

Pest Update (April 27, 2016)

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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 products identified in this publication.

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Plant development

The pears are in full bloom and many of the serviceberries and apples are beginning to flower.

Tasks to complete now

Apple scab symptoms do not show up till this summer (see picture) but management started recently with a fungicide application applied just as the buds were beginning to expand, less than a 1/4-inch of leaf showing. The warm weather means many apple and crabapple trees are ready for the second application. Fungicide sprays continue about every 7 to 10 days apart until 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 fungicide used for control of apple scab is Captan. Captan is also the fungicide included in multi-purpose fruit tree sprays, however *Multi-purpose fruit tree products should not be used during flowering*. These products also contain insecticides that are deadly to bees and other pollinators. 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.



Spruce spider mites are active now that 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 now, the damage to the needles, bronzing and browning, does not 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 through the silk and killing the mites. 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.

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 emergence hole.



Timely topics



The warm spring weather in the Black Hills means that the pine engraver beetles are flying. These are not as aggressive tree-killer as mountain pine beetles but as seen in the picture they can kill stressed pines. The adults spend the winter beneath the bark of standing or down trees or in the litter beneath the tree. When we start having consistent warm weather (temperatures in the 60°F) the adults begin flying. *This flight usually coincides with the leaves of apple trees beginning to*

open. These adults actually prefer fresh slash (the branches and limbs left on the ground from recently felled trees). If the needles attached to these branches are still green, most likely the beetles will attack the slash and not the standing trees. However, during periods of drought or if the slash is not available or has dried out the beetles will attack trees. The other attractant to the pine engraver beetle is fresh pine wood chips. If trees are felled and chipped in the spring as a thinning operation, the remaining trees are vulnerable to attack from the engraver beetle. They are drawn in to the odor of the chips and will attack the standing trees. Pines only need to be treated for protection from the pine engraver beetle if they are stressed or chipping was done this late winter or spring. We generally do not need to protect pines from the engraver beetle as a healthy tree is not susceptible to attack.



Treatment for the pine engraver beetle is the same as the mountain pine beetle, a spray of an insecticide specifically labeled for bark beetle control. The only difference is the entire trees from the top of the canopy to the base of the trunk must be treated when treating for the engraver beetles. The mountain pine beetle only attacks the trunk and only from the base of the trunk to a height where the diameter is about 4 or 5 inches in diameter so less coverage is needed. Another difference is the spray to control pine engraver beetle must be applied now while treatments for just the mountain pine beetle can be delayed until sometime in May. A single treatment made now with coverage over the entire

tree is sufficient to manage both insects, the pine engraver beetle and the mountain pine beetle, this growing season.

We are recommending landowners in the Black Hills continue to treat their high-value pines, those in close proximity to their home or cabin, for mountain pine beetle. While the epidemic is fading we do still expect a significant beetle flight this summer and pesticides are one of the best means of protecting a tree from successful attack.

Problems with spraying trees for bark beetles

The mountain pine beetle treatments only work if done properly. This past fall I inspected a number of trees that were sprayed by a company but were still successfully attacked. While situations such as these are rare in the Black Hills, they do happen on occasion and landowners should be as careful about choosing a company to treat their trees as much as they evaluate other services. Trees should be sprayed at the highest recommended labeled rate, not the lowest, and the application must saturate the bark, not merely a light mist. Insufficient coverage or rate are the two biggest problems I have seen that result

in lost trees. Most tree owners are going to trust the commercial companies to do it right so a few reminders. If the price is low, be suspicious. I have seen prices at \$4 to \$7 a tree, often less than the cost of the amount of insecticide needed to treat the tree properly. Depending upon the size of your trees, and the number of trees being treating, the cost is going to be between \$14 and \$35 a tree. It is also worthwhile to consider companies that have been in the Black Hills for a long time period. These are the ones that will be around this fall if you have any questions about the effectiveness.

E-samples



A picture of a colorful beetle was sent in with the question; "Is this a borer?" No, this is a leaf beetle. This family of beetles, known as Chrysomelidae, contains more than 50,000 species and they are primarily leaf feeding insects. Many of these insects have interesting patterns on the elytra and most are very brightly colored. This particular leaf beetle appears to be the **elm calligrapha**, *Calligrapha scalaris* (the patter on its back looks like the Sith Lord in *Revenge of the Sith*). It is a common leaf feeding insect on elms. The adults overwinter in bark crevices and leaf litter and begin emerging in April to lay eggs. The larvae hatch out in early May and feed on the foliage. There are two generations per year with the second one the overwinter adults.



Many people are taking advantage of the warm weather to get out and do a little yard and garden cleanup. I received this picture of a plant that was pulled from the garden and the person wondered if it was salt cedar. No, this is an **eastern redcedar** (*Juniperus virginiana*), most likely planted by a bird. You will often find this tree coming up under good perches for birds, fence lines and power lines. The

salt cedar, *Tamarix*, is not an evergreen but a deciduous plant that is often confused with junipers. The saltcedars were planted as an ornamental for their summer flowers and ability to tolerate tough sites. Unfortunately the plant is too aggressive and has crowded out the native vegetation along many of our West River streams and rivers.

Will it die? Can it come back? These were the question posed to me about the yew at the left side of this picture. Yews, *Taxus*, are some of the most versatile foundation evergreens. They have an attractive deep green color and response well to shearing. They do not tolerate our cold winter winds nor poorly drained soils. The one on the end was exposed to winter winds and suffered extensive winter



burn and dieback. Yews, along with junipers and arborvitae, will not resprout from bare branches so once the foliage dies there is little that can be done other than remove the plant.

Samples received / Site visits

Tripp County

What is wrong with this plant? Some of the needles are turning yellow and others are brown.



The plant is an American arborvitae (*Thuja occidentalis*) an evergreen tree or shrub used in landscapes throughout the eastern portion of the United States and into Minnesota and South Dakota. While there are some highly adaptable cultivars such as 'Rushmore' some arborvitae cultivars suffer from winter burn and winter browning in our state. The only effective means of preventing this problem is to wrap the plant in burlap during the winter or choose cultivars that are not susceptible to this problem. I seem to receive most of my winter burn samples of arborvitae from down in the Lyman and Tripp areas. Apparently a tough spot to be an arborvitae.

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