

Pest Update (May 20, 2015)

Vol. 13, no. 13

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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 colder weather is slowing plant development but we are still way ahead of last year. The nannyberry (*Viburnum lentago*) are in bloom now about a month sooner than last year!

Pest treatments needed soon



Diplodia tip blight is a common disease of Austrian and ponderosa pines across the state. The symptoms include stunted shoot tips and hanging gray needles. The disease can be managed (but not cured) with timely fungicide applications. The first application of a fungicide should be applied by now. 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 at the same time 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.



Timely Topics

Cedar apple rust



I am still getting lots of pictures of the fruiting bodies of cedar-apple rust on junipers including this spectacular picture of a branch covered with them. Generally the concern with cedar-apple rust is not with the cedar (junipers) but with the apples or crabapples. The orange gelatinized galls now appearing on the eastern

redcedars and Rocky Mountain junipers are perennial so remain from year to year. It usually take about two years for the galls to develop before it produces the horns that release spores that infect the apple leaves. Later this summer,

spores will be released from these infected leaves that are carried by the wind to land and infect junipers. The injury to the juniper from the disease is usually minimal, just a few scattered woody galls through the canopy. However, the galls can result in tip dieback on the branches and I have seen some trees in South Dakota covered with these galls and on these same trees there was significant dieback that may have been related to these galls. There are no fungicide treatments that will remove the woody galls that have already formed on the juniper. The only treatment is to prune them off. Spraying a fungicide to prevent new galls from forming is usually not recommended as the treatments are rarely effective due to the long time period in which spores are released from the apple leaves. If someone decides to treat their junipers, fungicides labelled for control of cedar-apple rust on junipers, must be used and these generally have Triadimefon as the active ingredient. Bayleton is probably one of the most common fungicides available that is labelled for this use. The sprays begin when the spores are being released by from the apples, about mid-June and continue on a two-week schedule until the end of September.

Leaves injured by cold weather



I have seen lots of cold damaged leaves this past weekend. When I was working out in the Black Hills I took a few pictures of aspen, cherries and willows with young leaves that had black margins. This is due to cold injury and while many of the leaves may survive this damage, we probably will see a lot of defoliation as tree shed these leaves. Trees that are defoliated by the cold will set out new foliage in the next few weeks.

E-samples

European elm scale



European elm scale is drawing attention at this time of year. It's not so much the insect that is noticed as the honeydew they excrete. European elm scale is a soft scale meaning they do not produce a hardened shell as do the armored scales. Soft scales also produce honeydew during early summer. This is a sticky material that "rains" down from the adult females and covered the leaves and anything beneath the trees such as cars and deck furniture. The honeydew becomes covered with sooty mold, a black powdery mold. The individual adult scales are sessile, meaning they do not move, and

remain in one spot while they insert their mouthpart into the phloem to feed. The adults are about 1/12-inch long, dark brown with felted white fibers that ring the shell.

The European elm scale is more a nuisance from the honeydew than a serious threat to the tree's health. While heavy infestations can result in premature leaf yellowing and defoliation, usually the trees are not impacted so treatments are rarely applied. Scale insect populations are kept in check by their numerous natural enemies and insecticidal sprays often kill more of their enemies than the scales. If the infestations are so heavy that branch dieback occurs, or the honeydew is making a mess of everything below the tree, then the best option is a soil drench of an insecticide containing Imidacloprid applied either early spring or fall. A systemic application of this insecticide will kill the scale but minimize the impact on its natural enemies. However, Imidacloprid application for management of this scale can result in an increase in spider mites.

Pine tortoise scale



Pine tortoise scale is another soft scale so it also produces honeydew. The sticky black mold on the needles and twigs is what usually alerts plant owners to the infestation. This scale is found on mugo and Scotch pines in South Dakota but occasionally Austrian pines are infested. The adult female scale is about 1/8-inch in diameter and has a wrinkled brown shell, much like a tortoise when viewed from above. The eggs are laid beneath this shell and after they hatch, the

crawlers, as the immature scales are called, move to the shoot tips to feed on the young needles and twig. The management of this insect is the same as discussed under the European elm scale.

Pine sawfly



Pine sawfly larvae are beginning to appear on ponderosa pine trees in the Black Hills. These insects on the needles in colonies and when disturbed the entire group will rear up and wiggle in unison. The "wave" behavior is thought to be defensive, a means of scaring birds (and people who are startled by this insect flash mob). The young larvae feed on the edges of the needles so a thin thread is left. As the larvae mature they feed on the entire needle leaving only a

stub. The sawflies are feeding on the old needles, those that formed last year, so the new foliage that will be expanding in the next couple of weeks will escape injury. The new foliage is the most productive and conifers can die from the loss of the new foliage but can survive having their older needles devoured. However, the loss of even the older foliage will leave the tree appearing thin and stressed.

Pine sawflies are easily managed at this stage with an application of an insecticide containing Carbaryl as the active ingredient. They can even be killed with a high-pressure stream of water and this is probably the simplest treatment for a colony found on a small pine in the yard.

The name sawfly comes from adult female “sawing” a slit in the edge of the needle to deposit eggs. The adults are flying in late summer and the eggs are inserted at that time. The eggs hatch in the spring with the larvae feeding in May and early June. The mature larvae drop to the ground and form a cocoon in the soil or litter, emerging in late summer as adults.

Samples received/site visits

Marshall County FL15005
becoming very open.

The two 10-foot tall spruce are

The sample submitted had no signs of any insect or pathogen. The shoots and needles produced three years ago were much shorter than normal, however the shoot and needle length from last year was normal. The trees were stressed several years ago, as indicated by the short growth, but are recovering now. I cannot tell what was the stress agent from the sample.

Minnehaha County FL150004

Maple leaves started turning red last summer and there were lots of seeds this spring and only half the tree leafed out. They discovered a broken (and leaking) sprinkler line nearby.

Maples do not perform well in wet soils and a frequent indication of this is premature autumn foliage color. The most likely agent for the decline of this tree was the wet soils.

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