The Plant Doctor's LANDSCAPE TIPS

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SCAB OF APPLE AND CRABAPPLE

INTRODUCTION:

Scab, caused by the fungus Venturia inaequalis is one of the most economically important diseases of Malus. The fungus infects members of the pome fruits, such as apple and pear, and their ornamental counterparts, flowering crabapple and pear. The fungus may also cause scab on other rosaceous plants, such as mountain ash, Pyracantha (firethorn) and cotoneaster. During years when environmental conditions favor scab development, virtual total defoliation of susceptible varieties of apple and crabapple may occur by mid-summer (Photo 1). Defoliated trees are often misdiagnosed as dead trees and removed. However, despite severe defoliation, scab rarely causes severe harm to affected trees. Trees often refoliate during the same season or will survive until the following spring, when their refoliation is usually assured. Many years of defoliation by the fungus may weaken trees and make them more susceptible to other problems, such as winter injury.

DISEASE CYCLE AND SYMPTOMS:

The fungus infects emerging foliage in the spring from overwintering and maturing spores in infected leaf refuse from the previous year. Damp, rainy and moderate temperatures favor spore release and infection. Fruit may also be infected, causing deformation, premature drop and less fruit production. The disease is considered to be multi-cyclic; spores continue to be produced in scab lesions and disseminated for further infection during several cycles throughout the spring and summer. Infected leaves fall to the ground during the summer and fall; spores in the foliage overwinter in preparation for spring infections, thus completing the disease cycle.

Scab lesions appear as olive green "scabby" spots on the foliage (Photo 2). As more lesions develop on individual leaves, the leaves may turn yellow or brown. During severe infections, the lesions may appear to coalesce and encompass the whole leaf. Fruit lesions may also appear olive green and usually cause fruit deformation.

SCAB MANAGEMENT:

One of the most important methods of managing scab is through genetic resistance. If at all possible, choose scab-resistant varieties when installing new plantings (Photo 3). Resistance is such a powerful and dynamic management tool. Even though the fungus may eventually evolve and infect "resistant" varieties, resistant varieties will usually provide many years of healthy-appearing trees.

On established or susceptible trees, several well-timed fungicidal sprays at 10-14 day intervals beginning at bud break in the spring may help to minimize serious defoliation during the summer. The degree of desired control is usually directly correlated with the number of sprays applied. Because scab infections are favored by moisture, avoid excessive and frequent irrigation in nurseries and landscapes.

Raking and destroying or composting the leaves in the fall should reduce the number of spores available for infection the following spring.

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Photo 1. With severe scab infections, trees are often defoliated by mid-summer. As such, these trees are often mistaken for deceased trees, while in reality, affected trees normally can sustain many years of defoliation without risk of death.

Photo 2. Scab lesions usually appear as olive green scabby blotches on the leaves. The lesions may become so populated on individual leaves that they appear to coalesce.

Photo 3. The use of resistant varieties is a very powerful tool for managing scab. Here, the resistant tree (left) shows little defoliation from scab while the susceptible tree on the right has been seriously defoliated.