



Bugs and Blights

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The fall equinox is that dreaded day when the sun rises over the equator and days become shorter. Fall is the time to examine bark and branches without the leaves being in the way. And it's a good time to take action to reduce diseases before next spring. Pruning opens up the canopy so air flows through and the foliage can dry quickly, before disease spores can germinate. Sanitation is a huge part of reducing fungal and bacterial diseases in nurseries and landscape plants, and in the vegetable garden.

Mushrooms and conks are the fruiting bodies of fungi, just like fungus flowers form the fruit of plant diseases or rots. Some fungi are beneficial as they break down organic matter, start the decay process so that other organisms can find food and shelter in the softening wood. It is also the time that the disease-causing fungi "bloom" spreading spores for new infections. (Left: turkey tail fungus (*Trametes versicolor*) is one of the decomposers, though it can sometimes damage weak trees).



Diseased leaves and flowers should be removed by raking, leaf blowing, shop vac, or hand-picking. The fungus and bacteria moved to other plant parts by

splashing, wind or hitch-hiking on visitors. Some diseases will just wait it out on infected bits of leaves or flower on the ground until better weather. For fungi this is usually moist and warm weather. The spores disperse to emerging leaves or flowers. Diseases include such familiars as apple or pear scab, gray mold on flowers and soft tissue, brown rot of stone fruits, dogwood anthracnose, many rust diseases (on Heuchera, mallow, Oregon grape, even some weeds), and conifer needle diseases. Removing the inoculum reduces the number of spores to start new infections.



Fruit left on the ground or on the tree will harbor scab, or fruit insects such as apple maggot. True, some of the insects will migrate from the fruit to the soil, but the fungi will remain on top of the ground waiting for new growth next spring. Prompt removal reduces future pest problems.

Twigs, branches and trunk also harbor diseases and insects. Once the leaves have dropped, it is an excellent time to inspect plants for cankers, lesions, scales, aphid eggs, and inward crossing branches. Opening up the canopy allows increased air flow through the trees to dry foliage so that spores don't have the free water they need to germinate. Prune out diseased branches, determine if the scale insects, tent caterpillar eggs are abundant enough to bother with. (To the right, apple anthracnose causes the sunken cracked area of on an apple trunk. This is one of the most common problems brought into our office. The sunken area and cracks are caused when the tree is growing but the cankered area is not. Top center: the characteristic "violin strings" are starting to appear,



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Fighting diseases is a bit like staying dry in the rain: If you want to stay dry, you have to put on the raincoat before the rain begins. If you are wet, the sunshine may dry the raincoat, but you will still be wet on the inside. Once a fungus infects the leaf, it gets much harder to control. Using preventative tactics will ensure healthy plants next spring. Sometimes, when disease conditions are not conducive for diseases to develop,, fungicides may not always needed.

Always target the pest, and protect the rest.