

# Pest Update (November 16-23, 2016)

Vol. 14, no. 38

John Ball, Forest Health Specialist SD Department of Agriculture,  
Extension Forester SD Cooperative Extension

Email: [john.ball@sdstate.edu](mailto:john.ball@sdstate.edu)

Phone: office 605-688-4737, cell 605-695-2503

Samples sent to: John Ball  
Plant Science Department  
rm 230, Agricultural Hall, Box 2207A  
South Dakota State University  
Brookings, SD 57007-0996

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 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.

## Timely Topics

|   |   |
|---|---|
| Picking out the perfect Christmas tree..... | 2 |
| Snow bending tree branches.....             | 5 |
| Ice melt products and plants.....           | 5 |
| E-samples                                   |   |
| Junipers turning color.....                 | 7 |
| Samples received / site visits              |   |
| McCook County (sandbar willow).....         | 7 |

## Timely Topics

**The Capital Christmas tree** began its journey to Pierre last week to grace the Capitol during the Holiday season. This is a good time to update the annual Christmas tree selection and care *Update*.





**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 50 million homes use artificial trees either for convenience or environmental concerns. However, the traditional Christmas tree can be the

environmental friendly way to celebrate the holidays. Real Christmas trees can come as close as the nearest choose-and-cut while most artificial trees journey to your home starts in Asia. The real tree is made of wood (obviously) while the artificial 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 six to 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. Only a few interior needles should fall out of the tree if it is fresh. 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 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 after the first 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.

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 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. This will reduce water loss from the tree and prolong its freshness. Another tip to prolonging freshness is to start out with a clean stand. Before setting up the tree stand wash it out with a solution of about a capful of bleach to a cup of water. This will reduce the growth of microorganisms that may also plug up the tree's pores.



**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 scent, excellent needle retention - they will last the entire holiday season - and the branches are stiff enough to hold most ornaments (however if really 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 similar to Fraser fir and is also becoming a popular Christmas tree.



Pines are very popular with Scotch pine, pictured to the left, probably the most popular Christmas tree in the country. It has a pleasant scent, excellent needle retention and the branches are stiff enough to hold heavy ornaments. Eastern white pine is another pine commonly sold at Christmas tree stand. The needle retention is not quite as long as Scotch pine and the branches are very flexible meaning heavy ornaments may fall off. White

do have very soft needles and if you are going to run into the tree in the middle of the night this is the one!



Spruces are not as popular of Christmas trees primarily due to their relatively poor needle retention. If you want to have a 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. Blue spruce, pictured to the left, has the best needle retention of the spruces – they may last a few weeks or more - but does not have much of a fragrance. 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.

Christmas tree characteristics of popular trees

|                  | Fir        |            | Pine        |            | Spruce       |             |
|------------------|------------|------------|-------------|------------|--------------|-------------|
|                  | Balsam fir | Fraser fir | Scotch pine | White pine | White spruce | Blue spruce |
| Needle retention | E          | E          | E           | VG         | VG           | VG          |
| Branch stiffness | G          | G          | E           | P          | VG           | E           |
| Fragrance        | E          | E          | G           | VG         | P            | G           |

E=excellent, VG=very good, G=good, P=poor



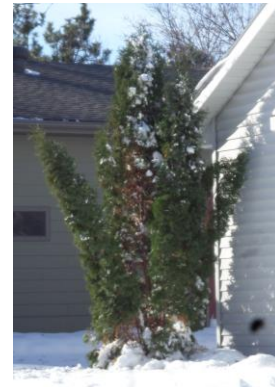
### **Snow bending branches – what to do?**

Winter seems to have struck across the state all at once last week. And it was not the light, fluffy snow that gets everyone into the holiday spirit. No, this was the heavy, wet snow that reminds us of why we enjoy Florida during the winter. The heavy snow not only was tough to shovel, it was tough on our trees as well. Now is a good time to remind folks what to do when the branches are bent from heavy snow loads.

First, do not take a broom or rake and start pounding away on branches. You might cause more breakage than the snow. Also do not get the hose out of the shed and spray water on the tree to wash away the snow. The water will just turn to ice and now you'll have more weight on the branches. Instead, just lightly brush the snow from the branches before the snow turns to ice.

You might also consider doing nothing and just go back in the house. During the sunny days that often follow these storms, the snow often melts off the tree in a day or two and the branches just bend back.

There is one chore that everyone might do; that they forgot to do last week before it snowed. No, it's not putting the holiday lights up, it's tying up the arborvitae. These upright evergreen shrubs are very prone to having their upright stems bend and break under heavy snow or ice load. The best solution is to loosely tie the stems together with a flexible cord at about 2/3's their height. This will keep the evergreen from splitting during the winter. Just remember to remove it come spring.



### **Ice melt products and plants**



The freezing rain and snow we experienced last week left some icy sidewalks and driveways. Homeowners are combating this hazard through the use of ice melt products. While these are effective means of melting ice, the use of these products may also result in damage to the lawn and ornamental trees and shrub come spring.

Ice melt salts are designed to break the bond between the pavement and the ice allowing the slush to be shoveled off the surface. The three different salts in ice melt products, used alone or in combination, are calcium chloride, magnesium

chloride and sodium chloride. Homeowners sometimes wonder if any one of these salts is less harmful than the others in term of plant damage, but the injury is due to the chloride in the salt and all three of these contain chloride.

Plants may accumulate toxic levels of chloride from ice melt products in their winter buds and evergreen foliage. This can result in buds failing to open next spring or proliferate to form clusters of short shoots known as witches-brooms. Brown needles in the spring is also a common symptom of chloride toxicity. Repeated exposure to excessive chloride over several winter seasons can kill sensitive plants.

Chloride enters plants through two routes: 1) being absorbed by the roots though runoff or 2) absorbed directly through the buds and foliage from aerial deposition. Runoff can result in injury if the plants are growing in a slight depression where melt water can accumulate in the spring or if salt-laden snow has been piled on the plants during the winter. However, chloride quickly leaches through the soil so for most situations runoff and root absorption is not the primary means of chloride entering the plant. Instead, salt carried as small droplets or dried particles are the more common ways of a plant accumulating chloride.

Homeowners can reduce damage to their lawn and ornamental trees and shrubs by 1) using salt substitutes, 2) minimizing their use of salts to clear ice and 3) flushing the salts from the soil and vegetation in the spring.



Sand, cat litter and even sawdust can be used to improve traction on ice. While the overuse of these materials can also create problems, they can be used in conjunction with ice melt salts to reduce the quantity of salts applied to the paved surface.

The use of salts can be minimized by clearing as much as possible the snow from the surface and then spreading a light layer of salt over the icy surface. Only apply enough salt to break the bond of the ice to the surface. Once the bond is broken, the icy slush can be removed with a shovel or scoop. It is not necessary to completely melt the ice from the surface, just enough to break the bond.

Finally, once the weather begins to warm next spring, wash all the dried salt from the pavement and soak the surrounding grass and plants with water about three or four times during warm weather so the chloride leaches away from the surface. Next spray water on the buds of deciduous trees and shrubs and the

needles of evergreens to wash the dried salt from the plants before it is absorbed.

The use of these practices can reduce the hazard due to icy pavement and also reduce damage to the lawn and ornaments next spring.

## E-samples



**Junipers are also turning color, but this is normal for autumn.** I received this cell phone picture of a redcedar (*Juniperus virginiana*) which is turning a little 'rusty'. Many junipers have a color change as they enter the winter. Eastern redcedar, Chinese juniper (*J. chinensis* syn *J. x media*) and Savin juniper (*J. sabina*) all may develop

yellowish-brown foliage as we go into winter. It's not that attractive, but they will green up again in the spring. Creeping juniper (*J. horizontalis*) and Rocky Mountain juniper (*J. scopulorum*) can turn almost purple and this can even be pretty.

## Samples received/site visits

McCook County

**We have this coming up in the sloughs. What is it?**

This is sandbar willow (*Salix exigua* subsp *interior*). It sprouts up almost always where there is wet soils in the spring (and livestock is excluded). I seem to get a sample of this every couple of years.

The South Dakota Department of Agriculture and South Dakota State University are recipients of Federal funds. In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability (Not all prohibited bases apply to all programs.) To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

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