



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: Carrie Moore and Dawnee Lebeau.

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Plant development for the growing season

Cooler temperatures are now the norm. We have barely increased the accumulation in Growing Degree Days-base 50 (GDD) for communities across the state.

Aberdeen	2,760
Beresford	3,240
Chamberlain	3,290
Rapid City	2,660
Sioux Falls	3,250

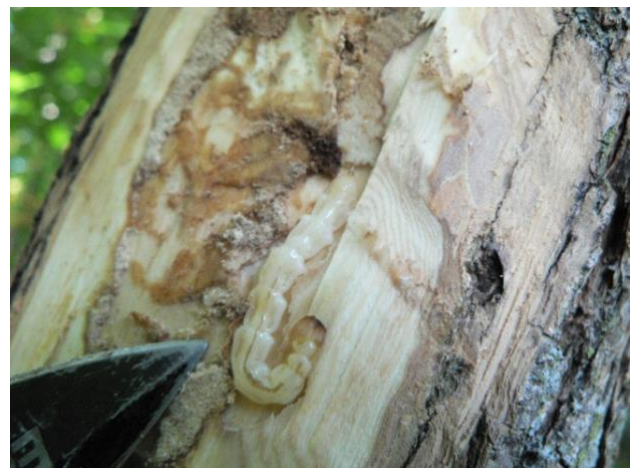
Precipitation has been above normal for the past 30 days in much of the state. Still, this has not eliminated the drought intensity in eastern South Dakota. The region along our eastern border is under drought. The area from Brookings County to Lincoln County is still under Severe Drought according to the U.S Drought Monitor from the National Drought Mitigation Center.

Frosts are beginning to occur some nights. The freezing temperatures, dry conditions, and winds are causing trees to rapidly lose their leaves (and have them blow into the neighbor's yard).

Timely Topics

Emerald ash borer update

Emerald ash borer sampling continues in Sioux Falls and Canton. Most of the larvae are in their fourth instar, but we are seeing some third instars feeding in the galleries beneath the bark.



The three and fourth instar larvae carve long and wide galleries. These cause severe disruption for water flow in the outer sapwood and sugars moving through the inner bark.

They larvae will all become fourth instars within the next week or two. The fourth instars stop feeding in October and burrow deeper into the sapwood. The larvae form a cell in the sapwood to spend the winter. They do not resume feeding in the spring but become pupae, then emerge as adults.

Chestnut update

Last week I discussed the difference between buckeyes (*Aesculus*) and the true chestnut (*Castanea*). This week I saw chestnuts from a tree near St. James, Minn. The individual nuts were exceptionally large and filled the prickly burs. The owner has several chestnuts that have been good producers.



Boxelders and Seasonal Pasture Myopathy in horses

Along with the falling leaves and seeds comes the concern with seasonal pasture myopathy (SPM). This is a muscle wasting disease that occurs in horses during autumn. The disease results in severe muscle damage, including the respiratory muscles, and is fatal in more than 75% of the cases.

The disease has been known for several decades and there were multiple causal agents investigated for this fatal disorder. The problem is the seeds of the female boxelder (*Acer negundo*) tree specifically two of its compounds, hypoglycin A and B. These are compounds found in some other soapberry family plants and are responsible for poisoning in humans, the Jamaican Vomiting Disease, from eating ackee fruit (not found in South Dakota fortunately).

The concentration of the hypoglycin found in boxelder seed varies among individual boxelder trees so some trees are more toxin than others. This is one reason boxelders may be found near a pasture, yet no cases of SPM occur in the horses. The problem is more common in dry years as there is not much grass left in some pastures by autumn and horses start looking for something else to nibble on. Overgrazed pastures present the same problem.

Some years boxelders produce seeds more than other years. This year appears to be an “on” year as trees are covered with clusters of dry, winged seeds. Not all boxelders produce seeds as some are male trees.

The best advice for horse owners is to check for boxelders and seeds around or in their pastures. If many boxelder seeds are littering the ground, it may be best to avoid using the pasture this fall. This is especially important for young horses as they are more predisposed to SPM, due to their size or having not yet learned to avoid the seeds.

E-samples

***Marssonina* leaf blight**

I received a picture of marssonina leaf blight on cottonwood from Lincoln County this week. This disease results in defoliation of cottonwood and other poplars. The disease starts with small leaf spots and lesions on the petioles (the leaf stalk). The spots are small (1/8-inch across), brownish circular to angular spots with a darker halo. The center may be white.



There are four distinct species of *Marssonina* that cause this disease and their symptoms differ slightly – halos are more common with *M. brunnea*, for example – but they all cause defoliation.

The disease overwinters on the infected shoots and in the fallen, infected leaves. Spores are released from these tissues during wet spring weather. If the weather stays wet during the summer, the new foliage will be continuously infected from previously infected leaves and shoots. If we have a dry spring and summer, defoliated trees are rare. If we have a wet year, like this one, many cottonwoods are defoliated by this time.

The most common treatment is to do nothing but hope for dry summers. Mowing the leaves in late fall to speed up decomposition will help reduce spore production next spring or plowing them under if the trees are in a windbreak protecting crops.

The trees can also be sprayed with a fungicide containing chlorothalonil and labelled for marssonina leaf blight with the application made just as the buds are opening in the spring.

Samples received/Site visits

Lincoln County, Shaggy mane mushrooms

The wetter weather is causing many mushrooms to appear. One that is showing up in eastern South Dakota is the shaggy mane.



Shaggy Mane mushrooms (*Coprinus comatus*) seem to appear overnight if we have some light rain and that has been the case in eastern South Dakota. The mushroom has a shaggy, scaly, white cap about 1 to 2 inches wide and 2 to 6 inches tall. The gills on the underside are white but turn black and inky within a few days.

The mushrooms do not last long, and the caps soon turn gooey. The stems last for a few more days after the cap has disintegrated. Then it also falls and all that remains is slightly gooey debris.

Inky cap mushrooms (*Coprinus atrementarius*) look like shaggy mane mushrooms. They both produce a black ink-like substance and have a bullet shape when they are young. The inky caps have a more defined caps while the shaggy mane, as the name implies, are shaggy.

Reminder: do not use these pictures or information to collect mushrooms to eat! There are look-a-likes that can be poisonous! Start your mushroom hunting adventure with an experienced hunter.

Minnehaha County, Smoketree identification

We had someone suggest we look at a tree in Sioux Falls that might be a smoketree (*Cotinus*). Smoketree is a smokebush in South Dakota as our winters often result in dieback – sometime to the ground! We rarely see them taller than 10 or 15 feet.

So, I was surprised and pleased to find a 30-foot-tall smoketree in Sioux Falls. But it was not the common smoketree (*C. coggryia*) that is typically planted. This may be the American smoketree (*C. obovatus*).



American smoketree can become a tree, often 20 to 30 feet tall. It is not considered border-line hardy for our region though it is often listed as zone 4.

The difference between the common smoketree and the American smoketree are slight. Minor difference in leaf shape and flowers. Based on the leaves and height, I am leaning now to the American smoketree but will have to wait till it flowers again next summer.