

# Pest Update (April 10, 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 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

The red and silver maples in the southern part of the state are already having their red buds staring to expand. This is a welcome sight after the long winter, but I



expect to see a lot of snow on them later this week. The expected 15 to 30 inches will not be appreciated. Let's hope we do not get the ice like we did in the April storm that hit several years ago. Winter apparently wants one more swipe at us before warm weather begins.

And this storm may be a heavy snow event which can lead to tree damage – see Timely Topics on what to do if this occurs.

## Treatments to do now



**Tent caterpillars** can be treated right now by pruning. Tent caterpillars (there are three different species, eastern, forest and western), are common defoliators of mountainash, cherry, crabapples, apple, and plums. If you look at one of these trees right now you might find these globs of what appears to be molten glass around the twigs. These are the egg mass to the tent caterpillar (see picture). If these egg masses are pruned off and

destroyed (don't just throw them on the ground, unless the mice eat them the eggs will still hatch) you'll save the tree from defoliation. The new egg masses do look like molten glass, very smooth and shiny. If the egg masses are a gray to white and have lots of holes in them, they are last year's egg masses and not a threat to your tree.

## Timely Topics



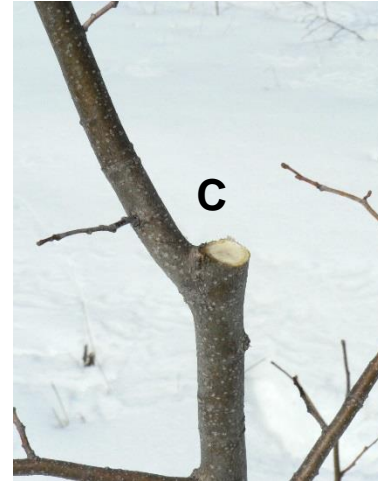
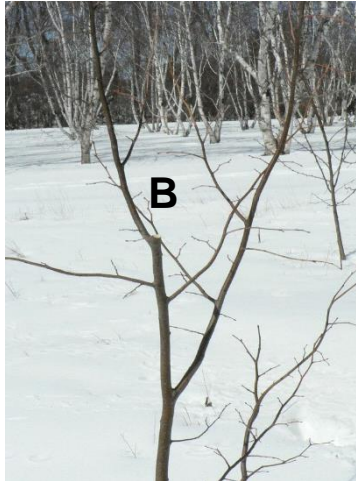
The impending snow/ice storm may leave a trail of broken trees in its wake along with downed power lines. What can a tree owner do if their trees are damaged by the snow and ice? Here are a few tips.

Many young trees will bend under the weight of ice and snow. A common reaction will be to go out and try to knock off the ice to reduce the weight. This can result in branch breakage and further damage to the tree particularly evergreens such as pines and spruce. Generally, it is best to allow the ice to melt and allow the tree to slowly resume its natural shape.

Do not spray any de-icing salts on the trees as these chemicals are toxic to plants. Also avoid the temptation to try to melt the ice with a blow torch or other flame source. This action may result in burned buds and damage other tissue as well.

## What to do if your small trees damaged by the ice storm

Once the ice and snow has melted, it will be time to assess the damage to your trees. Young trees, those less than 15 feet tall, may be saved with corrective pruning if only a few limbs or the tip of the terminals were broken. If the tree is broken near the base or more than 1/3 of the limbs are broken it may be best to remove the tree and start over.

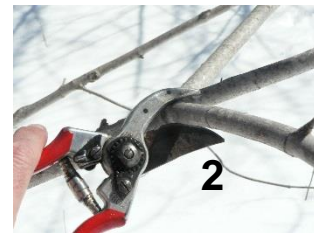


If the terminal is broken (A), trim back to the highest upright limb (a limb is a branch attached to the trunk) that is at least half the diameter of the adjacent trunk (B) and it may assume the role of a new leader. This technique works well for deciduous and evergreen trees if the leader is less than about 3/4-inch diameter. You may want to also bend the branch upward and use a biodegradable wrap (cotton or linen) to attach the bent branch to a pole. This technique will generally result in the branch assuming the leader position quicker and is strongly advised when attempting to replace the leader of an evergreen such as a pine or spruce.

The stem should be cut cleanly at the top of the point where the limb meets the trunk, but the angle is not important.



Broken branches on trees (1) should be cleanly pruned back to the larger limb or trunk to which they are attached. This pruning can be accomplished with a hand-pruner (for branches less than 1/2 inch diameter) or a small saw for larger branches. When using a hand-pruner, prune with the blade side closest to the larger limb or trunk (2). Do not leave a stub nor cut into the limb as you close the blades. Making the proper cut is the best means of protecting the tree from decay, tree paints or wound dressings do not protect against decay and can even increase the possibility of decay by keeping the interior too moist.





If the young tree is broken near the ground, it should be removed. Cutting it back to the ground and allow it to sprout might produce a new tree, but not necessary the same tree you had. Most of our deciduous, ornamental trees are budded trees, the part above the ground is the desired plant but the roots are just seedling grown and may not even be the same species. This is also true for our fruit trees so any fruit tree broken off near the base should be removed rather than allowed to sprout back.

Evergreens will not sprout back from the base so any firs, pines or spruces broken near the base should be removed.

#### What to do with mature trees damaged by the ice storm



Homeowners should also use extreme care when attempting to clean up broken trees and branches. Many trees have broken branches that are pinned to the ground under the weight of the remainder of the tree. Cutting a pinned branch may result in releasing the pressure creating what is known as a “spring pole,” a branch that can quickly return to its

original position and strike the person pruning, or their saw, in the process. Trees have also been known to roll when a broken branch is freed crushing the worker beneath 5 to 10-tons of wood. Homeowners should consider hiring professional arborists to do the major clean-up effort as these individuals have the training and equipment to work safely in this hazardous environment.



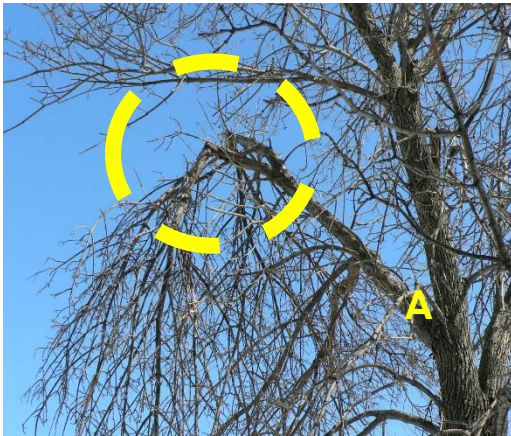
If the tree is deeply split, the best option is to remove the tree. Attempting to restore the tree by tying together the split will generally just delay the death a few years as the tree becomes strangled by the ties. Valuable trees that have been split, though not to the degree as pictured, can be saved by being pulled back together and then held in place by tree support systems. These



systems are best left to professional arborists who have the training to install the proper hardware that will

support the tree. Tree support systems are expensive and a homeowner should expect to pay anywhere from several hundred to several thousands of dollars to have them installed in their tree.

If the mature tree has the top 1/3 of the canopy broken out or more than 1/2 of the limbs broken, it may be better to remove the tree rather than save it. This also applies to trees with large wounds from broken limbs peeling off the trunk. These damaged trees may survive the loss, but their ornamental and shade value will be much reduced. The tree will also be more susceptible to decay and may have a reduced life span.



If the tree is worth saving, the broken limbs should be pruned back to the trunk (A) rather than leave a stub. Broken limbs and branches should be pruned back to the limb or trunk they are attached. Do not top ice-damaged trees! Trees that have the terminal or terminal broken out should be pruned back to a limb at least one-third the diameter of the terminal. Stubbing the terminal or cutting it back to a small limb or branch will result in extensive decay or the production of watersprouts.



Instead use thinning cuts which are cut just outside of the collar, a slightly raised area adjacent to the base of the branch or limb. A cut made at this point will help reduce the formation of decay and help maintain a more natural appearance to the tree. The top of the cut should be at the branch bark ridge, the upswell of tissue at the juncture where the limb meets the trunk. The finished pruning cut should be sloped slightly outward towards the base. There is no need to use pruning paint or other materials to seal the wound. It will be common

to have pruning wounds on maples and birch bleed, drip a slightly sweet clear sap from the wound, when pruned at this time of year. The “bleeding” is not harmful to the tree and will stop when the tree buds begin to expand with the warmer weather.





### What to look for when hiring a professional tree company

Tree work is among the highest risk professions in the United States. The combination of working at heights, with heavy loads, and power equipment creates an environment where incidents are common. Chainsaw injuries are a common occurrence when tree owners attempt to do storm clean-up. If operating a chainsaw all the personal protective equipment should be used and this includes a helmet, hearing protection, eye protection and cut-resistant chaps. Sturdy, cut-resistant boots and gloves are also necessary. It is strongly advised that tree owners limit their tree pruning to hand tools and remain on the ground.

When hiring a company to prune or remove your ice-damaged tree, make sure to hire a professional. After a storm it is common for people to stop by and offer to do the work. Often these individuals have little or no experience in doing this high-risk work and may either injure themselves or damage the tree further. Tree owners should hire only companies that have worker compensation insurance for their employees and general liability insurance. It is also a good idea to hire companies that have arborists certified by the South Dakota Arborist Association or the International Society of Arboriculture.

### ***Ash tree removal***



short period of perhaps three years.

As I mentioned in the *Update* last week, Sioux Falls is continuing their program of ash removals in anticipation of the widespread loss of these trees as the emerald ash borer population grows. If Sioux Falls experience mirrors that of other communities, and there is no reason it wouldn't, if nothing is done almost the entire ash population within the community, an estimated 85,000 trees will die from the borer with most 60,000 dying with a

This rapid die-off takes unprepared communities by surprise and overwhelms their resources to fell that many trees. Sioux Falls is getting a head start by staged removals of unwanted ash throughout the community beginning now rather than wait until the trees are lost to the beetle.

Sioux Falls is not the only community to begin this process, Brookings and others are already beginning to remove their unwanted ash. This does not mean every ash will be removed. Ash should still be a part of the community canopy a decade from now, but this will require biannual treatments of insecticides at a cost of \$100

to \$400 a tree depending on size and location. Only the best ashes are worth the expenditure of these resources and that is not a lot of ash.

### ***Emerald ash borer homeowner and commercial workshops***



The window to begin treatments to protect high-value ash trees from emerald ash borer is coming up soon. The City of Sioux Falls, South Dakota Department of Agriculture, South Dakota Extension Service and the South Dakota Arborist Association have teamed together to provide homeowners with information on how to identify an ash trees, the tell-tale signs of an infested ash, and what treatments are available to protect trees.

The homeowner workshops will be held at the Sioux Falls Extension Regional Center at 2001 East 8<sup>th</sup> Avenue. The first will be offered **Thursday April 18**, from 6:30 to 8:00 pm and the second, **Saturday, May 4** from 9 to 10:30 am. These sessions will cover how to identify infested trees, what treatment options are available and what are the best replacement trees.

We will also be sponsoring two workshops for commercial applicators. This is an opportunity for commercial pesticide applicators to learn how to use the many systems available for injecting trees with demonstrations by Arbor-Jet, Arbor-System, Rainbow and Warne Chemical (Chem-jet). The morning portion of the workshop will how to treat trees and which ash are the best candidates for treatment. This is a great opportunity for those already offering emerald ash borer treatments in the area to refine their skills and companies that are thinking about beginning to offer this service.



These workshops will be held at Laurel Oak Park, 3401 East 49<sup>th</sup> Street, Sioux Falls. They will begin at 9:30 am by the Picnic Shelter and run for about two hours. The workshop will be held on **Tuesday, April 23** and repeated on **Tuesday May 7**.

### ***City workshop on protocol for treating EAB in Sioux Falls***

Immediately following these workshops from 1 to 3 pm there will be City of Sioux Falls program on protocol for licensed arborists to follow when treating trees in the

city. This program will be presented by Duane Stall, Forestry Supervisor, Bryan Peterson, Urban Forestry Specialist, Bret Winterfeld, GIS Specialist and John Ball, SD Forest Health Specialist. Arborists that are licensed to work in Sioux Falls are encouraged to attend this afternoon session. The afternoon session will provide a new and improved mobile app for arborists to record trees that are being treated in Sioux Falls.

Reporting EAB treatments is required by the Director of Parks and Recreation. There will be a tutorial for those that want to use this mobile app. Other reporting options will be discussed. To help manage the advancement of EAB, the City is providing tags to the arborists to be used when treating trees. General information will be shared on how and where to tag trees. At the end of the session tags will be available to pick up for this year's use. We have an opportunity to make this year's field season smoother than last year and we need your cooperation in keeping this insect at a manageable level.

The **Tuesday, April 23**, program will be held at the Downtown Library Room A, 200 N Dakota Ave, Sioux Falls. This program will also be repeated on **Tuesday, May 7** but at a different location, City Center Room 110, 231 N Dakota Ave, Sioux Falls.

### ***A little shrub pruning before spring starts***

Flowering shrubs require regular pruning to look their best. Forsythias and spireas, both noted for their bountiful sprays of blooms lining every cane, may gradually be reduced to a few sporadic flowers if these shrubs are not routinely pruned. This does not necessarily mean annual pruning, but this task should be performed at least every two to three years since flowering occurs on the younger wood. Pruning not only benefits flowering but can also enhance bark color for shrubs with colorful canes. The dogwoods, prized for their vibrant red or yellow canes, can become thickets of gray stems if pruning is neglected since the younger canes have the brightest colors.



Prune shrubs with heading cut taken near the ground.

Most shrubs arise from multiple canes, which are long, relatively unbranched stems. The best means of maintaining an attractive and natural appearance to these shrubs is to prune with heading cuts. This is a type of pruning cut that stubs off the cane at about 2-inches above the ground. These heading cuts result in the formation of numerous new shoots that arise just below the cut and quickly grow as long canes. The heading cuts should be made cleanly and straight across the cane; cutting at an angle is not necessary.



While flowering is enhanced by this pruning, the timing is critical. Spring-flowering shrubs bloom from flower buds formed the previous summer. These shrubs should be pruned immediately after they finish flowering. If instead, they are pruned during this time, the flower buds will be removed. Summer-flowering shrubs bloom from flower buds formed during the current year, meaning their flower buds are yet to form for this season's blooms. Summer-flowering shrubs



Birchleaf spirea before rejuvenation pruning.



Birchleaf spirea the same summer after rejuvenation pruning.

should be pruned during the dormant season, usually just before bud-break – right about now.

While shrub pruning is accomplished by heading cut made near the ground, the number of canes removed may varies depending on the objective. If the shrub is overgrown, almost choked-out by an excessive number of canes and flowering poorly, all the canes can be pruned out, a technique referred to as rejuvenation pruning. Rejuvenation pruning can be done every dormant season for low-growing summer-flowering shrubs such as Bumalda spireas and Potentillas. Overgrown shrubs, regardless of size or flowering time, can be pruned in this manner as well. However,

pruning a 15-foot common lilac to 2-inches will mean forfeiting flowers for several years while the plant recovers. Loppers are the best tools to make these cuts as the long handles provide the leverage to cut through thick canes, however, on small canes, those less than 1/2-inch in diameter, a hand-pruner may be used.

If the plant is not overgrown, then renewal pruning can be applied. Renewal pruning involves removal of about 1/5 to 1/3 of the oldest and largest canes by heading cuts. If this task is performed annually, then over a three to five-year time period, the entire shrub will be completely renewed. The season to do renewal pruning depends whether the shrub is spring or summer flowering. Spring-flowering shrubs should be renewal-pruned right after they finish flowering. Summer-flowering shrubs should be pruned during the dormant season.

The following are two lists of shrubs by blooming time.

### **List of common spring-flowering shrubs**

Barberry (*Berberis*)  
Chokeberry (*Aronia*)

Dogwood (*Cornus*)  
 Falsespirea (*Sorbaria*)  
 Forsythia (*Forsythia*)  
 Mockorange (*Philadelphus*)  
 Ninebark (*Physocarpus*)  
 Lilac (*Syringa*, except late lilac *Syringa villosa*)  
 Slender deutzia (*Deutzia*)  
 Spring-flowering spireas (Birchleaf spirea, *Spiraea betulifolia*, Nippon spirea, *S. nipponica*, Bridalwreath spirea, *S. prunifolia*, and Vanhoutte spirea, *S. x vanhouttei*)  
 Viburnum (*Viburnum*)  
 Weigela (*Weigela*)

### List of common summer-flowering shrubs

Bush-honeysuckle (*Diervilla*)  
 Hydrangea (*Hydrangea* except Bigleaf hydrangea, *H. macrophylla* cultivars may have spring and summer flowers)  
 Late lilac (*Syringa villosa*)  
 Potentilla (*Potentilla*)  
 Smokebush (*Cotinus*)  
 Summer-flowering spireas (Billard spirea *Spiraea billardi*, Bumalda spirea *S. bumalda* and Japanese spirea *S. japonica*)

### E-samples



**Black knot** (*Apiosporina morbosa*) is a disease that really stands out on a bare tree. The cylindrical, black, rough textured galls on the branches are hard to miss and go by many descriptive names from “dead man’s finger” to “dog poop on a stick.” The disease is not only unsightly; it eventually girdles the attached branch through this often takes years. The disease is common on many cherries, particularly the ‘Schubert’ chokecherries and some plums.

Spores are released from these knots in the spring and infection can occur from the time the buds are just beginning to expand (April) until shoot growth is completed (early June). Infections can start during this time period whenever the tissue is wet (after a rain) and the air temperature is above 60°F.

The disease is not easy to manage, and I tend to lean towards killing infected plants – basal pruning – rather than attempt to cut out the knots. First, one susceptible, always susceptible. There is some resistance to this disease among cherries and plums and some trees will never get the disease and others will always have it (or become infected again after pruning). However, if you have a lot of time on your hands or the tree is important to you, prune out and destroy all the knots now, this coming weekend after the snowstorm. Prune away infected branches back to a healthy branch or limb. If the disease has progressed to the trunk, just kill the whole tree. And if you have enough time on your hands to cut the knots out of this tree, remove all the knots on any other cherry or plum within a couple of hundred feet of this tree.



Second, even after you prune, you'll see new knots the following year. The shoots infected last year only have a slight swelling to them at this time and are easily missed while pruning. The larger, blacken galls will not form from these swollen areas until this summer.

After all the knots are removed, fungicides can be applied to reduce future infections. Fungicides containing chlorothanil that are labelled for stone fruits such as cherries and plums (the trees with the most problem with black knot) can be used to help manage this disease. The first application should be made just before bud-break and then on a 10-day interval until shoot growth has stopped (late May or early June). The treatments are to prevent the tender new shoots from becoming infected by the spores being released from the knots. Fungicides containing chlorothanil or captan should not be tank mixed with oils or applied within two weeks before or after an oil spray as plant injury may occur. Chlorothanil application must stop at blooming for any tree you intend to harvest fruit for human consumption. The first applications are the most important so if flowering occurs before shoot growth ends (and expect this on cherries and plum) forgoing the last sprays will probably be okay.

## **Samples received/Site visits**



## Lake County

### Is this emerald ash borer?



Madison is beginning some ash removals and found this ash with some blonding (where the outer layer of bark has flaked off) and some tunnels beneath the bark. Blonding is commonly done by woodpeckers in their search for the emerald ash borer larvae beneath the bark but this blonding must be associated with woodpecker pecks. If there is just blonding, it most likely was due to squirrels.

The tunnels were also not due to the emerald ash borer but our native banded ash borer. These insects make meandering, rather than distinctive Serpentine (S-shaped) tunnels created by the emerald ash borer. The tunnels are also engraved deeper into the wood than typically seen for emerald ash borer. Fortunately, this tree was not infested by the emerald ash borer.



## Union County

### Why are these two spruce dying?



There were two rows of spruce on each side of a draw. Most of the trees were in very good condition but two were dead. The symptom pattern was not one typically associated with pathogens or insects. The two dead trees had not gradually decline, in fact their shoot expansion (picture to lower right) was the same as the surrounding trees in the row but then they suddenly died in one season.

The reason? Did I add the trees are in fabric and are 12 years old? Frequent readers of the *Update* are probably putting this together and suspecting that these two spruces had their trunks girdled by the fabric. The fabric was imbedding into the trunks of these trees and close for some of the other spruce.



The adjacent cottonwoods also had the fabric tight on their trunks but the exposure to sunlight – absent beneath the spruce – is allowing the fabric to degrade and tear. The problem with fabric girdling trees in a belt is most often associated with spruce and cedars (junipers) and generally after the trees have been in the belt for 8 to 12 years.



The solution at this time is crawling beneath each tree and take a knife to slit the fabric on all four sides of each tree to allow the trunks to expand. The better solution would have been to remove the fabric about 6 years ago. Trees do not need to be protected forever from grass and forb competition, usually 5 or so years is all they need. I also like to see the fabric removed then rather than later. We have seen a few belts decline when all the fabric was pulled on 12-year old cedar trees during a drought. The root system was just beneath the fabric (which was covered with 2 to 3 inches of soil and litter) and once exposed to the sun and heat, quickly desiccated.

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