Pest Update (Dec 3, 2014)

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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. **Walnut samples may not be sent from any location – please provide a picture!**

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

The continual freezing and thawing weather we are experiencing in South Dakota so far this winter is leaving icy sidewalks and driveways. Homeowners are combating this hazard through the use of a variety 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 plant injury is due to the chloride in the salt and all three of these contain chloride.

Plants can accumulate toxic levels of chloride from ice melt products in their buds and foliage from ice melt salts. This can result in buds failing to open next spring or proliferate to form clusters of short shoots known as witches-brooms. Branch dieback, leaf scorch and needle browning are also common symptoms of chloride toxicity. Repeated exposure to excessive chloride over several winter seasons can kill sensitive plants.

Chloride enters the 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 accumulates 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

Chestnuts roasting on an open fire… Each year I get calls about roasting the "chestnuts" that drop during the fall. The large shiny brown seeds, with the single light spot (pictured to the left), are buckeyes, not chestnuts, and the seeds are poisonous to us as well as most livestock. They contain aesculin and while the poison can leach out and the nut made into an edible pulp (don't try it, gravel would taste better) the nuts are rarely used for food. Squirrels can eat them but if you are reading this you're probably not a squirrel. The only way to obtain chestnuts in South Dakota is to buy them from the store, not collect them from trees. The true chestnut has tear-drop shaped seeds enclosed in a spiny bur (as pictured to the right). As far as I know we do not have any chestnut trees in our state (though one occurred in Brookings County for a while) with the closest known trees in Waseca, Minnesota at the Hodgson Arboretum.

Scotch pines needles often go through a color change as winter approaches. Unfortunately the color change is not for the better. The needles can go from an attractive bluish green to a sickly yellow. This color change sometimes alarms tree owners who wonder what pest might be responsible for these symptoms. This color change, while not that attractive, is normal for Scotch pines. The yellowing begins in autumn and usually reaches its peak by now. The needles will stay yellow this winter, but green up very quickly as the temperatures warm in the spring. The color change is under genetic control and not all seed sources of Scotch pine go through this change so it is common to see a row of trees and only a few changing color.

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