

What is Verticillium Wilt?

Verticillium Wilt is a fungal disease that attacks eudicot plants, including many economically important agricultural crops such as cotton, tomatoes, potatoes, oilseed rape, eggplants, peppers and ornamentals.

Signs and Symptoms

Older leaves on plants infected with *Verticillium* appear as yellow, V-shaped areas that narrow from the margin. The leaf progressively turns from yellow to brown (see Figure 1) and eventually dies. Older and lower leaves are the most affected. Sun-related fruit damage is increased because of the loss of foliage.

A light tan discoloration (see Figure 2) develops in the vascular tissue, especially near the base of the plant. The discoloration extends a short distance up the plant and may occur in patches. Symptoms are most noticeable during later stages of plant development when fruit begin to size.

Comments on the Disease

The fungus survives as microsclerotia in the soil. Once established in a field, it persists indefinitely and can cause disease whenever a susceptible host is planted. A large number of crops and weeds serve as hosts. The disease is favored by cool soil and air temperatures.

Verticillium wilt is difficult to distinguish from *Fusarium wilt* and positive identification may require cultivating the fungus in a laboratory. Verticillium wilt seldom kills tomato plants but reduces their vigor and yield.

Management

Use resistant cultivars effective against Race 1. No source of resistance to Race 2 is commercially available. Sanitation, especially washing equipment to prevent movement of infested soil, may help to slow spread of the Race 2 strain of the pathogen. Rotation to non-susceptible crops, such as small grains and corn, helps reduce inoculum.



Fig 1. Verticillium wilt first appears as yellowing between the major veins on mature leaves.



Fig 2. Plants with Verticillium wilt develop a patchy light brown discoloration in the xylem tissue.