



Forest Health Protection, Southern Region

VERTICILLIUM WILT,

caused by *Verticillium albo-atrum*

Importance. - *Verticillium albo-atrum* causes wilt disease in trees growing in ornamental settings, but diseased trees can occasionally be found in forest stands. Maples (sugar, silver, red, Norway) are favored hosts, but elms and other species are also infected.

Identifying the Fungus. - Laboratory culturing and microscopic observations are necessary for accurate identification.

Identifying the Injury. - Symptom expression can be quite variable. The foliage may yellow before wilting, and this may involve only a few twigs or branches. Occasionally, the entire crown may suddenly wilt. Dieback of twigs and branches may occur. Elongated stem and branch cankers may develop. Sometimes, green or green-brown discoloration occurs in the outer sapwood of the affected branches or stems. This discolored tissue readily yields the fungus on culturing.



Sapwood discoloration in maple twig.

Biology. - This is a soil fungus that requires wounds in order to infect the host. Infection normally occurs through roots and is spread throughout the tree by spores transported through the vascular system. Branch or tree death results from the disruption of the water-conducting tissue.

Control. - Control is most successful when initiated early. Fertilization with non-nitrate fertilizers, accompanied by adequate but not excessive irrigation, is recommended. If the tree dies, replanting with less susceptible species may prevent future disease.
