South Dakota State University Extension

Tree Pest Alert

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In This Issue

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

We are starting the year with snow in the Black Hills but much of the rest of the state is brown. The temperatures are cold but not the bitter -30ºF we see some years.

The growing degree days (GDD base 50) are at zero across the state. The daily growing degree days are calculated by the day's average (the high temperature plus the low temperature divided by 2) minus 50. So, the growing degrees for a day with a high temperature of 60ºF and a low of 45ºF would be:

$$GDD = (60 + 45)/2 - 50 = 2.5$$

We are not experiencing days above 50ºF yet, let alone an average of 50ºF. Usually, we start accumulating GDD during the January thaw that typically occurs later this month. Often only the Black Hills communities from Spearfish to Rapid City see temperatures in the 60s with nights remaining above freezing.

They are the first communities to start accumulating GDD. Aberdeen – in the frozen tundra of the north – is the last.

Aberdeen	0
Beresford	0
Chamberlain	0
Rapid City	0
Sioux Falls	0

Drought monitoring

The entire state is classified as "Moderate Drought" or a greater drought intensity by the US Drought Monitor. The southeastern counties seem to have stayed under severe drought conditions for the past three years! It is a wonder how trees are still alive.

Treatments to Begin Now

Winter watering

Winter watering is a common topic in South Dakota. We often have winters – such as this winter – with an occasion stretch of warm days. Consider how dry the state is right now, should people water their trees during these warm days? Maybe a little drink during the January thaw we experience later in the month?

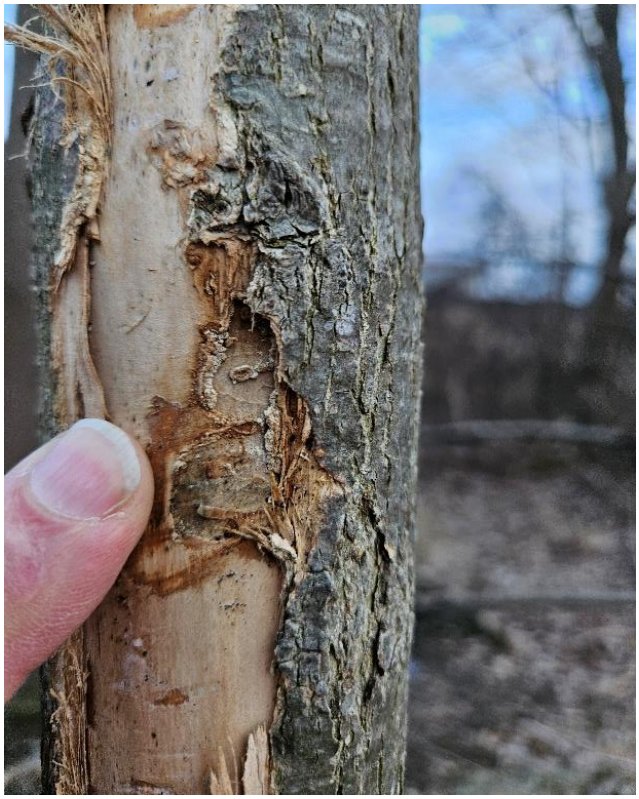
Generally, no. If the soil is frozen, any water poured around the tree will stay there and freeze. Unless you want a mini-ice rink around the trees, do not water.

The exception is if the soil has thawed, and the days are warm then a little watering may be helpful. This means the temperatures are forecast to be at least in the high 40s and the soil is not frozen. Water with a slow soak beginning in late morning. You want to finish watering by mid-afternoon so the water will soak into the ground before the temperatures drop below freezing at night.

Timely Topics

Emerald ash borer update

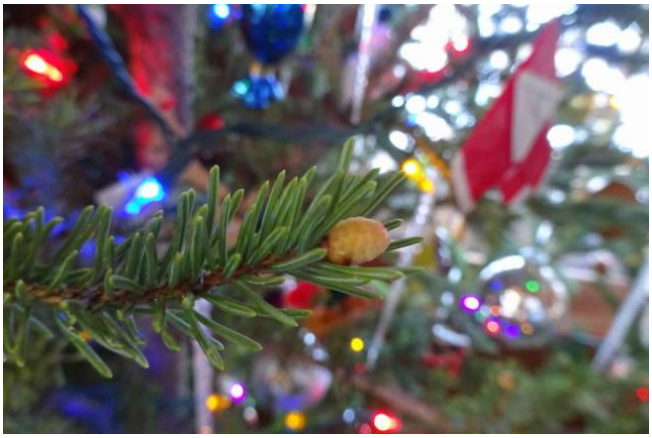
Emerald ash borers (EAB) are spending the winter "snug as a bug" deep inside the sapwood. They are sleeping in an alcohol bliss (they increase the glycerol content of their body) until spring. They will start waking up – probably with a hangover headache – in May.



My Christmas tree is starting to grow!

I usually get a few emails after Christmas about a Christmas tree in a stand starting to grow. They wonder if the tree will produce roots and continue to live. Nope, it is a zombie tree.

Conifers prepare for dormancy in response to the lengthening autumn nights and cold temperatures. They remain in this dormant state for at least six to nine weeks as this is the period it takes to fulfill their chilling requirements. The trees must be exposed to a set period of temperature below 40ºF as a prerequisite to resume growth in the spring. Once this chilling requirement is fulfilled all it takes to initiate growth is a little warm weather; just what your house will provide!



Most trees are harvested in October, too early to have fulfilled their chilling requirement. But if the tree was cut in early December from a choose-and-cut or the Black Hills National Forest, the tree was already primed to grow. Despite the fact it cannot grow – there are no roots, nor can it regenerate them quickly – an occasional Christmas tree will have the buds expand, or as seen in this picture, the male cones forming.

Warning: Your Christmas tree is not a salad!

There is a new internet craze to turn your Christmas tree into an edible product. Rather than dispose of the tree at a community landfill to be turned into mulch, they try to turn it into a recipe. Please do not do this.

The first problem, the trees were not grown to be an edible food product. They may be grown with pesticides that are not labelled for food crops. Some Christmas tree species are also sprayed with green dye to enhance the color. These dyes are not for edible foods.

There are recipes to mix pine needles with honey, butter, jam, and bread. While I have not seen one yet, I will bet there is a recipe to substitute pine needles for shredded carrots in Jello we once ate in Sunday meals in church basements. Again, do not include your Christmas tree as part of your diet.

While some needles can be eaten if properly prepared, it is not worth the effort. Even these recipes caution the needles should be collected from young trees in the forest, not the Christmas tree.

Finally, not all Christmas tree species needles are edible. Some will cause digestive problems. A few can kill you. Turn the tree into mulch.

E-samples

Emerald ash borer impostors

Communities in the eastern part of the state are working to reduce their ash population. Since no community will escape the destruction of their EAB – it is only a question when, not it – many cities are felling ash during the winter.

One southeastern community where we have not yet confirmed EAB, was cutting down ash street tree last week. They found these tunnels in a dying ash. The concern was that this might be EAB, so they sent a picture.

The picture showed powder-filled galleries just beneath the bark. This is where EAB constructs its tunnels. But EAB is not the only borer in ash.

Banded ash borer (*Neoclytus caprea*) is a common borer of ashes and has been for centuries. It is a beneficial insect as it infests dying ash trees. It is one of nature's recyclers.

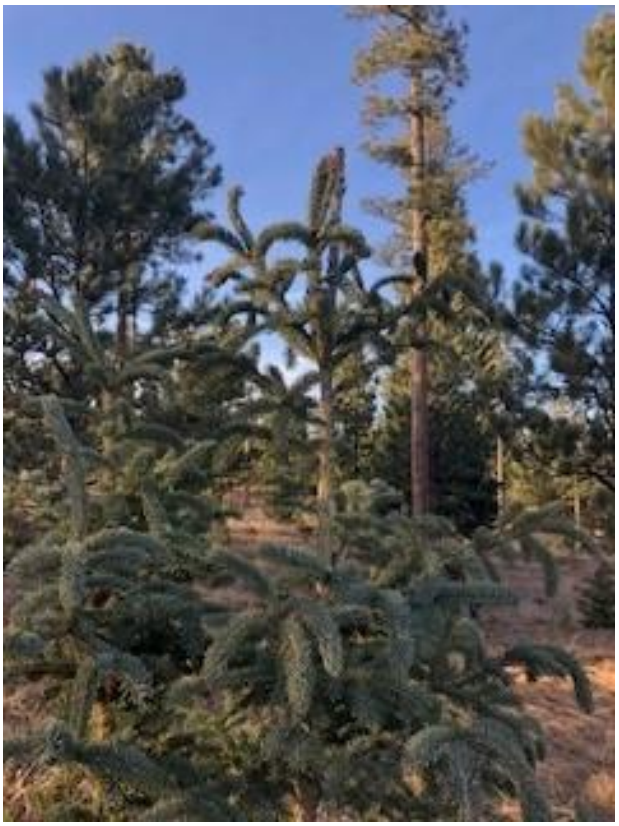
The tunnels constructed by the banded ash borer are a little wider (about 1/4-inch) than those made by EAB (about 1/8-inch). The tunnels of the banded ash borer also dip deeper into the sapwood.

I thought these tunnels were too wide for EAB. But they also found an insect at the end of a tunnel deeper in the tree. The picture clearly shows an adult banded ash borer. This insect usually overwinters as an adult. They are one of the first borers to emerge in the spring. They will even start emerging around February from freshly cut ash firewood brought in the house.

The adults are cylindrical, about 1/2-inch long, and dark colored. They also have wavy and looped patterns of light-colored hairs on their body.

White spruces shoots drooping in the Black Hills

Some landowners in the Black Hills have noticed the small (3-to 5-foot tall) white spruce have drooping shoots. The shoots appear healthy otherwise. There is no tip dieback or discoloration.



While there are some insects that can cause these symptoms, the most common cause is summer drought. While last year it started wet in the Black Hills, it quickly became dry during the summer months. Many small trees had adequate water to extend the shoots in the spring, but summer drought left them drooping.

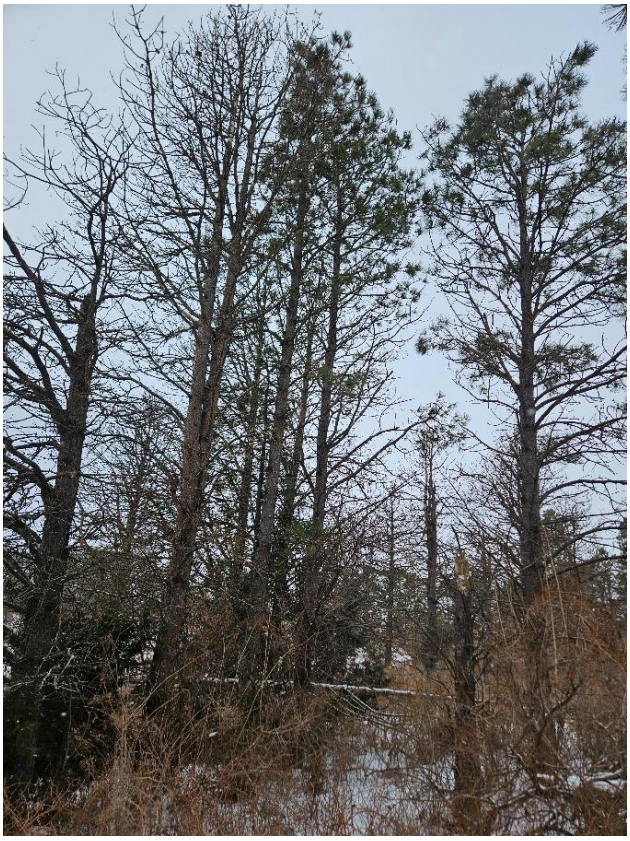
They should recover this spring. If we have average summer precipitation, the trees will be fine.

Samples received/Site visits

Marshall County, Dying mature ponderosa pines

This is becoming a common reason for a visit. Pockets of mature, 40-to-60-foot tall, dead ponderosa pines. The death usually occurs over a relatively brief period, maybe three or four years.

These trees always show symptoms of Diploida tip blight (*Diplodia sapinea*). This is a common fungal shoot disease of pines, including ponderosa pine. The disease usually affects mature ponderosa pines. If the trees are planted in eastern South Dakota, the disease is often fatal in trees more than fifty feet tall. These are mature trees that are weak.



The weakened trees are also susceptible to other opportunistic pests such as borers. There is no effective control for these pests in windbreaks and wildlife plantings. The cost of spraying would be prohibited.

While in the Black Hills ponderosa pine can live for hundreds of years, the lifespan is measured in decades, not centuries in the more humid climate and soils of eastern South Dakota.

Still 70 to 80 years is not a bad lifespan for a tree. But if you have a windbreak of this size pine, you might want to develop an end-of-life plan for them.