

Pest Update (December 6-13, 2017)

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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 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.

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Timely Topics

Why are my evergreens turning color?

Color changes on evergreens are common during the winter and it does not always related to desiccation injury. Scotch and white pine foliage may become yellowish green during the winter, a normal change, and then become bluish-green again once the weather warms in the spring.

Arborvitae can also turn from a bright green in summer to a very ugly brown during the winter months. Junipers may turn almost a plum purple during the winter but return to green the following summer. Usually the normal winter color change seen in some evergreen species is uniform along the foliage. Winterburn is typically limited to the tips of needles.

Chestnuts roasting on an open fire... Each year I get calls about roasting the “chestnuts” that drop during the fall. This is one of the most common calls I receive at this time of year. The large shiny brown seeds, with the single light spot, are buckeyes, not chestnuts, and the seeds are poisonous to us as well as most livestock. They contain aesculin and while the poison can be leached out and the nut made into an edible pulp (don't try it, old fruitcake taste better). Squirrels can eat them but if you are reading this you're probably not a squirrel.

There is an American chestnut (*Castanea dentata*) that has largely disappeared from the landscape due to an Asian disease called Chestnut blight. The disease arrived in the United States in the late 1800s and by 1950 the tree had almost been eliminated from its native range along the Appalachians. Fortunately trees were planted in Iowa and other Midwestern states and the blight has made few inroads into these populations. There are only a few true chestnut trees in our state and its hardy enough we probably should be growing more of them in the area south of I-90.



The American chestnut nut is high in calories, starches, protein as well as vitamin B, C and E – and once roasted these nuts are delicious! Harvesting the nuts is a lot of work. The nut is protected by a very spiny bur (keeps the squirrels from getting them) and the best way of collecting them is let the closed bur fall to the ground and gather them as they drop. Once collected (and wearing

thick gloves) use a knife to cut the bur open along its sutures to collect the small teardrop shaped nut. The nuts can be stored in the raw state for about a month in the refrigerator. Once you are ready to eat them, use a knife to make an X on the flat side of the nuts then roast at 400°F for 20 minutes. Remove from the oven and while still hot (so better have gloves) remove the shell from the nut and eat.



Another common call at this time of year is about firewood. Now that the weather has turned a little colder, people are thinking about having a nice cozy fire at home. While you should have purchased firewood earlier this year, all those folks that do their taxes on April 15 are also just getting around to buying

firewood. You can find ads for firewood from anywhere from \$75 a pick-up load to \$300 a cord delivered, but the wood species, whether it is seasoned and how the 'load' is measured all determines the value.



A common question is “What is the best firewood?” This is an excellent question as not all firewood is the same. The different species vary in their heat value, color of the flame, fragrance and amount of sparks. Crabapple and apple have one of the prettiest flames and oaks and sugar maple have excellent coals, while cottonwood goes to ash fairly quickly. Pines produce a lot of sparks. Apple has a nice fragrance and some woods,

such as catalpa and elm (if it had wetwood disease), might even have an odor (the burnt wood can smell like a tomcat peed in the fireplace). The most important factor for many homeowners is not the color or fragrance but the heat so here is the ranking of fuelwoods in million BTUs per cord of seasoned wood.

Species	BTUs (million per cord)
Bur oak	25
Mulberry	25
Honeylocust	24
Sugar maple	24
Black walnut	22
Crabapple	21
Green ash	20
Hackberry	20
American elm	19
Boxelder	17
Ponderosa pine	15
Aspen	14
Cottonwood	14
Basswood	13

¹ BTU stands for British Thermal Unit, the unit of energy required to increase the temperature of one pound of water from 60 to 61°F. A gallon of propane is the equivalent of 100,000 BTU's so a cord of green ash has the heat equivalent of about 200 gallons of propane.

As you can see from this list, oak is going to generate almost twice the heat as basswood or cottonwood so you can expect to pay more for this wood. I have also seen some sales of 'mixed hardwood' containing mostly cottonwood with a little ash mixed in – it's mostly go'fer wood meaning you are always going for more as it burns quickly!

You should always buy firewood by the cord or as a fraction of a cord. A cord is a stack of wood 4 feet wide, 4 feet high and 8 feet long containing 128 cubic feet of space and about 70 to 80 cubic feet of solid wood. If you buy a cord you are purchasing a known quantity of wood. If you buy a pick-up load or face cord, you are going to get a range of possibilities. Most pick-ups hold about 1/5 to 1/3 cords, but this varies and a face cord usually is about 1/4 to 1/3 of a cord but again this can vary as well. You can find pick-up loads of wood being advertised for around \$75 while cords are going for \$150 or more. A pick-up load sounds cheaper than a cord but remember you probably are getting three or five times the amount of wood with a cord.

Also be sure to buy seasoned firewood. This is wood that has been split and stored off the ground and protected from the elements for about a year. After this time it will have a moisture content of less than 28 percent so it should burn long and hot rather than steaming and smoking in the fireplace.

And finally and most important, buy local firewood. There are woodlot owners from Iowa and Minnesota offering ash firewood for delivery to the Sioux Falls area. A very common way emerald ash borer moves from one community to the next is in firewood. While the concern was once vacationers bringing ash firewood, now the threat is more homeowners buying firewood for their house. Let's try to delay the arrival of this insect as long as we can – do not bring in ash firewood from trees cut this last year from out of state.

E-samples



I am receiving picture of an insect coming out of a Scotch pine Christmas. After the tree was set up in the house on Thanksgiving weekend, sometimes hundreds of these small insects appeared on branch tips. The insect is the pine aphid (*Cinara*). This is a genus of large brown to black aphids that feed on pine foliage. These aphids usually overwinters as eggs on the needle but if brought into a warm house on the Christmas tree they quickly hatch. The adult aphids begin to give birth to live young so the aphid population appears to explode almost overnight! As the Christmas tree begins to dry, these insects (like many unwanted Christmas guest) begin to explore other areas of the house. The aphids are not harmful, cannot bite people or pets, and will not bore you with long, meaningless conversation so are probably better than some of your relatives you see only at Christmas. The only annoying problem with this Christmas houseguest is if you smash one on your favorite couch they leave a big purple stain. The aphids cannot survive on your houseplants so without a food source they will soon die and the problem (and guests) disappear.



Once the leaves drop, people start noticing lots of other abnormalities on their trees.

These swollen buds on the tips of the sandbar willow branches are willow cone galls caused by a small midge, *Rhabdophaga strobiloides*. The adults (appears as a gnat) place a single egg on the developing terminal bud. Once the egg hatches the feeding activity by the developing insect prevent the bud from opening and forming a shoot and leaves and instead

just continues to enlarge as a bud.

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