

Apple Scab

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Problem

Unfortunately, the plant I am using to describe apple scab has already lost its leaves and fruit. (However, I was able to find a few fruit samples on the ground.) In this way, I was able to clearly see the branching structure of the plant, and that it seemed normal. Also, recalling my previous encounter with this particular plant, earlier in the season and in another class, I remember the symptoms being fairly well distributed among all the leaves and fruit. This is probably due to the fact that lesions (usually large) are first seen on expanding leaves in the spring, and continue to occur on already expanded leaves later on (these lesions are usually smaller because expanded, or older, leaves tend to be more resistant). Therefore, apple scab can affect all leaves and fruit. Overall, the health of the plant did not seem to be greatly affected, aside from the unsightly and unappetizing leaves and fruit. However, apple scab can cause repeated defoliation which can lead to reduction in tree growth and yield.



Apple scab produces lesions that can be found on leaves (both sides) and fruit. Young lesions may be brown to olive green with indistinct margins. As they get older, the margins become more distinct, and surrounding tissue thickens, causing deformation of the leaf. Lesions in fruit are similar, though they become brown and corky as the fruit grows.

Cause

Apple scab is caused by a fungus (*Venturia inequalis*), which can overwinter in leaves and fruit on the orchard floor. Spores are released in the spring, when fallen leaves become wet, and are carried by rain and wind. They land on young blossoms and leaves, germinate, and initiate infection.

Remedy

Apple scab can be managed using chemical control, resistant cultivars, and cultural control practices. Overall, management is focused on preventing the initial infection in spring. Two types of fungicides are used: protectant (preventative, applied before infection) and systemic (curative, can be applied after infection). Resistant cultivars include 'Enterprise', 'Freedom', and 'Jonafree' apples, and 'David', 'Harvest Gold', and 'Mary Potter' crabapples. (Some varieties which are susceptible include 'Delicious', 'Fuji', 'Gala', and 'McIntosh'.) Using resistant cultivars can increase bloom potential because of less risk of defoliation and do away with the need for fungicides. Finally, simple sanitation practices such as picking up and disposing of fallen leaves and fruit in the fall (if only a small number of trees) and cleaning tools between pruning trees can be effective.

For the plant that I have diagnosed with apple scab, any of these remedies could be effective. It happens to stand alone as a tree for aesthetic purposes, near the University of Idaho Administration building.

References

<http://www.apsnet.org/education/LessonsPlantPath/AppleScab/top.htm>

http://www.caf.wvu.edu/kearneysville/disease_descriptions/omapscab.html