



# *Crabapple Diseases And Pests*

*Bruce R. Fraedrich, Ph. D., Plant Pathologist*

Most crabapples are hardy in areas all along the eastern seaboard. In general, they are subject to the same diseases and insects that affect commercial apple varieties. These can affect the tree in two ways: first by disfiguring the trees, rendering them unsightly; and second by weakening them to a point of becoming more susceptible to other insects, diseases and non-biotic problems, such as poor soil conditions and environmental stress. If insects and diseases continually affect crabapples, they may succumb entirely or flower production will be greatly reduced, thus eliminating the aesthetic value of the tree in the spring.

In many areas, the most common disease is **apple scab**, caused by the fungus Venturia inaequalis. The appearance of dull smoky areas on the new leaves is the first evidence of the disease. Often the leaf tissue underneath the spot becomes raised or puckered, forming what appears to be a scab (Figure 1).

The best prevention of apple scab is planting resistant varieties. If these varieties are not available, scab can be controlled by a three fold program including sanitation, checking for and removing twig lesions to reduce the inoculum potential, and a protective spray program beginning at budbreak.

Figure 1. Light brown scabs on apple infected with apple scab.



**Fireblight**, caused by the bacterium Erwinia amylovora, is a very damaging disease of flowering crabapples. Its distribution is as general as that of scab, but yearly occurrence is much more sporadic because disease requirements are more specific. Severe infections may not occur for six to seven years; however, when it occurs it can be devastating as several branches or entire trees may be killed.

The symptoms first appear on blossoms about or soon after the time when flower petals fall. Wilting and brownish-black leaves occur on terminal growth and shoots at the base of the trunk. Entire branches are killed outright with the dead leaves remaining attached to the frequently curved twig (Figure 2). Slightly sunken cankers may form on limbs, roots or the trunk. Conditions favorable for infection include open blossoms or succulent new growth,

temperatures about 65° F, plus rainfall or high relative humidity. Outbreaks may occur on tender new growth of terminals and suckers during the early growing season after bloom, following periods of rain accompanied by wind or prolonged high humidity.

The disease will most likely be severe in areas where fireblight was present in the preceding year. Since the causal agent overwinters in the margin of cankers on infected trees, affected twigs and succulent growth should be pruned out with a clipper or saw sterilized between each cut with alcohol or household bleach (one part in nine parts of water). Make cuts well below the blackened area in what appears to be healthy wood. Refer to the Bartlett Pest Management Recommendations for selection and timing of pesticides.

Soil management and nutritional practices should be arranged to avoid flooding the soil and to prevent sudden increases in the supply of nitrogen, which would encourage growth late in the season.

**Cedar-apple rust** is usually a problem only in areas where large numbers of eastern red cedars or ornamental junipers are growing within about a mile of the



Figure 2. *Bright orange spore masses develop on the underside of infected leaves.*

crabapples. The fungus *Gymnosporangium juniperi-virginiana* causes the disease. Orange spore masses measuring 1/8 - 3/4 inch in diameter appear on the underside of affected leaves (Figure 3). Severe infection of leaves and twigs may cause early leaf fall and dwarfing of the tree.

Elimination of cedars and junipers within a mile of apple trees provide almost complete control. Since this is frequently impractical, chemical control is the best alternative.



One of the most common insect problems of flowering crabapples is the **aphid**. Aphids feed on the underside of the foliage and, in sufficient numbers, can cause the new growth to become curled and twisted. **Sooty mold** fungi will frequently colonize the honey dew secretions of the aphid. Aphids are easily controlled when first noticed on the leaves and twigs. Since aphids commonly are found on sucker growth, periodic removal of this growth will do much to reduce the aphid population.

Gypsy moth, tent caterpillars and fall webworms can infest flowering crabapple during early spring and summer. Consult Insect Control Recommendations for control of these potentially devastating caterpillars.

In most years in the northeastern states **mites** are not a serious concern on flowering crabapples. They are red or reddish-green and are barely visible to the naked eye. Infested leaves become yellow or brownish, causing eventual stunting of the tree. Damage is generally more prevalent during dry summers.