Scout for Fire Blight Cankers in Late Winter

By Nick Goltz, DPM, UConn Home & Garden Education Center

Spring will soon be in the air! Longer days are on the horizon and many people are eager to prepare their garden beds and purchase seeds for the upcoming growing season. It's exciting to plan ahead to prepare for the next season. I encourage you to incorporate some disease prevention in those plans as well!

Though many of us know to wrap up pruning before winter ends, we may not think to scout for diseases while pruning our trees. It's true that many diseases aren't easily observable in the winter, but the winter can be a great time to scout for – and manage – certain impactful diseases such as the dreaded bacterial disease of apple and pear, fire blight.

Fire blight is caused by the bacterium *Erwinia amylovora*. It can cause devastating damage to most cultivars of apple, pear, crabapple and quince. Native ornamental plants in the same family (Rosaceae) may be impacted too, albeit less severely, including mountain ash, hawthorn, and others. Affected trees will lose fruit, have blighted twigs and branches and, if left unchecked, will perish once the bacteria sufficiently colonize the plant's vascular tissues.

The bacteria that cause fire blight overwinter in large cankers on branches and trunks of their hosts. Bacteria will mix with sap and ooze from these cankers shortly before the trees begin to flower. Bees and other insects will feed on the sweet sap and inevitably bring the associated bacteria to the flowers of other trees where the cycle of infection can begin anew.

The winter is a great time to scout for these cankers and prune them away to prevent the disease from moving to the main trunk and/or spread to other plants nearby. Use clean pruning tools to cut away the affected twig or branch, at least 8-12 inches past the lowest visible point of symptoms. Clean your tools after each cut using 10% bleach (made with 9 parts water, 1 part household bleach). If the canker is found on the main trunk of the tree, the tree should be cut down and replaced. Looking to replace with another apple or pear tree? Look for cultivars resistant to fire blight! May nurseries carrying fruit trees will have this resistance labeled. Your local extension office or the UConn Home & Garden Education Center can also provide cultivar recommendations appropriate for your area.

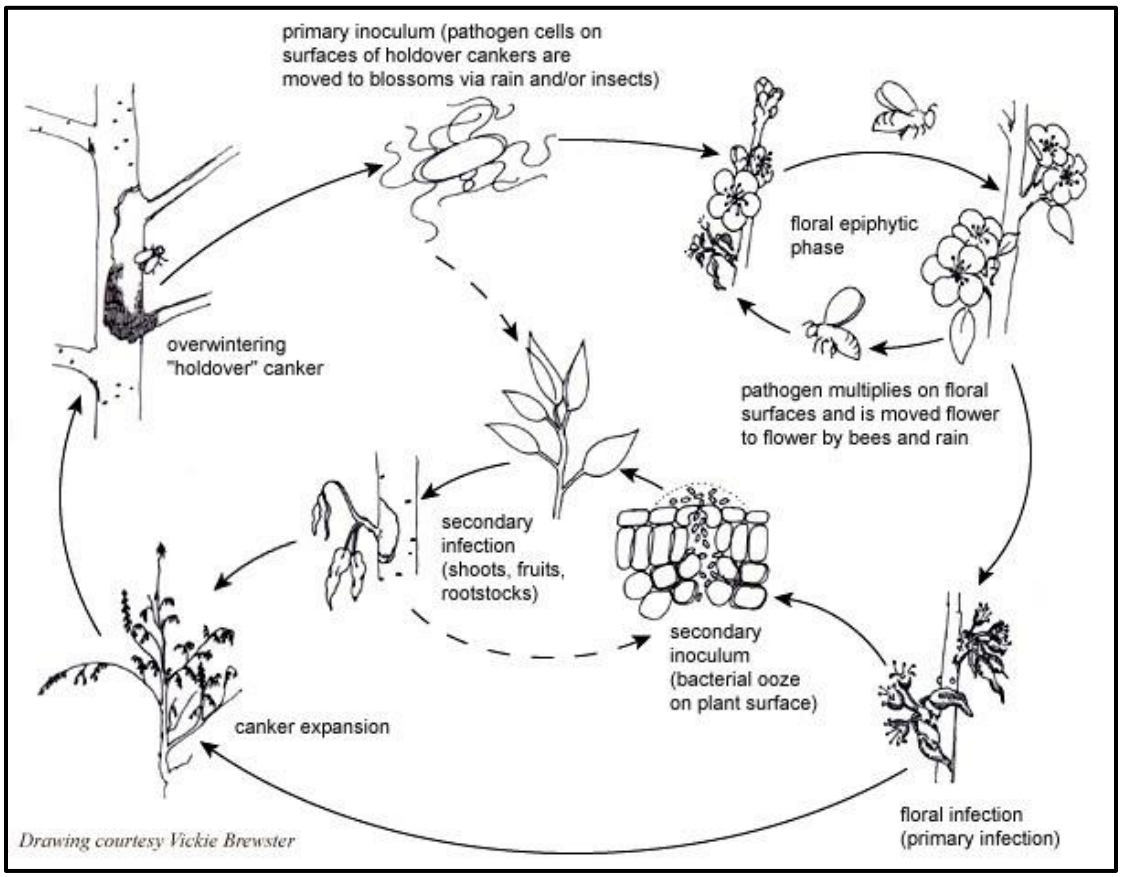

Illustration of the Fire Blight disease cycle. Vickie Brewster, APS.

Winter isn't the only time to scout for this disease! Keep a close eye on your trees while they are flowering. Give them a quick inspection every other day to see if there are any blighted flowers and twigs. These often appear as shriveled, darkened, or "burnt-looking" tissue. Often, the twigs will curl and create a characteristic "shepherd's hook" appearance that fire blight is infamous for causing. If you observe any, prune away according to the recommendations above. If your trees have a history of fire blight or have more than one or two small twigs affected, you may want to use a preventive spray such as a copper bactericide or an antibiotic, such as oxytetracycline or streptomycin.

Once the growing season is well underway and fruit is beginning to develop, fire blight becomes less of a concern for homeowners. Scouting can be reduced to once or twice a week. Late spring and summer are good times to be on the lookout for other diseases as well, including cedar-apple rust, apple scab, and sooty blotch/flyspeck. Look for leaf spots and spots on fruit, wilting or dying branches, and other symptoms of disease.

Unsure if you are dealing with a disease? Contact the UConn Home & Garden Education Center for free horticultural consultation! Email them at ladybug@uconn.edu or call (877) 486-6271, Monday through Friday, 8:30am to 4:30pm. They can help by providing horticultural advice or can direct you to the UConn Plant Diagnostic Lab or UConn Soil Nutrient Analysis Lab for further support.