Pest Update (March 23, 2016)

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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. **Walnut samples may not be sent from any location – please provide a picture!**

Available on the net at:
http://sdda.sd.gov/conservation-forestry/forest-health/tree-pest-alerts/

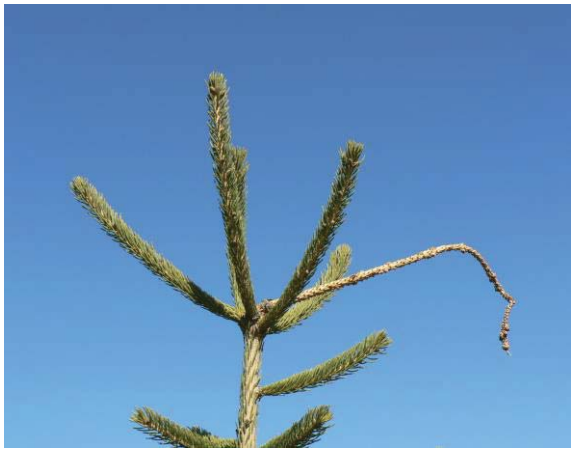
Any treatment recommendations, including those identifying specific pesticides, are for the convenience of the reader. Pesticides mentioned in this publication are generally those that are most commonly available to the public in South Dakota and the inclusion of a product shall not be taken as an endorsement 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.

Plant development

The forythias and cornelianchcherries (*Cornus mas*) (picture left) are blooming in Brookings. This did not occur until about mid-April last year so we are a little ahead for the season. Many trees and shrubs have their buds expanding and I expect we will see a lot more

plants in bloom and leaf within the next week or two. An early spring is nice, but let's hope we do not get a stretch of cold weather (0º to 10ºF). This could end up killing the tender flowers and leaves on many plants. We seem to experience this event every five years or so and it's mostly our non-native woody plants that are affected. Native trees, such as our bur oaks, know to hold off until May.

Timely topics



Since spring is almost upon us it's time to complete one more pruning chore – **removing the double leaders from young spruce trees**. Colorado and Black Hills spruces are popular trees in our state (perhaps a little too popular) for their attractive pyramidal forms. Unfortunately, they are also prone to developing two or more leaders and this results in competing trunks rather than one. As these trunks expand they eventually touch and the bark between them becomes compressed and imbedded. This makes for a weak connection and given enough wind or ice loading, the tree breaks at the union of the trunks. The multiple trunks occur when the terminal dies and several of the branches in the whorl just below this point begin to turn upward to form a new terminal. Sometime just one assumes dominance and a single new terminal forms but often two or more attempt to become dominant and continue to grow upward at the same rate. This most often occurs while the tree is young so the correction is easy, just prune off all the upward angled shoots but one to assume the role as leader. Do not worry if the one you leave is bent to the side. It will straighten and form the new trunk. If you do not want to remove all but one because of a concern that this will create an empty spot along the trunk, you can just tip them back a few inches so that one is taller than the rest. This one will become the new leader.

E-samples

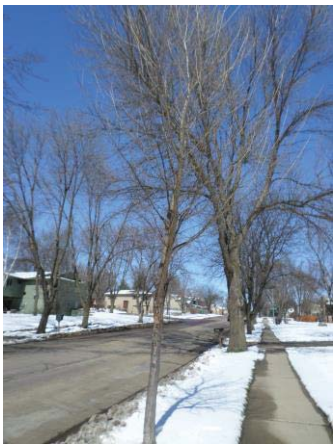
Crown gall was a common problem on many plants when I worked in Michigan but I do not see it very often in South Dakota. This is likely because many of the hosts for the disease are not hardy to our climate. I occasionally receive a sample of crown gall on burning bush (*Euonymus alata*) from Sioux Falls or Mitchell but that is about it. I did, however, receive this picture of what appears to be crown gall occurring on a cherry tree. The galls on cherries typically form above ground, near the graft union, though they sometimes occur at or slightly below the soil level. The galls are rounded with an irregular, rough, dark

surface. A mature gall can be anywhere from less than an inch to several inches in size. Young trees can be stunted by the disruptive girdling from a large gall. The galls are due to a soil-borne bacteria, *Agrobacterium tumefaciens*, so management is fairly difficult. We do not have chemicals that are effective against this bacteria and since it can survive in the soil destroying infected trees will not necessarily rid the disease from the row. If it occurs in a shelterbelt it is probably best to just remove the plant and if it begins to appear on other cherries or plum, just avoid planting these trees on the site in the future.

I do not receive many samples or pictures of this particular problem, though it's fairly commonly in the state. Most likely people do not notice it occurring on the tips of their aspen branches. This terminal gall is due to the **aspen twiggall fly** (*Hexomyza schineri*). The larvae of this small fly produces the swelling that forms around the terminal of a shoot. If you break open a gall in mid to late summer you can find a greenish yellow larvae in the hollow area in the gall, actually you can usually find two or three. Apparently the fly likes company. The insect is native to the region and really does not threaten the tree's health but can result in distorted branches. It is more a concern in nurseries where developing straight stems and branches is essential for a sale. Management is usually through the numerous predators and parasitoid that feed on the larvae. Pruning off the galls will not have much of an effect on a tree become infested the following year. Insecticides have generally not been effective due to the problems with timing. However, nurseries have used early spring applications of insecticides with imidacloprid as the active ingredient as a soil drench with fair success.

Samples received / Site visits

Minnehaha County **Canker on hybrid elm**



I recent drove down to inspect a declining hybrid elm. The hybrid elms have become popular during the last decade due to their resistance to Dutch elm disease and fast growth. These trees are not without their problem, many require extensive training to develop a single main trunk, and some are very susceptible to defoliation by the elm leaf beetle and the European elm weevil. Another problem that occasionally occurs on these elms is neonectria canker (*Neonectria galligena*), a perennial target canker that occurs on a wide range of hosts including elm. The disease kills the bark, cambium and the outer increments of the sapwood but also produces

a chemical that promotes the formation of wound wood around the canker. This creates a target shaped canker where the disease expands during the fall when the tree is not increasing in diameter and then tree forming new wound wood around the expanded canker. This continual see-sawing may continue for years and even decades depending upon the vitality of the host. The disease is usually a problem on stressed trees when the fungus gets the upper-hand. If the tree is healthy, a canker can even become enclosed by the wound wood.

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