

Pest Update (May 14, 2008)

Vol. 6, no. 11

John Ball, Forest Health Specialist, Extension Forester

Email: john_ball@sdstate.edu

Phone: 605-688-4737

Samples sent to: John Ball
Horticulture, Forestry, Landscape and Parks
Rm 201, Northern Plains Biostress Lab
North Campus Lane
South Dakota State University
Brookings, SD 57007-0996

Available on the net at:

<http://www.state.sd.us/doa/Forestry/educational-information/Pest-Alert-Archives.htm>.

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.

In this issue	pg
Plant development.....	2
Treatments to do now.....	2
Apple scab.....	2
Cedar-apple rust.....	2
Diplodia tip blight.....	3
Spruce needleminer.....	3
Tent caterpillars.....	3
Treatments in a week	
Ash borer.....	3
E-samples	
Cytospora canker.....	4
Black knot.....	4
Samples received	
Bon Homme County.....	4
Campbell County.....	5
Douglas County.....	5
Faulk County.....	5
Marshall County.....	5
Yankton County.....	6

Plant development (Phenology) for the growing season

Crabapples and serviceberries were in full bloom in Rapid City last week and they are just now in full bloom in Brookings, about three weeks later than last year. The season is off to a slow start so many of our early spring treatments are in May this year. While later than normal, West River seems to be about a week ahead of East River, same as last year.

Treatments to do now

Apple scab control first application should be on now (green tip) to avoid discolored leaves and fruit and premature foliage drop later in the season. I usually begin receiving calls about apple scab in mid-July when it is far too late to do much about it. The young leaves are most susceptible within the first five days of unfolding so the most effective control is *early* control. Captan is the most common fungicide homeowners can use and can be applied on crabapples and apples. Chlorothalonil and propiconazole can be used but *only* on ornamental crabapples, not trees in which the fruit will be harvested. First application is about now as the leaves are beginning to break bud, followed by 2 or 3 more spaced 10 days to two weeks apart. **West River locations should**



already be applying their second cover spray. These first two sprays are critical to protecting the leaves later this season – do not miss them!

Cedar-apple rusts will begin releasing spores on eastern redcedars and Rocky Mountain junipers within the next week or two. The telial horns are now beginning to swell and when we receive the next period of rain the horns will become gelatinous, bright orange and begin releasing spores. While this disease is rarely considered a problem on junipers, the bright orange spots and premature defoliation that occurs on infected hawthorns and crabapples does detract from the ornamental value of the trees. Treatment should start on the hawthorn or crabapple alternate host in another week



with chlorothalonil (*Daconil*) or mancozeb and a second application made about two weeks after that.

Diplodia (Sphaeropsis) tip blight treatments should be started now. This is probably the most common disease of pines, particularly Austrian pine. Symptoms in early summer are the new needles becoming brown and stunted. Twigs may be infected and become stunted and deformed. The treatment is a fungicide containing thiophanate-methyl, propiconazole or chlorothalonil just before the buds sheaths have opened, timing is critical, and repeat the treatment in 10 to 14 days. The bud sheaths are just beginning to open now throughout the state so try to get the first application on in the next week.



Spruce needleminer treatment – the larvae will begin moving to form their webbed nest and resume their feeding – a spray of high-pressure water will knock them off the tree though be sure to rake up the fallen needles (and larvae) after the spray. The other approach is spray acephate (*Ortho Systemic Insect Killer*) to kill the larvae as they begin moving out onto the foliage. Remember to spray inside the canopy, not just the exterior. Actually “power washing” the lower canopy of the spruce is a good way of cleaning off all the dead and dying needles as well as some insects and diseases. But be aware the tree will appear a little more open afterwards!

Tent caterpillars are hatching!



Tent caterpillars, eastern, forest and western, are common defoliators of mountainash, cherry, crabapples and plums. If you look closely in these trees right now you might see the beginnings of very small nests. The caterpillars are not moving far from the nest yet so pruning and destroying these small nests will still work as a means of limiting defoliation of a plant. Another option is to tear the nests open as this will expose the young larvae to predators and parasites and these insects can significantly reduce the population (you can

also use a toilet brush to push into the small nest, twist it a couple times and pull it out – you just made tent caterpillar cotton candy, not tasty but will get rid of the pest!). In another week control will be primarily with pesticides and one of the best is B.t., otherwise known as *Bacillus thuringiensis* var. *kurstaki*. This naturally occurring bacterium acts as a stomach poison for tent caterpillars and is highly effective against the young larvae. Once the larvae become larger, more than 1-inch long, B.t. does not kill as many or as quickly. So by the third week of May insecticides containing carbaryl, such as *Sevin* or malathion (sold as *Malathion*) will be the treatments of choice.

Treatment perhaps a week away.

Ash borer treatments with a permethrin product, *Astro* for commercial applicators or either *Enforcer Outdoor Insect Killer* or *Hi-Yield Garden, Pet and Livestock Insect Control* for homeowners can be applied next week. The insects are pupae right now, as seen in this picture but will soon become adults. The adults are usually out flying about a week or so after spirea begins to bloom. This often is the first week of May but may be more towards the end of May this year.



E-samples



I got this picture from Cindy up in Roberts County of some declining spruce. A sample from trees in this belt was sent in to the University as well and the problem is cytospora canker. This canker is one of the most common diseases of spruce, particularly Colorado blue spruce, in our region. The disease usually is responsible for the dieback and death of the lower branches of mature (more than 20 years old) spruce. What is unusual is the appearance of the disease in trees this young. I have noticed this in the past five years that young trees, even as small as 2 or 3 feet, can be found with the characteristic symptoms of the disease – yellowing or purple needles on branches missing much of the foliage and a bluish-white resin stain on the supporting twig or branches. The disease development

is stress-related, if these trees are planted on poor sites, too dry or too wet, the disease becomes aggressive and causes tree decline. The only means of combating the canker disease is to keep the trees healthy, provide supplemental irrigation during warm, dry summers and be sure to plant these trees on the best site possible – loam soils that are not poorly drained or droughty.



I also got this picture sent in regarding a “gall” on a chokecherry. This is the disease discussed in the April 22, 2008 *Update*, black knot. These black, coal-like galls, sometimes covered with a white powder, can often be found lining the branches and trunks of susceptible trees. A common recommendation is to prune out these galls during the winter months, but this activity has very limited value. First, these galls are the second year's infection. The shoots infected last year are only indicated by a slight greenish swelling of the tissue. If these shoots are not also removed they will grow to form the blacked masses the following year, as you can see it is hard to get ahead of the disease by pruning. The other problem is only certain trees are very susceptible to black knot and once they get the disease you can

probably expect the tree to become infected again regardless of your pruning efforts. Basal pruning (cutting the tree down) is probably the best approach.

Samples received

Bon Homme County (Extension) **What is wrong with these ponderosa pines? The trees have clusters of browning needles.**

The needles also had banding with a halo around them and within these the fruiting bodies to dothistroma needle blight. The needles also had white “bumps” on them and these are sessile insects known as pine needle scale. The pine needle scale population is so low, less than one scale per needle, that there is little need for chemical control. Natural predators and parasites can control a population this size. The dothistroma may require control. The most common treatment is fixed copper or mancozeb applied in about two weeks as the needles are expanding and a second treatment in early July. One year’s worth of treatment should be sufficient to restore the health of the trees.

Campbell County (Extension) **Here is a spruce sample from Selby. The owner said it started to dieback last spring.**

The problem appears to be winter-injury, at least from the color change the symptoms are consistent with what is seen with winter-injury. The sample did not contain any signs of harmful pathogens, either on the needles or twig. There was a fungus on the twig but it was a saprophyte, merely living on dead tissue rather than being the cause of the death. I also noted some spider mite injury but not enough to warrant treatment and I doubt this feeding activity would account for the dieback.

Spruce, as everyone reading the *Updates* is aware, has a multitude of problems, many environmental; winter-injury, drought-stress, poor-drainage; and these stressors often produce similar symptoms and is the underlying cause for the dieback and decline of blue spruce in our state.

Douglas County (Extension) **Here are some samples from arborvitaes, most of the one plant is brown, and the more protected one has less discoloration. Is this winter-burn?**

Yes, you are correct. I have seen a lot of browning arborvitaes this spring and much of the injury is to the foliage, not the supporting twigs and branches. In some instances these branches will survive and sprout foliage so I suggest that pruning out the “dead” might be delayed until a few more weeks to see what might still green up.

Faulk County (Extension) **We were wondering if this twig might have Dutch elm disease. The tree died last year.**

Dutch elm disease is a very common disease of American elms throughout the state and we have seen an increase in the incidence of the disease in the last few years. It would not be too surprising if the disease killed the tree. Unfortunately the twigs are too small for sampling. The best twigs are those that are at least pencil-size and should also be from a living branch that is flagging – the leaves wilting and turning yellow.

Marshall County (Extension) **I hope you can tell us what is wrong with Nancy’s tree. She has lost two already.**

Unfortunately the sample did not show any problems. The attached note explained that the trees had been transplanted three years ago to a windy, cold location. I suspect the problem is related to this but will call her to discuss it in more detail.

Yankton County (Extension) **Marina brought this branch in from her spruce.
The bottom half of the tree looks bare.**

This is cytospora canker; see the information regarding this disease under e-samples