

(revision date:4/30/2013)

Common Diseases: Verticillium wilt

Use Integrated Pest Management (IPM) for successful plant problem management.

Biology

Verticillium wilt is caused by a soilborne fungus. The fungus resides in the soil by means of resting structures and can remain there for many years. When roots of susceptible plants grow near the fungus, the fungus infects the roots and grows upward within the water-conducting tissue into the trunk and branches. When a plant part dies, the fungus forms more resting structures. Sometimes the fungus enters through a wound in the aboveground parts of the plant. The fungus usually moves upward in the plant from an infection point. Leaves on an infected tree may abruptly wilt, die, or drop during the growing season. This may happen on one or several branches, on one side of the tree, or on the entire tree. Diagnosis requires examination of branches for discolored streaking in the vascular tissues. This fungus can infect hundreds of species of plants, including catalpa, Prunus species, daphne, lilac, nandina, photinia, smoke tree, sumac, viburnum, brambles, vegetables, and weeds. Among maples, the Japanese, Norway, red, silver, and sugar maples appear to be the most susceptible.

Management Options

Non-Chemical Management

- ~ Remove and destroy diseased branches. Sterilize tools before pruning healthy plants.
- ~ Remove and destroy severely diseased or dead trees, including the roots.
- ~ Use nitrogen fertilizer sparingly. Water the tree properly.
- ~ Use disease-resistant species and varieties, such as ash, birch, dogwood, holly, willow, oak, juniper, ageratum, impatiens, apple, and conifers.

Select non-chemical management options as your first choice!

Chemical Management

IMPORTANT: Visit Home and Garden Fact Sheets for more information on using pesticides

None recommended

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Images



~ Caption: Vascular discoloration from Verticillium wilt on smoke tree
~ Photo by: R.S. Byther



~ Caption: Vascular discoloration from Verticillium wilt on impatiens
~ Photo by: R.S. Byther



~ Caption: Vascular discoloration from Verticillium wilt on dahlia
~ Photo by: R.S. Byther



~ Caption: Verticillium wilt symptoms
~ Photo by: R.S. Byther



~ *Caption: Vascular discoloration from
Verticillium wilt on maple*
~ *Photo by: C.R. Foss*