

Pest Update (May 14, 2014)

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

Email: john.ball@sdstate.edu

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

Samples sent to: John Ball
Plant Science Department
rm 230, Agriculture 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 product identified in this publication.

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Plant development (Phenology) for the growing season



Plant development. We are way behind in plant development from most years. This year the serviceberries are not even beginning to bloom in Brookings; about a month later than normal though about the same time as last year. Crabapples are also a later than normal with many trees still in the bud stage.

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 another week. The bark must be sprayed to protect the tree as the insecticide will kill the adults (picture of their exit holes seen below) as they are walking on the bark while laying eggs. The insecticide will also kill the newly hatched larvae before they burrow into the wood. Systemic treatments are generally ineffective so injecting a pesticide or pouring one around the soil are not practical means of managing this particular borer.



The adults are usually out flying about a week or so after Vanhouttee spireas begin to bloom and the shrub should begin flowering in another week or so.



Diplodia tip blight first application of a fungicide should be applied soon. Tip blight is probably the most common disease of pines, particularly Austrian pine. Symptoms in early summer are the new needles becoming brown and stunted (as seen in the picture below). Twigs may be infected and become stunted and deformed. The treatment

is a fungicide containing thiophanate-methyl, propiconazole or chlorothalonil (labeled for control of this disease) just before the buds sheaths have opened and should be happening soon. Timing is critical, once the bud sheaths have opened and the candle begins to form, it's a little late to begin the first application and this is the one that provides most of the protection.



Spruce spider mites become active now as silver maple leaves are expanding. Spruce spider mites are cool season mites meaning they are active in the spring and fall, not during the summer heat. The mites will go dormant once the temperatures *consistently* reach into the mid 80's. While the mites are beginning to feed, the damage to the needles, bronzing and browning, does not typically show up until summer just as the mite populations begin to decline. Treatment options are very limited for homeowners, horticultural oils and insecticidal soaps being the two most common. These are really suppression treatments, not eradication, and the webbing often prevents these pesticides, particularly the soap, from penetrating. They should be applied now and then another treatment next week, about 7 to 10 days after the first treatment to kill new mites as they hatch from eggs. Be aware of the cautions to the use of these products, particularly for spruce, as applications of oils or soaps can result in the loss of blue or silvery color to the foliage. You can make a *blue* spruce, a *green* spruce, very quickly, so read and follow label directions very carefully. You can also turn it *brown* if you apply oil sprays when the temperatures are too hot so read and follow label directions exactly. A spray homeowner can use on their smaller yard spruce contains tau-fluvalinate as an active ingredient. This is usually found in pesticides that also contain chemicals to kill insects so it will be one of the active ingredients listed rather than the only one. Pesticides containing tau-fluvalinate and labeled for mite control should be applied in two treatments spaced 10 days apart.

There are a number of products that commercial applicator can use that provide excellent control and have minimal impact on non-target organisms. It is worth the time and money to have a commercial applicator provide these treatments considering the effectiveness of the products they have available versus those



available to homeowners. This is one pest it is far better to pay for a professional than attempt to do it yourself.

And finally, another value in hiring a professional is to be sure the problem is spruce spider mites. We have another mite, the two-spotted mite, that is found on many plants in our state (including soybean) and sometimes it is the problem on the spruce, not the spruce spider mites. The two-spotted mite is a warm season mite and does not

overwinter on spruce bark so the timing of controls is different.

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



I have received several calls regarding small clusters of “buds” on the ground beneath ash trees. These are clusters of male flowers that are falling from the trees. Most of the ashes planted in communities are male cultivars as no one wants the seeds produced by the female trees. The male flowers appear as bundles of dark purple, apetalous (no petals) flowers on very short stalks and occur before the leaves open. These are often

infested by the ash flower gall mite which results in an abnormally large bundle of flowers that turn dark brown and often remain hanging from the tree for one or two years.



I have calls again this year concerning the large seed crops on elms this spring.

This year there is another abundant crop of elm seeds and now that the seeds are beginning to fall, people are noticing a gap in foliage just below the leaves at the shoot tips. This gap was where the flowers occurred and does not represent a problem. The flower crop on elms can be so large that some people mistake the falling seeds for leaves and are concerned that the tree

is losing its leaves early in the season.



I usually receive calls and pictures of mushrooms occurring in the yard at this time of year and with the recent wet weather, questions are coming in. Clusters of brownish, bell-shaped, mushroom caps are appearing around old stumps of elms and other hardwood trees. The stump may no longer be present but the decaying roots are still beneath the soil and this organic matter is the food source for the fungus. The fungus is also referred to as inky cap,

as the gills beneath the cap turn to an inky black liquid within hours of the mushroom being picked or as the fungus begins to break down naturally. There is no control for these mushrooms, a quick mowing will break them off and they do not continue to form after the weather turns warm and dry. They can their annual appearance until the decayed tree roots are completely broken down, a process that can take a decade or more. Some inky caps are edible but explaining how to properly identify edible fungi is beyond the scope of this Update and no one should ever pick and eat mushrooms unless in the company of an experienced picker – this is not a skill that can be learned only from a book!

Samples received

Brookings County

Declining apple



The tree is declining and there are these tunnels beneath the bark.

The galleries beneath the bark and the small exit holes are from the shot hole borer, also known as the fruit tree bark beetle (*Scolytus rugulosus*). This small boring beetle is commonly associated with declining fruit trees

throughout the northern United States. The tiny (1/10 inch) black beetle attacks branches and trunks of stressed trees and the tunneling by their larvae further weakens a tree. The best management is to keep the tree healthy and prune out and destroy any infested twigs and branches.

Hughes County

Dying mature spruce

This spruce are in rows planted about 40 years ago on 8-foot spacing. They looked fine until a few years ago and now the needles on the lower branches are becoming discolored and falling.

Spruces do not often “age gracefully.” They usually begin to loss the needles along the lower branches once they turn 20 years old or so. The most common problem associated with these declining trees is cytospora canker, a fungal disease. The pathogen is present in the tree long before symptoms appear and the expression of the disease occurs once the tree is stressed by age, competition (this is why we recommend planting at least 16 feet apart, farther is even better), drought and/or other environmental stresses. The best management is to reduce the stress if possible and remove the lower branches as they die.

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