead of the many insects and diseases that are just waiting to infect or infest the season's harvest. But once again early spring is not the best time for all treatments. This is not the time to spray for any fruit insects. All these sprays are applied after petal fall so plenty of time to prepare.

Some of our disease sprays should be applied very soon and these are the ones to concentrate on in the next week or two. These are also critical applications as the first treatment is the most important one to reduce **apple scab** infections on apple leaves. Apple scab infects both the leaves and the fruit. The leaves on



infected trees develop olive drab blotches with much of the remaining leaf blade becoming yellow then dropping prematurely, sometimes as early as August. The fruit may also develop discolored blemishes on the skin. The first fungicide application for apple scab should be applied at half-inch green tip, just when the buds are opening enough to see the beginning of the new leaves. After this application, repeat the sprays about every

seven to ten days until the weather turns dry, usually mid-June. During wet summers these applications may have to be extended with the same spacing (10 days apart) for a little longer. The most common fungicide for managing apple scab is Captan. This fungicide can be found in multi-purpose fruit tree sprays but it is best to buy Captan as a single product. The multi-purpose fruit tree sprays also contain Malathion and Sevin (Carbaryl), two insecticides. Since apple scab sprays may need to be applied during flowering, multi-purpose sprays cannot be used since they are deadly to the pollinators. Captan can also result in reduced fruit set if applied during full bloom so still use with caution.

Fungicides containing Myclobutanil as the active ingredient may also be used for managing apple scab but should be alternated with Captan; an application of Captan followed in 10 days with an application of Myclobutanil and repeat; to reduce the possibility of the fungus becoming resistant to the chemical. Sulfur and copper fungicides are sometimes used as an organic approach but these are often limited to the first application. Sulfur and copper can injure young, tender leaves. Also Captan if mixed with sulfur, or applied within a few days of a sulfur application, can injure apple trees.

Fireblight is a common bacterial disease of pear and apple trees. If chemical control is desired, an application of a copper-containing fungicide can be applied

as the buds begin to swell. This will protect the new shoots from infection. However, copper should not be applied later than this time period as it can injury the tender, expanding leaves.

Cedar-apple rust is another fungal disease of apples and crabapples. Fungicides containing Myclobutanil as the active ingredient may be used for managing cedar-apple rust. Captan is not effective against this disease. Fortunately, cedar-apple rust is not a serious problem for apple producers in our state so it is not commonly treated. If treatments are to be initiated, they are not applied until May. The spores are not released from the galls on the junipers until then

E-samples



Black knot is a common disease of chokecherry (*Prunus virginiana*) and the Mayday tree (*Prunus padus*) but it also occurs on plums and other cherries. The disease takes two years to develop on the tree. The first year galls are a faint light green swellings on twigs, almost undetectable. The following spring these begin to enlarged and form the large velvety black mass. The knot can eventually girdle and kill the branch they are attached to resulting in a misshaped tree full of dead and stunted branches. One common recommendation is to prune off and destroy all

the knots by early April. However, this has limited value as the disease will quickly reappear since the first year infections are usually missed. The other recommendation is to spray branches with sulfur *before* bud-break but this treatment rarely is effective. There is a tremendous variation in susceptibility among chokecherries and other hosts so the best treatment might be simply to remove infected trees rather than continuing to prune away the knots as they form.



Cedar apple rust disease, as with many rust diseases, must alternate between two different hosts to survive hence the name cedar and apple. 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 now as a hardened, brownish gall on the twigs and branches of the juniper. The dimples on these

galls will give rise to bright orange telia horns in a month or so. The horns

release the spores that infect the apple or crabapple leaves. Once the horns release their spores they shrivel and turn brown and the galls become dark brown, brittle and hard. The cycle begins again when later this growing season spores are released from infected apple and crabapple leaves that infect the junipers and result in the formation of galls the following year.



I seem to get emails every couple of springs about these bumps that are appearing on the tips of junipers. These are not an insect or a disease but the **male cones** (strobii) beginning to form. Most junipers are dioecious, either the plant is male or female. The plants that are males are forming their male cones along the shoot tips. These cones appear as yellowish green swellings and can line every tip on a branch. These will soon be releasing pollen

which is transferred by the wind to the female cones. These are the bluish-green “berry” seen on junipers. The pollen looks like a fine dust and some people are allergic to this pollen, call it juniper-fever, rather than hay-fever.

Samples received / Site visits

Stanley County **This was found beneath the bark of a dying boxelder. What is this insect?**

This is commonly referred to as a sowbug, a member of the Order Isopoda, so a crustacean rather than an insect. They have short flattened bodies and are commonly found under stones, boards or beneath the bark of dying trees. Sowbugs just happen to be living under the bark of the dying trees rather than being the cause of the decline.

The South Dakota Department of Agriculture and South Dakota State University are recipients of Federal funds. In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability (Not all prohibited bases apply to all programs.) To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

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