# Pest Update (April 22, 2015)

**Vol. 13, no. 10**

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

Email: 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. **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.



## Plant development

The continuing warm and dry weather is pushing the development of our ornamental plants. Crabapples are beginning to bloom in the southern half of the state, about a month earlier than last year.

## Timely Topics

**The "growing" concern for trees this spring is the drought that is intensifying across much of South Dakota.** While it was a relatively mild winter for people, the dry fall and winter was tough on trees and most came into spring already under considerable moisture stress. The dry spring has turned the moderate moisture stress to severe for many trees.

There is not much that can be done at this time other than water. This is particularly important for new plantings, no matter if they are seedlings planted in windbreak or a tree planted in a yard. How much and how often should trees be watered? There is no precise recipe for this as it depends on the soil type and rainfall patterns. However here are a few guidelines for watering during this drought. The most critical watering needs are for the trees that will be planted this spring. These trees do not have a well-developed root system and regardless of whether they are planted bare-root, container or balled-and-burlapped, will require extra attention to watering this spring and summer. A newly planted seedling needs between a pint and quart of water per day while a newly planted ornamental tree, one about 6 to 8 feet tall, needs about 2 to 3 gallons per day. Ideally this quantity of water is applied daily for the first couple of weeks following planting. The root system of these transplants is fairly small and larger quantities of water may flow away from the tree roots before being absorbed. It is also important to water directly next to the stem during this time period so the water is available to the tree.

Established trees do not need daily watering but will still benefit from weekly watering if the rains continue to hold off. A small windbreak tree, one planted a year or two ago, still needs about 2 or 3 gallons of water a week. A 2-inch diameter tree (measured at 6-inches above the ground) should receive about 20 gallons of water a week during drought periods. The best means of applying this water for landscape trees is slowly with a soaker hose placed near the tree. While tree roots typically extend out as far as the tree is tall, the critical watering zone is a distance out about 2/3's the height. As an example, if the tree is about 12 feet tall, the watering should be done within 9 feet of the trunk.

The water should be placed on the soil, not the foliage. There is a common myth that evergreens absorb most of their water through the foliage. While there is nothing harmful about watering foliage, it does not result in scalding, it is a waste of the resource.

**Dieback and death of seedlings planted this spring may becoming a common occurrence this summer.** This may be a repeat of 2012 when there was significant mortality of newly planted seedlings in belts across the state. The most common symptoms seen by summer were plants failing to break bud or the leaves partially opened and dried up. While these symptoms can occur on any seedling tree if it is not being watered this summer, this symptom pattern was mostly being reported on dogwoods, hackberries, hawthorns, honeylocust and oaks. These are all plants that perform poorly if planted out bare-root into high temperatures, low humidity and low precipitation – the prevailing weather so far this spring. These plants have a difficult transition from a bare-root plant being kept in cool or frozen state with high humidity and then being planted in hot, dry conditions. Hackberries, honeylocust, hawthorns and oaks usually will perform better if "sweated" in the spring (a procedure outlined in last week's *Update* Dogwood, while not requiring sweating, also requires warm, humid conditions to begin growing. Since this is a "shock" problem, not a watering problem, I have even seen belts where the watering has been diligently performed affected.

**We may also lose seedling trees to heat injury**. The threshold for thermal injury to tree seedlings is about 115$^{o}$F, a threshold we can exceed on bare, dry soils and those covered with fabric. Southern states have long noted injury at the stem where it meets the soils and I have seen this occurring in South Dakota during hot, dry summers. Seedlings that have been girdled by the heat often will have the roots alive but every part of the plant above the girdle is wilted and dead. This picture is typical of the heat injury that I saw in 2012.

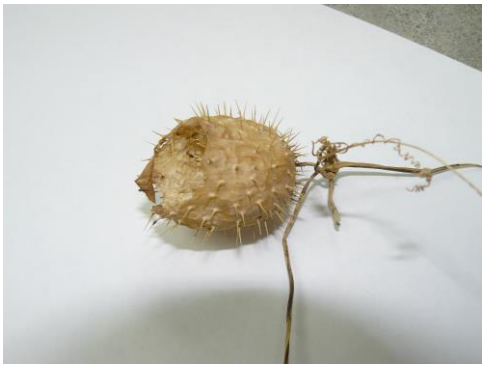
**I have received numerous calls regarding small clusters of "buds" on the ground beneath ash trees.** These are the male flowers that are falling from the trees. Most of the ashes planted in our communities are male cultivars as no one wants the seeds produced by the female trees. The male flowers appear as bundles of dark purple, apetulous (no petals) flowers on very short stalks and occur before the leaves open. These are often infested by the ash flower gall mite which results in an abnormally large bundle of

flowers that turn dark brown and often remain hanging from the tree for one or two years.

## E-samples

I received a picture of a declining birch tree. One of the stems of the clump is expressing dieback, and the concern is what might be causing the decline. Paper birch is not a long-lived tree in our ornamental landscapes. Our summers are too hot and dry for them to thrive and the slow spiral of decline usually begins when the trees are in their 30's. Bronze birch borer, a native cousin to the emerald ash borer, hastens this decline and the usual pattern is one trunk at a time dies off until the entire tree is killed. While it is not possible to determine if bronze birch borer is responsible for the dieback from this picture, it is most likely a factor. The presence of the insect can be determine by D-shaped holes, about 1/8-inch, in the upper branches and trunk. Usually these holes, which are the holes the adult borer creates as they leave the tree, are not seen along the lower trunk until the tree is dead. If the holes are found on these upper branches, then treatments for the borer are in order. The adults usually begin flying when buckeyes are in bloom, probably a couple weeks from now, and the treatments can be either a trunk spray or injection with an insecticide or with a soil drench. The soil drench method with an insecticide labelled for bronze birch borer and containing imidacloprid as the active ingredient, is probably the most common treatment used by homeowners.

I received a picture of a "strange growth" on a cedar tree. This is the fungus cedar apple rust. The galls are just beginning to have the gelatinized telia form and within the next week, these projections turn a reddish brown and become almost horn-like. These horns will release spores that spores that infect the apple leaves. While cedar-apple rust is a problem on apple and crabapple foliage, where the infected leaves become discolored and drop prematurely, it usually produces few symptoms on the junipers other than the woody gall. Occasionally dieback will occur on heavily infested junipers, particularly Rocky Mountain junipers.



A picture of a vine that was growing in some trees was also send in with the question "How do I get rid of this?" The vine is the wild cucumber (*Echinocystis lobata*). The seed pod (pictured) is oblong and covered with sharp spines. The plant is a vine that may grow 15 feet or more during a long, warm summer. The plant is an annual so merely pulling the old vines out of the trees is not going to provide any control. The seed pods have opened and the seed fallen to the ground and will soon be germinating. The best control is to hoe out the seedlings as they begin to grow. While this can be a tedious task around and under evergreens, it can provide effective control over time. Herbicides containing glyphosate or dicamba can be used as post-emergent treatments but drift onto foliage and, in the case of dicamba, root absorption, is a very high risk to woody plants.



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