



# Tree Pest Alert



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## Samples

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of plants or insects from other states. If you live outside of South Dakota and have a question, please send a digital picture of the pest or problem.

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 as the label is the final authority for a product's use on a 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.

Reviewed by Master Gardeners: Bess Pallares, Carrie Moore, and Dawnee Lebeau

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## Plant development for the growing season

We seem to be right on schedule for plant development. The black locusts are finishing their flowering across the state and the catalpa are starting to flower. If anything, we seem to be just slightly ahead of schedule in the progression of flowering for the season.



The hot weather has also been dry. While there are popup thunderstorms throughout the state, these are hit or miss and may areas have not seen significant precipitation for weeks.

## Treatments to Begin Now

### Codling moth

Treatment time is upon us as the adult codling moths (*Cydia pomonella*) is out laying eggs. Once the eggs hatch, the larvae will burrow into the newly forming apple, usually near the base of the fruit, resulting in a trail through the apple filled with brown, powdery frass.

Treatment is usually malathion applications, though there is much evidence that Carbaryl (commonly sold as Sevin) provides better control, beginning about 10 days after petal fall with three more applications spaced about 10 days apart. The other option is bagging the individual apples using the Japanese fruit bags when the apples reach about 1/2-inch diameter.

This is no guarantee of control as the fruit may become infested before it reaches that size. The bags do provide reasonable control of this pest and many others. The bags also can improve the shine to the apple.

### Spruce bud scale

Spruce bud scale (*Physokermes piceae*) crawlers will soon be hatching. The scale resembles a small round, reddish bud which can be found on the tips of the branches where the side branches attach to the shoot.

They, and their mobile young called crawlers, suck the sap from the shoots resulting in dieback and decline of the lower branches. Since these are soft scales, they produce honeydew that results in a black, sooty appearance to the needles and twigs. The scales have one generation per year and the crawlers' hatch about the time littleleaf lindens bloom which should be in another week or two.

The best treatments are insecticides containing Carbaryl as the active ingredient and applied on the foliage and shoots near the tips. Products containing Imidacloprid can be effective as a soil drench but need to be applied in the fall or spring for control this summer.

### **Spruce needle miner**

We are also coming up to the time to treat for spruce needle miner. The needle miner (*Endothenia albolineana*) gets its name from the fact that the young larvae are so tiny they can live inside the needle, mining it as they feed. They eventually outgrow their home and then create a nest of webbed, detached needles to live in. The larvae usually feed on the lower, exterior needles, almost stripping the tips of needles but they can also be found in the interior of the tree and even the tops of young trees.

The adults are small moths that will begin flying soon and depositing eggs on the needles. The treatment is usually with a pesticide containing carbaryl as the active ingredient and labeled for this use. Infested tree should be treated in another week or two as the adults should be flying by then. This is a little earlier than normal as some years the treatment is not applied until the beginning of July.

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## **Timely Topics**

### ***Emerald ash borer update***

The adults are out flying now so I am finding more D-shaped holes and empty cells. There are still many pupae still in the cells, more are yet to emerge than have already exited the tree.



But not every emerald ash borer is destined to leave the overwinter cell to enjoy life in the sun. I am finding some adults that are blackened, shriveled husks and there is a small round hole on the bark rather than a D-shaped hole. This is the work of one of the parasitoids that has

been released to slow the population expansion in Sioux Falls.

### **Water before injecting an ash tree**

We are still in a good window for treating ash trees for the emerald ash borer. Treatments applied now will kill adults as they are feeding on the leaves, a prerequisite to laying eggs. The insecticide will also kill any young larvae that hatch before they do any damage to the tree.

But it is very dry this year and that can reduce uptake of the insecticide that is injected into the trunk. Commercial applicators are reminding customers to water their trees the evening before they do the injections. This does not mean just sprinkle some water on the lawn.

A mature ash tree will need several hundred gallons of water applied the evening before (unless it is raining). This means set an oscillating sprinkler near the base of the tree and turn it on full for at least 30 minutes.

Dieback and thinning ash canopies do not always mean emerald ash borer

The number of suspected emerald ash borer calls is almost overwhelming! I have received pictures (email and text) as well as telephone calls and they are almost all the same. The ash tree in their yard is leafing out slowly, almost branch by branch. The tree does not have a full canopy but has tufts of leaves and some branches are bare.



A thinning canopy is one of the common symptoms to an emerald ash borer infested tree, but this same symptom can be due to other agents. We are still seeing a lot of freeze injury on ash and other trees. This is not without precedence.

Back in 1997, I drove from Summit to Eagle Butte and found almost all the ash along the highway presenting this same symptom because of cold weather. This same problem occurred in 2020 and generated numerous calls.

When I stop for a site visit to inspect these trees the canopies are in various stages of leafing out. There are limbs in full leaf, while others are sprouting leaves now and a few are still bare. When I pull the bark back on these bare branches the wood is still green and moist, the buds have just died. If the trees are watered (or we finally receive rains, they will leaf out this year.

When I stop in Sioux Falls, I can find emerald ash borer infested trees presenting similar symptoms of crown thinning. However, on these trees I also find the telltale signs of woodpecker drills and some blanding of the bark.

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## E-samples

### **Forest tent caterpillar in northeastern SD**



Josh, from Day County Conservation District, sent me these pictures from the Buffalo Lake area of Marshall County. The basswoods, oaks, and other hardwoods are almost completely defoliated.



The reason is not frost, but forest tent caterpillars (*Malacosoma disstria*) which is easily identified by the "keyhole" pattern on the back. This is one of three tent caterpillars in the state (the other two are the western tent *M. californicum*, and the eastern tent *M. americanum*). The forest tent caterpillar is only found in South Dakota in our northeastern counties. It is also the only tent caterpillar to not form a nest.

Forest tent caterpillar has outbreaks about every 10 to 16 years. We saw high populations back in 2010 and 2000. The forests usually recover from these periodic episodes of defoliation, but it may be more stressful this year.

The trees will send out new leaves later in June, but these tender leaves will be expanding during hot, dry

weather. This may prevent many of the new leaves from completely opening and we may see many trees remain partially defoliated for the summer.

### **Plum pockets on plum fruit**

The fungal disease causing abnormally swollen fruit is called plum pockets (*Taphrina communis*). The infected, unripe plums become abnormally large, spongy, distorted and hollow on the inside. The infected fruit will later shrivel, turns black and remain hanging on the tree into fall and even the winter.



The disease generally is a problem on the American plum (*Prunus americana*), the wild plum found in thickets across the state. It is not usually a problem on the hybrid plums grown for fruit. The disease is supposed to be managed with a single application of a copper sulfate fungicide made just before bud-break but good luck. Timing must be just about perfect otherwise the disease will appear.

### **Virginian tiger moth**



The Virginian tiger moth (*Spilosoma virginica*) has pure white wings (but dark bands on the body). The adult moths tend to rest with the wings folded over the body like a tent rather than spread out. The moth looks so soft some might reach out to touch it but beware. A few folks can be allergic to these hairs.

The caterpillars which are seen in large numbers in the fall are equally soft and fuzzy. These are the yellow woolly bear caterpillars. Since the larvae feed on grasses and clovers they usually are not noticed until September when they are wandering about

## White poplar suckers appear in a lawn

The perplexed homeowner was wondering what was appearing all over his lawn. These are white poplar (*Populus alba*) suckers. They are not seedlings from the tree but are sprouts from the root system.



White poplar is a common tree in our state, especially in the western communities where it is hard to find anything that will grow. And this tree does grow! White poplar can become 50 feet tall or more and will maintain a growth rate of two feet per year for decades.

This sounds like a great tree but with two major caveats. First, it is a poplar, so the wood is weak and prone to decay. Mature trees are often dropping limbs and occasionally the entire tree will fail after a storm.

The other issue is the suckering. The suckers do not just appear around the base of the parent tree but can pop up along the entire length of the common root system. It is common to see sprouts appear 40 feet or more from the parent tree. If these are not removed by mowing (which does leave a stubby lawn), the sprouts will quickly grow into trees and produce even more sprouts! You will have a mini forest!

The sprouting is worse just after the parent tree is removed and that appears to be the case in this instance. This also makes the management easier. There are two options. One is to just keep mowing until the food reserves in the roots are exhausted and the sprouting will stop. This can take a year or two so patience is needed.

The second option is to spray the leaves on the sprouts with a 2% solution of Glyphosate (sold as the active ingredient in many non-selective herbicide). The spray must be on the white poplar leaves and not drip onto the lawn, otherwise it will also kill the grass by the sprout. This application, done carefully, and in conjunction with mowing for the season, should eliminate the problem by the end of this growing season.

## Samples received/Site visits

### Custer County, Dying spruce



Dying spruce are not uncommon right now. A browning and declining spruce is the most frequent call I currently receive. The usual question is what to spray, and my usual answer is H<sub>2</sub>O. Spruces are not adapted to hot, dry sites. They will survive them, but they will not be happy or attractive.



The sample did not present with any of the usual pests; spruce bud scale, SNEED or one of the needlecast diseases. But the tips need exhibit the "bottlebrush" appearance to the new growth where the needles are stunted and densely packed along the shoot. This usually means a site problem. The tree is in a cemetery and that not a good place for spruce to live. No one waters cemetery trees and they are often open growing so exposed to heat and wind. I will follow up with a site visit.

## **Kingsbury County, Sappy windows!**



The concern here was the sappy windows that appeared almost fogged! The culprits were the lecanium scales feeding on the silver maples that tower above the house.



Lecanium scales (*Parthenolecanium* spp) are a complex of species (though some authorities considered them all different forms of the same species). The adult scale is sessile – they remain stationary – and suck the sap from the tree's twigs and branches.

The adults seen on the twigs are all females (males are rare and not necessary for reproduction) and they look like reddish to dark brown army helmets about 1/8 inch long. They lay eggs under their shell covering and the very tiny pink crawlers soon hatch to find a place to feed. They feed for the season and molt into adults the following spring.

Lecanium scales are in the category of soft scales. These insects produce honeydew as a by-product of sucking the sap from the tree. The honeydew is a sugary, liquid substance that rains down from the tree. It creates a film on any surface beneath the tree, cars, decks, lawn chairs, and yes, even windows.

While the homeowner's concern was the sticky windows, the scales can also be a concern to the tree. Scale populations can expand during dry weather and high populations can remove 20% of the sap from a tree. This

can result in branch dieback on mature trees and occasionally kill a young tree.

Since lecanium scale is a soft scale, it is susceptible to insecticides delivered as a soil drench such as products containing Imidacloprid (and they must be labeled for scale control on maple). Products containing Dinotefuran can also be used as a soil drench or basal trunk spray. Now is the best time to treat to kill the young crawlers.

Important note: soil drenches require water to move the insecticide up the tree. The ground around the tree must be watered before the soil drench is applied. Also do not apply systemic insecticides to trees such as lindens that have flowers that are attractive to bees and other pollinators.