

# Pest Update (November 14, 2018)

Vol. 16, no. 37

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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.

## 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 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.

Plant Development.....	1
Timely topic	
Real or Plastic: selecting a Christmas tree.....	2
E-samples	
Bronze birch borer.....	5
Banded or redheaded ash borer in wood pile.....	5
Junipers (cedars) turning brown.....	6
Samples received/site visits	
Minnehaha County (Diplodia shoot blight).....	6

## Plant Development

There should be no plant development now until spring – it's too cold! The cold snap we went through earlier this week was not too cold, our woody plants can tolerate temperatures this cold by now. If we do not see minus zero temperatures for a few more weeks, we should not see any cold injury due to the autumn or early winter temperatures.

## Timely Topics



A Christmas tree lot will be a common sight by next week.

**Real or Plastic?** Christmas tree lots are already beginning to spring up around the state and Thanksgiving marks the start of the Christmas tree season with more than 30 million trees being sold between Thanksgiving and Christmas. Another 60 million homes use artificial trees either for convenience or environmental concerns.

However, the traditional Christmas tree can be the environmentally friendly way to celebrate the holidays. Real Christmas trees can come as close as the nearest choose-and-cut while the journey to your home for artificial trees starts in Asia. The real tree is made of wood (obviously) while the artificial is plastic. And while you don't have to buy an artificial tree every year, the average artificial Christmas tree may have a life span of ten years before it ends up in a landfill and it will remain there for a long, long time. The real Christmas tree, while used for only one season, can become valuable mulch, a winter bird feeder, or even used as a fish habitat after the holidays.

**Here are some tips on picking out the perfect tree.** The best way to obtain the freshest tree is to harvest it yourself at a choose-and-cut Christmas tree farm or obtaining a Christmas tree permit from the Black Hills National Forest.

If cutting your own tree is not possible, here are some tips for checking freshness at a Christmas tree sales lot. First, give the tree a light, but vigorous, shake. If it is fresh, only a few interior needles should fall out of the tree. If a pile of brown needles appears on the ground after shaking, it is not a fresh tree. Next, reach into a branch and pull the needles *gently* through your hand as you move out towards the tip.



The stand should hold at least a half-gallon of water and the tree trunk.

The needles should bend, not break, as your fingers run across them and the branch should only slightly bend to the touch. If the needles break off completely this is another indicator that the tree has already dried out too much. Likewise, if the branch is not flexible more like a wooden stick, the tree has already dried out and is not worth buying

Regardless of whether you buy a tree from a

lot or cut it yourself, once you get the tree home leave it outside in the shade while you set the stand up indoors. The choice of a stand is probably the most critical factor in maintaining the freshness of the tree once in the home. The stand should be able to hold one-half to one-gallon of water as the new tree may absorb this much water on the first day. A good rule-of-thumb is a tree will use 1 quart of water per day for every inch trunk diameter at the base. If you have a tree with a 3-inch base, it may use 3 quarts of water per day.



Just before you bring the tree in the house cut the base between a half and one-inch from the bottom. This will open the sap-filled pores that transport water through the tree. The base cut does not have to be slanted. The angle makes little difference in the amount of water absorbed so cutting perpendicular to the trunk is fine. Do not drill holes into the trunk or whittle the trunk smaller, neither will improve water uptake.

Also brush off any debris or dirt on the base before placing it in the stand. And start out with a clean stand. Wash it out with a solution of about a capful of bleach to a cup of water, rinse and let it dry before using. A clean stand does not increase the life of the tree but does eliminate the mushy odor from an old, dirty stand.

Once the tree is in the stand add water and then *never* let the stand become empty. If the stand becomes empty for more than six to eight hours, the tree's pores plug up again. Water uptake will be significantly reduced, the tree will dry out sooner than expected and the needles will soon begin to fall. If the tree stand does dry up for half a day or more there is nothing that can be done other than pull the tree out of the stand and recut the base – not a pleasant task once the lights and ornaments are already up.

Nothing needs to be added to the water in the stand to improve needle retention. The commercial “tree fresher” products do not significantly increase the life of the tree. The home remedies such as aspirin, sugar, soft drinks and vodka do not work and may be harmful to pets (or partyers) that may drink from the stand.

Place the tree in a spot that receives only indirect light from the windows and not near any heat duct, fireplace, or your attempt to deep fry the turkey. Also use lights that emit less heat, such as the LED Christmas lights. This will reduce water loss from the tree and prolong its freshness.

What do you want from a real Christmas tree? There are three main qualities, 1) pleasant fragrance (we all love the Christmas tree smell), 2) stiff branches to hold

all those ornaments, and 3) long needle retention so we do not have a 'Charlie Brown' tree before Christmas.



**Which is the best tree?** Each species has its good points, but the Fraser fir (pictured to the left) is probably one of the top favorites. The tree has a very pleasant fragrance, excellent needle retention - they will last the entire holiday season - and the branches are stiff enough to hold most ornaments (however if heavy ornaments are to be placed on the tree go with a spruce). The bright green needles are white on the underside and this makes a

very attractive display.

Balsam fir is another good choice though the needles do not last quite as long, and the branches are not as stiff. Canaan fir, another popular fir appears to have qualities like the Fraser fir and it is another popular Christmas tree.



**Pines** are very popular as trees with Scotch pine, pictured to the left, probably the most popular Christmas tree in the country. It has a pleasant fragrance; excellent needle retention and the branches are stiff enough to hold heavy ornaments.

Eastern white pine is another pine commonly sold at Christmas tree lots. The needle retention is not quite as good as Scotch pine and the branches are very flexible meaning heavy ornaments may fall off. White pines do have very soft needles and if you are going to run into the Christmas tree in the middle of the night this is the softest one!



**Spruces** are not as popular of Christmas trees due to their relatively poor needle retention. If you want to have a Colorado blue spruce as your Christmas tree, you probably should wait until a couple of weeks before Christmas to set it up as the needles may only last that long. Once the needles begin to fall, blue spruce are about the worst tree in the house as the fallen needles are sharp and seem to find their way into socks and slippers. The branches are very

stiff, however, and can support the heaviest ornaments.

White spruce, or Black Hills spruce is not a commonly available Christmas tree at lots though is used in the Black Hills where it is cut from the National Forest. It does make a nice tree, particularly when cut fresh, though needle retention is poor. The tree also does not have much of a fragrance and occasionally Black Hills spruce trees can produce a slight musky odor when the foliage is bruised.

## E-samples

There are not many samples now. The weather is too cold for much pest activity and most folks are spending more time inside than out. I still get a few e-samples so let's go through them.



A **bronze birch borer** (*Agrilus anxius*) larva image was sent in by Tony, one of the South Dakota Department of Agriculture forest health foresters. He was looking at trees that were damaged by the storm that came through the Black Hills last summer. The bronze birch borer is native to the Black Hills and attacks damaged or stressed birch trees. The storm left many birches bent and broken and these were vulnerable to attack.

The adults are flying in June (and July in the upper elevations of the Black Hills) and lay their eggs on the bark. The eggs hatch within two weeks and the larvae spend the summer and into the next spring feeding just beneath the bark. They form a pupa in late spring then emerge as adults.

If the larva looks like an emerald ash borer larva, it should. These are close cousins separated by hosts and continent. The bronze birch borer is native to North America and attacks birch while the emerald ash borer is native to East Asia and attacks ash. Each in their native lands and hosts only attack declining or wounded trees. However, when the emerald ash borer arrived here, our native ashes – black, green, and white - have few defenses and are successfully attacked regardless of health. The reverse is true as well. The bronze birch borer can attack health Asian and European ash in this country and the Chinese do not want this pest to show up in the birch forests of northeastern China.



Another picture was sent in by Allyssa, a South Dakota Department of Agriculture forester in the Northern Hills. Someone was found it in a log from a pile of wood. This larva is either the **banded ash borer** (*Neoclytus caprea*) or the **redheaded ash borer** (*N. acuminatus*). We have both insects throughout the state and they

are very closely related insects – they would attend the same family Christmas party.

These insects attack recently dead and dying ash trees (as well as other hardwoods) so are not much of a threat to healthy trees. The most common issue with these insects (other than being frequently misidentified as emerald ash borer) is they are inside trees cut down as firewood. If the wood cut this autumn is brought into the home during the winter and stored for several weeks or more, the insect can emerge as an adult.

Each late winter I receive pictures (see the February 28, 2018 issue of the *Update*) of these insects buzzing around the house and hitting the sun-lit windows to escape. They cannot attack anything in the house, so they are just an annoyance.



**Junipers are also turning color, but this is normal for autumn.** I had a couple of calls and pictures of junipers turning color. Many junipers have a color change as they enter the winter. Eastern redcedars (*Juniperus virginiana*), Chinese junipers (*J. chinensis* syn *J. x media*) and Savin (*J. sabina*) all can develop yellowish brown foliage. It is not attractive, but they will green up again in the spring. Creeping juniper (*J. horizontalis*) and Rocky Mountain juniper (*J. scopulorum*) can

turn almost purple during the autumn and this can even be described as pretty.

## **Samples received/Site visits**

Minnehaha County

**This pine is declining. What is the problem?**

The pine shoots are infected with Diplodia shoot blight (also called tip blight). The stunted shoot tips submitted as a sample and the ash-gray needles are common symptoms of this disease. Fungicide treatments next spring will be helpful in slowing the disease, but they will not cure the problem. You should expect to treat the tree for at least two years and repeat again in another five years or so. Fungicides containing chlorothalonil and labelled for this disease should be applied at bud swell next spring and then repeated just as the needles are forming and a third application made 10 days later.

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