



# Tree Pest Alert



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## Samples

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of plants or insects from other states. If you live outside of South Dakota and have a question, please send a digital picture of the pest or problem.

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 as 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.

Reviewed by Master Gardeners: Carrie Moore and Dawnee Lebeau

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## Plant development for the growing season

The growing degree days (GDD-base 50) are still at or near zero for much of the state. A few communities along the edge of the Black Hills are now at about 20 to 30 GDD, about 50 GDD behind last year. The winter does not seem to want to end.



Rapid City is seeing a few signs of spring due to the slight rise in temperature. Silver maple buds open at about 40 to 50 GDD and a few are opening there now. The rest of us will just have to wait a little longer for some signs that winter is ending.

## Treatments to Begin Now

### *Now is time to finish fruit tree pruning!*

While it is not getting warm very quickly, at least we are probably beyond the extreme cold temperatures of winter. Sioux Falls experienced low single digit temperatures last week. The forecast looks like snow and rain but not cold.

This means we should complete some pruning chores before the tree buds begin to open. We generally delay pruning fruit trees until late winter or early spring. There are a few reasons for this being the best time of year.

First, it is easy to see the branch structure of the tree with all the leaves off. Second, we are behind the extreme cold of winter (we hope!) so no need to wait to prune off shoots killed by cold temperatures. Finally, the pruning wounds will quickly seal internally with the resumption of growth.

Right now, concentrate on pruning the scaffold branches, the limbs attached to the trunk. There should be about a foot between adjacent branches. Spacing branches this far apart will improve light penetration and air flow – two key ingredients in quality fruit production.

## Timely Topics

### ***Herbicide carryover and windbreak plantings***

The calls are coming in from Conservation Districts double-checking whether fields that were treated with herbicides last year can be planted to seedling trees this spring. I appreciate the checks because this is far better than having to explain to someone that the reason the seedling trees died was from a herbicide used last year when the field was in corn, beans or wheat. The tougher discussions are when I have to explain the reason the newly planted trees are dying is a herbicide applied *two* years ago.

The persistence of some herbicides may have benefits for certain field crop situations but they are a challenge for windbreak planting. An addition challenge is the similarities in herbicide names but with different active ingredients and carryover characteristics.

An example is WideMatch® and WideARmatch®. Both contain clopyralid and fluroxypyr as active ingredients, but WideARmatch also contains halauxifen-methyl. WideMatch has a rotation interval of 12 to 18 months between application and planting while WideARmatch is closer to 18 months.

Another recent question was on Harness®, which has acetochlor as the active ingredient. This product has minimal carryover and it is usually safe to plant trees the year following an application. The same is not true of Harness Xtra® as this product also includes atrazine which extends the carryover risk for two years after use.

### ***The Year of the Rabbit continues!***

The last issue of the *Pest Alert* listed the most commonly browsed woody plants. The Year of the Rabbit is still living up to its name. The calls continue to come in about shrubs and small trees that have all the bark stripped around their canes and lower trunks. Bunnies are everywhere.



The most commonly reported damaged plants are:

- Apples and crabapples (*Malus* spp.)
- Arrowwood viburnum (*Viburnum dentatum*)
- Burning bush (*Euonymus alata*)
- Hedge cotoneaster (*Cotoneaster lucida*)
- Honeylocust (*Gleditsia triacanthos*)
- Kentucky coffeetree (*Gymnocladus dioica*)
- Purple-osier willow (*Salix purpurea*)
- Shaghorn sumac (*Rhus typhina*)
- Spireas (*Spiraea* spp.)

Two more shrubs to add to the list are dogwood (*Cornus* spp) and serviceberry (*Amelanchier* spp.). I have received reports and personally seen these shrubs with all the bark removed from the lower six inches or so of the stems and canes.

The Year of the Rabbit comes every 12 years in the Chinese calendar – let's hope our bunnies observe this schedule.

### ***Emerald ash borer update***

There are some pluses to a long, cold winter. It has been hard on the emerald ash borer. The length of the winter is not a problem for the larvae deep inside the tree – it's the continual extremely cold weather.

Many larvae are able to tolerate temperatures to -20°F in midwinter with some able to survive -30°F or lower. A recent Canadian study found that emerald ash borer is becoming more adaptive to the cold, now some are capable of surviving -50°F!

But that is mid-winter. Now the emerald ash borers are slowly stirring from the winter slumber. A few larvae are beginning to shrink and straight to begin a short prepupal stage before becoming pupae.

This slow resumption of life also means they are losing their tolerance to the cold. Temperatures near zero (F) can now result in larval mortality. While no one wants to see extreme cold weather in late March or early April, at least it can help kill emerald ash borers.

### ***Maple syrup season starts with a trickle***

The sap is beginning to flow, but only a trickle in the Brookings area. The temperatures have stayed too cold for a steady flow. The ideal conditions are cold nights (25°F), warm days (40°F or above) with a little snow on the ground.

We have met two of these conditions; snow on the ground and cold night temperatures. What we are missing are the warm day temperatures. We need some warm days to have liquid water moving through the vascular tissue to saturate the wood.

As the temperatures drop into the 20s°F at night the water freezes in the wood which traps and compresses carbon dioxide gasses. The next day as the temperature warms into the 40s°F, the ice thaws, the gasses expand

and this forces water up the trunk and out any wound or spile.



The sugaring season is just starting in neighboring Minnesota and in southern South Dakota. The fear is the late start may end just as quickly. Some years the consistently cold weather quickly turn to consistently warm temperatures. We need cold alternating with warm to work the sap “pump”.

## E-samples

### *Beetles flying in houses*

I received a picture of a banded ash borer that a homeowner found in their house. They found several of them clinging to the window on a sunny day. The question was what were these beetles and what would they hurt anything.

These are banded ash borer adults. They are one of the first beetles to emerge in the spring. I can often find swarms of them in late April hovering around dying ash trees. They are easily identified by their cylindrical gray body with several yellow bands on the wing covers. The ones on the upper cover almost form two loops.



The beetles cannot harm anything in the house. They will not lay eggs on wood floors or furniture. The adult beetles will just be a nuisance as they buzz through the house. Control is either open the window to let them out to experience our winter cold, vacuum them up, or just let them entertain the cat.

### *Feedlots and spruce – not a good combination*

I received some pictures of declining or dead spruce. The stunted needles on the declining spruce were presenting with pale yellow banding. These symptoms are commonly associated with high salts (among other stressors). I suspect salt in this instance as the trees are adjacent to a feedlot.



This is just a guess based on the symptoms and location of the planting. It will take soil testing to be sure. The salt content of the soils adjacent to feedlots can be as high as 8.5 dS/m (measured as 1:1 electrical conductivity, EC), high enough to restrict the growth of many woody plants. The salts include sodium, calcium, potassium, magnesium and manganese among others. These are often at concentrations five to ten times higher than are typically found in soils.



Spruce are not salt tolerant. They are better described as salt sensitive and perform poorly on high salt environments. The ideal soils for spruce have an EC less than 2 dS/m. Ponderosa pines or junipers (either eastern redcedar or Rocky Mountain juniper) are a better choice for an evergreen windbreak surrounding feedlots.

Note: ponderosa pine and juniper needles contain isocurpressic acid which can cause late-term abortion in cattle. Plant these evergreens where the livestock cannot reach them.

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## Samples received/Site visits

### **Lincoln County, Drought injury on mugo pine**

This was a site visit to a small shopping center in Lincoln County. The property manager was concerned about the poor winter color and wondered if this was winter burn. The needles were discolored, a common outcome of winter-burn, but the twigs were brown, hard and dry. Another interesting clue – the candles from last year were also hard and dry. They expanded but never opened.



The problem was these small evergreen were planted in the “death strip”, the narrow gap between the building and the sidewalks. No one watered the plants last summer or the year before when they were planted. The cause of death was neglect, not winter.

### **Union County, squirrels are going nuts on buckeyes!**

I was asked to look at a buckeye tree that had the bark stripped from branches. As I was walking up to the tree the contrast between the dark bark and where the bark had been gnawed away revealing the white sapwood was noticeable.



The most common trees I see browsed by squirrels are maples (*Acer* spp), elm (*Ulmus* spp), hackberry (*Celtis occidentalis*) and lindens (*Tilia* spp). I usually do not see squirrels chewing on buckeyes but they are closely related to maples so maybe the taste is similar.

Regardless, the same guidelines apply. If the branch has been girdled complete around then it will either die or become severely stunted. A little early spring pruning is in order.