

# Pest Update (October 2, 2019)

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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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## Plant development for the growing season

The weather remained wet and warmer than normal for the past week but that is changing quickly. This continual wet weather is not a plus for trees or most other plants. It is still “fooling” plants into thinking it is spring.



We are seeing lot of common lilacs in full bloom, not just a few flowers, but entire plants in bloom! This picture was sent to me by Brenda, one of our Master Gardeners, in Yankton.

The trigger for spring flowering is warmer temperatures after a cold winter and the daylength. We are at about the same day length as spring, perhaps two hours shorter, and we have had the temperatures go up and down. The combination of the shorter daylength and the fluctuation temperatures, along with the autumn moisture, has “fooled” the lilacs into blooming now rather than spring.

While this is a nice fall display, it comes at a cost. Lilacs set their flower buds in the summer for the following spring. Every lilac flower you see in bloom means one less flower next spring. However, that is the only problem with fall flowering, other than that the plant should be just fine.

## Timely Topics



**Fall color is occurring on arborvitae along with the other evergreens.** Pines and spruce have their older needles turn yellow (or sometimes brown) before falling. Usually this normal fall needle drop is easy to tell as it is the interior needles that are coloring and dropping. Arborvitae normally have the yellowing occurring as random spots - almost ribbons - of yellowing foliage throughout the entire plant. I have received several samples of normal foliage color change on arborvitae from concerned homeowners wondering if their tree is diseased. This is normal.

**Snow is upon us!** A reminder that knocking snow from branches may cause more damage than letting it melt off. Heavy snow on branches with leaves can result in branch breakage but hitting the branches might also result in snapping. Instead, use a broom and gently sweep the snow off or just let it melt.



## Lingering ash – hope or denial?

There has been increasing discussion about the lingering ash tree, native ash trees that survived the emerald ash borer epidemic. The epidemic got started in urban

areas and while there were lots of ash trees in southern Michigan and northern Ohio communities, they did not represent much genetic diversity. Almost all the deciduous trees planted as ornamental or shade trees are cultivars, clones of trees selected for their ornamental qualities. Hence, while a community may have thousands of ash trees, they might only represent a very limited gene pool, perhaps as small as 20 trees!

This means emerald ash borer ran (and continues to run) through towns leaving 100% ash mortality behind them – what we choose for ornamental qualities did not equate to resistance to this insect.

However, once the insect moved into native forest stands the trend slightly changed. Now every ash tree was unique, and some were not killed by the insect. I say slight as the mortality dropped from 100% in town to 99% in forests, but at least 1% of the tree withstood the epidemic.



I have had several opportunities to inspect these lingering ashes in southeastern Michigan. These survivors represent two mechanisms. One group are trees that tolerate an infestation so can survive if there is only a low population of borer (such as after the wave of mortality has passed). Many of these are smaller trees that seeded in after the wave so have never been exposure to high populations of borers.

The second group are trees that have some resistance to the emerald ash borer. These are trees that were either not attacked despite all the ash trees in the forest being killed around them or the attacks were very light. Apparently, these trees are not attractive material for the borer. Many of these ash are large, mature trees. I have looked at several trees in ravines that are still doing just fine though they are surrounded by fallen ash that died from attacks.

So, there is a little good news, maybe 1% of seed-grown ash might survive. The bad news is more of the 1% are white ash than green ash, though representatives of each species have been found to have some form of resistance.

The Big Sioux Nursery, a major supplier of Northern Plains windbreak trees, has carefully documented seed sources of green ash and they have a good collection. And these trees now dot windbreaks across the state and region. Rather than wait and see what might survive, we are looking at possible means of determining

resistance. Nothing immediate, but testing will hopefully start next year with some simple trials.

## E-samples



**Woolly apple aphids are out.** This insect receives its name from the white waxy covering on the adult aphid. The aphid is very common but is often overlooked until the white clusters of insects appear, usually mid to late summer. The insect is often found around the base of apple and crabapple trees usually clustered around the succulent growth that lines wounds, such as those created by hitting the tree with the lawn mower or grass whip. However, it also can be found on the shoots of other woody plants such as cotoneaster pictured here.

Winged females fly to nearby elms (though this is not the only host) in the fall and lay eggs. These eggs will hatch in the spring and the young nymphs feed on elm leaves resulting in distortions to the leaves before becoming winged adults and migrating to the apples. The insects rarely are serious problems for their hosts, elm or apple, but can be controlled with a spring application of an insecticide containing imidacloprid applied as a soil drench. This will kill the insects as they feed on the twigs or trunks.

## Samples received/site visits

Clark County

**What is this and are the berries safe to eat?**

This is common buckthorn (*Rhamnus cathartica*). It's a tall shrub (or small tree) that can be found throughout South Dakota. This European plant was introduced to our state more than a century ago as a hedge plant by John Miller of Huron SD. Buckthorn is easy to spot right now as it is still covered with green leaves and is full of fruit. Do not eat the fruit, even eating a dozen or so ripe berries can result in rather sudden, and violent, diarrhea.

Davison County

**What is causing these curled leaves on the ash?**

The clusters of curled leaves at the shoot tips are the result of feeding by the ash leaf curl aphid (*Prociphilus fraxinifoli*). This insect feeds on the leaves at the tips of ash trees during the summer. While the insect is gone by autumn – it migrates to the roots - the curled leaves remain. These aphids can be managed with a spring soil drench of an insecticide containing Imidacloprid or spraying the tree with an

insecticide containing Acephate when the problem is first noticed in early summer. Despite the ugly appearance to the branches, the tree will not die from the infestation.

Davison County

### Is this pine wilt in these trees?



Yes, the increment cores collected from the tree for one of the two landowners had some of the highest densities of pinewood nematodes (*Bursaphelenchus xylophilus*) we have seen! The increment corers from the four trees for the other landowner also had the nematode present in the samples.

Pinewood nematode is responsible for a disease called pine wilt. This disease is characterized by the rapid decline and death of an infected pine. A pine infected by the nematode will have the needles turn from the normal green in summer to brown or tan by late summer or autumn. The tree will be dead by the following spring.

The nematode is carried from an infected to a healthy tree by sawyer beetle. Once introduced into the tree, the nematode, along with a blue-stain fungus, disrupts water transport from the roots to the needles causing the tree to quickly dry out. The wood of a tree infected by the disease has about half the weight of a healthy pine.



The pines most susceptible to dying from this disease are the exotic pines, Austrian (*Pinus nigra*), Mugo (*P. mugo*) and Scotch pine (*P. sylvestris*). Scotch pine being the most vulnerable to the disease and we are losing most of these trees south or along Hwy 212. The disease requires warm summer temperatures as the warmed temperatures favor the development of the nematode and increases the moisture stress on the pine. The nematode is present in our native pines, such as ponderosa pines (*P. ponderosa*), but does not develop into the pine wilt disease unless the tree is already succumbing to death from fire or another stressor.

Miner County

### Ash flower gall mite

The day will come when ash samples are few and far between. However, since it is still one of the most common trees in the state, this species is one for which I

receive many samples. The ash flower gall is a distortion of the male flowers on ash caused by the feeding of a small mite, the ash flower gall mite (*Eriophyes fraxiniflora*).



Since we only planted male cultivars of ash, no one likes the seeds, we have thousands of hosts across the state (at least for the next twenty years). The galls do not harm the tree but can serve as a nucleus for ice to form and the weight of ice or snow laden gall clusters can result in broken branches.

Minnehaha County

**What is wrong with this Virginia-creeper? Is it herbicide damage? Dicamba was used nearby.**



This is a hedge of Virginia-creeper (*Parthenocissus quinquefolia*) on a chain link fence. The leaves are falling from the bottom of the vines and all the leaves have spots. These are common symptoms to many leaf fungal diseases and have been a problem due to our continual wet summer. However, a herbicide containing dicamba may have some impact on them, though not much.

Virginia-creeper is a woody vine that is near impossible to kill with herbicide. The best is cutting the vines and painting the small stumps with Glyphosate. Dicamba will not work so while the application may be contributing to the leaf shedding, it will not kill the vine.

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