

Pest Update (May 1, 2019)

Vol. 17, no. 11

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

Agronomy, Horticulture and Plant Science Department

rm 230, Berg 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 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
Treatments to do now.....	2
Timely topic	
Planting bare-root trees.....	3
E-samples	
Oak gall and woodpeckers.....	5
Sapsuckers and pines.....	6
Samples received/site visits	
Spink County (not emerald ash borer, not even an ash).....	6



Plant Development

Forsythia are in full bloom in Brookings while serviceberries and crabapples are just beginning to leaf out. Many years by this time crabapples have been full bloom in Brookings! Compared to past years, this growing season seems to be off to a very slow start due to the cold weather. While a few days have been warm, it looks like a return to wet and cool weather next week.

Treatments to do soon

Diplodia tip blight treatments should be started soon in much of the state. This is the most common disease of pines, particularly Austrian and ponderosa pine.



Symptoms begin in early summer with the new needles becoming brown and stunted, less than half the length of normal needles. Twigs may be infected and become stunted and deformed. The treatment is a fungicide containing thiophanate-methyl, propiconazole, or chlorothalonil (labeled for management of this disease) *just before the bud sheaths have opened*, timing is critical, and the treatment needs to be repeated in 10 to 14 days, as this is the period when the

shoot is very susceptible to infection. The bud sheaths will soon begin to open throughout the state so try to get the first application on in the next week or two.

The treatments will not ‘cure’ the disease, but the tree will present fewer symptoms for several years or more before the treatments need to be repeated. It usually takes two years of treatments at the beginning to get the disease under control.



The new shoots will be expanding soon on spruce so it close to time to apply a fungicide to protect against **Rhizosphaera** or **Stigmia needlecast**. These are the most common foliage diseases of blue spruce. These diseases cause the older foliage to turn yellow by midsummer and then purplish-brown. Usually small black fruit bodies can be found in the spring lining the stomata along

the needles. The disease results in premature needle drop and a thin and discolored canopy. The disease can be managed by an application of chlorothalonil now and a second application in about two weeks. If the needlecast is due to Stigmia the applications may have to continue every 10-days till August. Also, for this needlecast pathogen it is important to treat the entire canopy, not just the lower branches.

Spruce spider mites become active as silver maple leaves are expanding – now across much of the state. Spruce spider mites are cool season mites meaning they are active in the spring and fall, not during the summer heat. The mites will go dormant once the temperatures consistently reach into the mid 80's. While the

mites will begin feeding soon, the damage to the needles, bronzing and browning, does not typically show up until summer just as the mite populations begin to decline. Treatment options are very limited for homeowners, horticultural oils and



insecticidal soaps being the two most common. These are really suppression treatments, not eradication, and the webbing often prevents these pesticides, particularly the soap, from penetrating. They should be applied now and then another treatment next week, about 7 to 10 days after the first treatment to kill the mites as they hatch from eggs. Be aware of the cautions to the use of these products, particularly on blue spruce, as

applications of oils or soaps can result in the loss of blue or silvery color to the foliage. You can make a *blue* spruce, a *green* spruce, very quickly, so read and follow label directions very carefully.

The other common pesticide that homeowners can buy has the active ingredient acephate, but this is an insecticide that is more of a mild suppression on mites than real control. Acephate should also be applied in two treatments spaced 10 days apart. Homeowners with large spruce trees, or trees that are heavily infested, should consider hiring a professional service. They have the equipment and chemical products that can truly provide some control of mites.

Timely Topics

Planting bare-root trees

Bare-root is an economical and efficient way to plant trees (and shrubs). The primary drawback is the narrow window in which bare-root trees can be planted. While bare-root trees can be planted in the autumn and spring in most of the United States, in South Dakota only spring planting is advised. Our harsh and dry winters can often injure tender fall planted bare-root trees. Bare-root plantings are limited to a spring time period between when soil temperatures are warm enough for root growth (at least 45°F) and the tree's buds begin to expand. We are quickly approaching the 45°F threshold at 8 inches soil depth for much of state.

There are two key consideration when planting bare-root trees; 1) keeping the roots moist until planting and 2) sweating.

Keeping the roots moist

Bare-root trees must never have their roots exposed to the sun and drying winds. This exposure can cause desiccation injury to the roots which will result in poor survival and growth. Bare-root trees should be kept cool (about 40°F) and the roots

covered with a damp packing material until planting. Ideally the tree goes directly from the packing material into a planting hole which is quickly filled with water and covered but this is not always practical. However, the shorter the time between being removed from the packing material and into the planting hole, the better. Even a five-minute exposure on a hot, windy day can kill tree roots.

If possible, hydrate the tree roots by placing them in a tank of water for one to two hours before planting. Only have the roots covered with water, not the tops. Also do not allow the trees to remain in water for more than two hours, longer time periods may result in root mortality.

Sweating

Some bare-root tree species require sweating before planted. The list of tree species that require sweating is short. Bare-root hackberry, hawthorn, and oaks all require this treatment. If removed from a cooler and directly planted into the field or landscape, these trees often fail to break bud and remain dormant far into the summer either leafing out very late or not at all. Only bare-root trees require sweating, not container-grown or balled-and-burlapped trees.



Sweating bare-root trees starts with laying the stock down in a shaded area, preferably on the north side of a building or better yet on a concrete floor in a pole building. Cover the roots (and only the roots) with wet packing material such as straw or fine woodchips and then seal the entire plant, tops and roots, with a sheet of clear plastic that is held tight to the ground.

The daytime air temperature should be between 50° and 60°F. Once the sweating process has started, the buds on the trees in this “mini sauna” of warm temperatures and high humidity will begin to swell, often within a week. Once the buds begin to swell, remove the trees from the plastic and plant them.



The trees must be planted immediately following sweating but if planted in dry, cool conditions, the expanding buds will continue to open very slowly, if at all. The sweated trees should be planted in humid, warm conditions and these conditions may not occur in South Dakota until mid-spring. Keep bare-root oak and other species that require sweating in the cooler until that time and then sweat them for a week.

The conditions outside should be acceptable for planting these bare-root trees in the field. This can be as late as mid-May or as early as mid-April depending on the weather. This year it looks like early May will be a good time to plant and we have already started sweating some oaks on campus.

E-samples

Woodpeckers and oaks

I received this picture with the question; “Why are the woodpeckers pecking away on this tree?” If it was an ash, we would know that they are searching for the emerald ash borer larvae. Woodpeckers find the larvae by sound and once they find one, they peck through the bark at the exact spot. It’s amazing how you can pull the bark away around the peck on an infested ash and find a tunnel stops at that precise spot – got you!



But this was not an ash in Sioux Falls but an oak. The woodpeckers are drilling into the bark of this tree in search of the larvae of the **gall wasp** *Callirhytis flavipes*. During the winter the small, white larvae are found within the inner bark of the branches and twigs of mature oak trees and the trunks of young trees. The gall wasps emerge in the spring as adults and move to the newly expanded leaves where they insert eggs into the midrib, the

central vein of the leaf. Once the eggs hatch, the larvae form a gall on the vein and live out their short lives within this structure. Adults emerge later in the season and lay eggs on the twigs and branches.

The galls formed by this gall wasp are not particularly harmful to the tree, no more than the many other galls that form on oaks. What makes this gall wasp a problem is the woodpeckers that feed on the larvae during the winter. The woodpeckers can shred most of the bark from young trees, enough that the trees are be killed by this injury. The trees that are not killed by the woodpecker activity, often have the tops killed back enough that the trees become misshaped and of little value as a windbreak tree. Fortunately, there are also many trees that recover from this injury so do not cut the tree down too soon.



Management of the problem is difficult. Some people have tried protecting their small oaks with Tanglefoot Bird Repellent^R on the trunk. This is a sticky material that comes in a caulking tube that can be smeared on the trunk to discourage woodpeckers. This is a very time-consuming task and must be repeated every year. Some others have hung flashy tape and ribbon in the trees to discourage the woodpecker activity in late winter and spring.

Insecticides to kill the gall wasps have not been completely evaluated yet. The timing for insecticide sprays is critical and the gall wasps are flying for an extended time period in the spring and late summer. Injecting insecticides to kill the larvae as they feed have not proved successful yet for *Callirhytis*. Not all trees are infested by the gall wasps. It is very common to find several bur oaks growing near one another and only one tree infested by the wasps. The bark on the infested trees appears to be less furrowed than the uninjured tree but this is difficult to evaluate as the woodpeckers have often removed so much bark it is hard to tell the origin texture.

Sapsuckers and pines



I also received a picture of parallel rows of holes in the trunk of a tree. These are the work of a **sapsucker**, not an insect, but a bird. These woodpeckers are not after insects, but the sap that runs from the wounds, hence the common name of sapsuckers. The damage is easy to spot from the bands of round drill holes that encircle the trunk. The holes are usually very shallow and may weep sap. The damage to the tree is minimal and most people once they find it's not a borer attacking their tree do not worry about them further. However, if rows of holes in a tree trunk are an aesthetic concern, the birds can be discouraged from returning (they do favor some trees more than others) by smearing a sticky material such as Tanglefoot^R in a band above and below the holes. Since sapsuckers are protected, shooting them is not an option and may create holes in the tree as well for those that are bad shots.

Samples received/Site visits

Spink County

Does my ash have emerald ash borer?



They did not wait for me to drive up but had already cut the two trees and pushed them in a ditch. The trees were in tough shape, some dieback, but most of the problem was just old age as they were about 30 years old. Old? At 30? Yes, not if you were an ash (*Fraxinus*) but yes if you were a mountainash (*Sorbus*). These trees were the latter and the owner assumed since 1) they were ash and 2) they were dying, it must be emerald ash borer.

Fortunately, emerald ash borer only infests ash trees, though they have occasionally been found in fringe trees (*Chionanthus*), an uncommon (but attractive) shrubs in our state and apparently, they will infest an olive tree if you force them too. But not mountainash. Mountainash is no closer related to ash than seahorses are to horses all they share is a little bit of the alphabet.

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.