

Pest Update (December 13-27, 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

Emerald ash borer confirmed in Winnipeg

Generally new confirmations of emerald ash borer (*Agrilus planipennis*) do not occur this late into the season but there has been a recent discovery of this invasive borer in Winnipeg, Manitoba. As with many of the earlier new discoveries in the US and Canada, it likely that the insect has been there for between two to four years. Delimitation surveys and determining the possible time and location of the first infestation is expected to begin next year.



The tree in which the larvae were discovered was presenting the classic symptoms for an infested ash tree – woodpecker ‘blonding’ where the outer bark has been clipped from the tree as the birds peck to find the larvae which live just beneath the bark. Many of our native borer burrow deeper into the wood so are not accessible to woodpeckers and the density of attacks not as heavy so are not as attractive. The density of emerald ash borers found in an ash tree (9-10 emerging adults per square foot of bark) is much higher than native *Agrilus*, close cousins of this insect, that are found in birch (bronze birch borer) and oak (twolined chestnut borer).

This new confirmation means that the eastern Dakota are being boxed in with infestations of emerald ash borers found in Nebraska, Iowa, Minnesota, and now, Manitoba. I cannot imagine our luck will hold out much longer.

The continuing drought in west-central South Dakota



While we await the enviable arrival of emerald ash borer, much of west-central South Dakota is dealing with the present drought. As an example, one community received about 12 inches of precipitation during this past growing season with about a third of that falling in August. They typically receive about 17 inches of rain during the growing season with about half in April and May – a critical time period for tree establishment and growth.

Not only was last summer dry, it was hot. We tend to forget that not only do our cold winters influence what will grow here but also our summer heat. High summer temperatures increase water stress as the trees are transpiring at a much faster rate.

Let’s compare my unnamed west-central community, community ‘X’, with the growing conditions in the native range of commonly planted windbreak trees.

Table of commonly planted windbreak trees growing requirement or limits.

Species	Growing season precipitation (inches)	Average July temperature (°F)
Community 'X'	12	81
Conifers		
Black Hills spruce	15-20	75
Colorado (blue) spruce	18-24	72
Eastern redcedar	15-30	72
Ponderosa pine	11-17	75
Rocky Mountain juniper	15-18	75
Broadleaf		
Bur oak	15-30	75
Green ash	15-30	80
Hackberry	14-30	80
Plains cottonwood	10-30	80

When I was inspecting recent plantings (those planted during the past decade), the broadleaf trees were outperforming the conifers with the exception of ponderosa pine and Rocky Mountain junipers. They are better adapted to tolerating our often dry and hot summers in this region. This does not mean you cannot grow spruce or eastern redcedar in western communities, just they are more susceptible to decline and death during a dry year as even our good years are stressful to them.

The Latest Spell of Cold Weather and Trees



Much of the state will finally be experiencing sub-zero temperatures during next week, a trend expected to continue for a few weeks. While these cold temperatures are tough on people, livestock and machinery, they will have little impact on trees. Many tree species can tolerate temperatures as low as -30 to even -40°F during January a time of maximum hardiness. The “winter injury” we experience in South Dakota is rarely due to mid-winter cold

temperatures, but the extreme temperature fluctuations that occur as trees are entering dormancy in September through October or exiting dormancy in late March through April. These are the times were temperatures in the teens can result in injury, particularly if they occur suddenly and follow a spell of unseasonable warm weather. So how much winter injury will we see this winter? That is still a guess as no one knows what is in store for us this coming March and April, but as far as this cold spell is concerned, the impact will be insignificant.

E-samples



I received a picture of these galls from a homeowner in the Yankton area. He said he planted male ash trees about a decade ago and now they are producing these 'fruits'. Of course, these are not fruits, but galls, specifically **ash flower galls**, which are the result of feeding by the ash flower gall mite (*Eriophyes fraxiniflora*). This tiny eriophyid mite feeds on the male flowers causing a proliferation of flower buds to form in a distorted cluster. While they look unsightly, they do not harm the tree's health. However, when a tree is covered with these galls, they tend to collect ice and snow and the additional loading can result in branch breakage. Most recommendations are just to live with the problem or prune the galls from the tree. The first suggestion is the most commonly followed one as pruning is usually impractical due to the number of galls on a tree and it will have no impact on the number of galls the following year. The only pesticide treatment I see listed – and I have no personal experience as to its success – is an application of carbaryl (Sevin) as the male flowers are beginning to open. At best, this would be a difficult treatment to time.



I received a couple of pictures of a maple that grow nicely for 4 years and then suddenly died. There are many possible causes for a maple to quickly decline and die. Two of the more common are verticillium wilt and stem girdling roots. Verticillium wilt is a soil-borne fungal disease that obstructs water flow to the foliage so the leaves wilt and die. Sometimes the disease only affects part of the canopy, other times the entire canopy. The only recommendation for this disease is NOT to plant maples, catalpa, or elm back in

the same area as they are all susceptible. The other major problem is stem-girdling roots. If the trunk is going straight into the ground and digging around the base reveals a root pushed up against the buried trunk - stem girdling roots are the problem. This occurs at planting when the tree is placed too deep into the ground and roots were already wrapped along the edge of the container.



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