

Pest Update (May 7, 2014)

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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/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 product identified in this publication.

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Plant development (Phenology) for the growing season



Crabapples and serviceberries were just beginning to bloom in Brookings. Last year at this time and in previous years to that, the flowers were in full bloom by this date. This year the flower buds are not even beginning to expand yet and shrubs that should be past blooming, forsythias and corneliancherries are in bloom (and even had some snow on them from last week). We are several weeks behind at this point so many of our early spring

treatment will be in May rather than April.

Tasks to complete now

Apple scab symptoms do not show up till this summer (see picture) but management starts now with a spray applied just as the buds are beginning to expand, less than a 1/4-inch of leaf showing. We are at the silver tip stage now so bud break will be occurring very soon in the northern part of the state and has already occurred in the south. After the first spray, fungicide sprays are continued about every 7 to 10 days apart until after petal fall, after that the weather usually turns a little drier and a 10-14 day interval can be used until the end of June when applications generally stop. The most common fungicides used for control of apple scab have captan or copper listed as the active ingredient. Captan is also the fungicide included in multi-purpose fruit tree sprays. The first two apple scab fungicide treatments are critical to the successful control of this disease and if missed will significantly reduce effective control of the diseases even if the remaining sprays are properly timed.



Tasks coming up soon

Clearwing ash borer treatment with an insecticide containing permethrin as an active ingredient can begin in a couple of weeks. The adults are usually out flying about a week or so after Vanhouttee spireas begin to bloom, probably at least a week or two away. You know when the adults are flying out from an infested tree by the papery pupal skins and sawdust left in or around the emergent hole.



Zimmerman pine moth larvae will become active soon and begin burrowing into the wood. Infested trees typically have masses (appear as big globs of bubble gum) of reddish pitch near branch attachments. Treating the bark on the tree with an insecticide containing permethrin as the active ingredient is the most effective means of control. The chemical must be applied to the bark on the trunk so it is critical to make use the pressure of the sprayer is sufficient to penetrate the canopy.



E-samples

The flocking on pine trees, those small white bumps on the needles, is actually a scale insect known as the **pine needle scale** as can be seen in this recently send in picture. The pine needle scale is an armored scale, one that forms a hard shell and these do not produce honeydew, the sticky material excreted by aphids and soft scales. Pine needle scale is very common insect on Austrian and mugo pines and can also be found infesting spruce trees.



Right now you can find eggs beneath the hard teardrop shaped scales and these will hatch about the time common lilac is in bloom, late May and early June. Control of this insect is difficult as most pesticides do a better job at killing the predators and parasites that feed on the scales than the scales themselves. Only use pesticides containing acephate or carbaryl if the scales are so thick they are killing the tree (and remember most of the scales you find on the needles are the old, dead adult scales. These you can scrape off with your fingernails. The new scales will stick). You will have more effective control and less of an impact on their natural enemies, if you use insecticidal soap or horticultural oil, but remember the treatment window is probably several weeks away.



Wetwood disease is a common ailment of cottonwood and elms across the state. This picture came from David in Campbell County and it shows the bleached streaking that occurs along the bark from this disease. The disease also manifests itself internally with an elevated pH and mineral content, more water and gas under pressure. Wetwood, also known as slime flux, is a bacterial disease that is caused by

bacteria found in a number of genera including *Bacillus*, *Clostridium* and *Pseudomonas*. The internal liquid spreads into the outer sapwood and from there moves out of the tree through cracks in branch crotches or old pruning wounds. The bark bleaching is due to the high pH of this liquid. The disease is sometimes associated with symptoms of leaf scorch and yellows and sometimes even branch dieback. However, often the only symptom expressed by the disease is the streaking on the bark and otherwise the tree grows just fine. Regardless there are no effective treatments for the disease and drilling holes in the tree to relieve pressure may cause more problems than it cures.

Another disease is alcoholic flux or white flux. This occurs when microorganisms ferment sap in cracks and other bark wounds. Alcoholic flux is acidic and nearly colorless though can appear (as pictured) as a white froth. It often has a pleasant fermentative odor, almost fruity. This usually persists for only a short time period. It commonly occurs on stressed trees though the stress may be due to any number of agents including the base of the tree being struck by lawnmowers or grasswhips.



Samples received

Aurora County
redcedars dying?

Why are these young

The question on this planting was if Milestone had been the cause for the decline. Milestone herbicide has aminopyralid as the active ingredient and is used for broadleaf weed control. The herbicide has been associated with injury on trees, particularly certain evergreens (pines and spruce) and hardwoods (peashrub and honeylocust). It is not to be used as an over-the-top application on any seedling tree and this is where I see most of the injury. The samples submitted may be too little to test for the herbicide but will see. I was also able to find kabatina shoot blight on some of the tips and this disease will result in dieback of eastern redcedar. Usually the plants survive this disease since only the tips are killed and the new growth later in the season just covers it up.

Edmunds County
spruce dying? They started dying a few years ago.

What are these 20 year old

The sample submitted showed excellent shoot growth until a year or two ago and then the growth slowed to less than a third of the previous growth. Even the spruce cones were abnormally small. I was not able to find any signs or

symptoms on the samples that are related to any insect or disease problems. However, I suspect these trees have cytophora canker. This is a very common disease of spruce that are about 20 years old or so. The disease appears as bluish white resin blisters on the lower branches and if these can be seen in the dying lower branches you found at least one of the problems. This disease is managed by pruning off the lower dying branches. The other issue is age, and while 20 does not seem old, many Colorado blue spruce begin to decline at that age in our state.

Faulk County **These pictures and a sample are from discolored Colorado blue spruce. I have also included samples of young Black Hills and Norway spruce.**

The blue spruce sample does not have any signs or symptoms of an insect or a disease. They may have cytophora canker (see information under Edmunds County) but since the growth is normal and the buds seem healthy, this may just be winterburn and the tree may recover (though still suffer needle loss).

The spruce samples show abnormal shoot curling and distortion, symptoms I usually associate with herbicide applications. I will call to set up a time to visit these producers.

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