



# Diagnostic Facts



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[www.cips.msu.edu/diagnostics](http://www.cips.msu.edu/diagnostics)

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## Apple Scab

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**A**pple scab occurs in most areas of the world where apples are grown and is one of the most serious diseases of apple and ornamental crabapple.

It is caused by the fungus *Venturia inaequalis*. Apple scab occurs on the leaves, petioles, blossoms and fruit. Infections usually develop first on the undersides of leaves on fruit spurs, the side exposed when the fruit buds open. Once the leaf has unfolded, both sides may be infected. Apple scab rarely kills a tree, though repeated infections will weaken the tree and increase its susceptibility to other problems. Unless severely infected, the apples are edible, though perhaps not aesthetically pleasing.

### Symptoms

Symptoms appear as velvety brown to olive spots that turn black with age. At first, the margins of the lesions are feathery and indefinite, but later they are distinct. Severe infection can cause extensive defoliation. Trees defoliated 2 or 3 years in a row are weakened and susceptible to low-temperature damage. Fruit infections resemble leaf infections when young but become brown and corky with age. Scab infections result in uneven growth of fruit and cracking of the skin and flesh.



*Apple leaf infected with apple scab.*

## Biology

Apple scab is spread by two types of spores. Sexual spores are produced on previously infected fallen leaves. The spores spread by wind and splashing rain and provide inoculum for the disease the following year. Asexual spores are produced on the tree during the growing season. They are also spread by wind and rain. The disease is most severe in years with cool, wet spring weather.

## Control

The apple scab fungus overwinters on fallen leaves. Any infected leaves that are left under the tree are sources of disease for the following growing season. Though it may not be possible to remove all of the leaves from the area, removal of the majority of fallen leaves will greatly decrease the amount of inoculum in the area. To prevent recurrence of the disease next year, remove and destroy leaf debris and infected fruit in the fall.



*Scab infected fruit.*

Apple scab is controlled primarily with fungicide sprays. Unless severely infected, the apples are edible, though perhaps not aesthetically pleasing. Trees should be sprayed with ORTHO Home Orchard Spray, ORTHO Orthocide Garden fungicide, or a fungicide containing triforine according to label direction. Like most fungal diseases, timing of fungicide applications is important

for control of the disease. By the time the disease is noticed, it is too late to treat the tree. Chemical applications should begin in the spring.

Resistant or tolerant crabapples are available. Keep in mind that though they are resistant to scab, they are still susceptible to other early-season diseases.

Adequate chemical coverage on large trees is difficult and often requires specialized spray equipment. Contact the Michigan Nursery and Landscape Association (MNLA) at 1-800-879-6652 to find a landscape professional in your area who can assist you with fungicide applications and other disease management procedures.