

Verticillium Wilt in Stone Fruits

March, 2016

Verticillium wilt, caused by *Verticillium dahliae* is a fungal disease that has a wide host range. Stone fruit are susceptible, particularly apricots, peaches and cherries.

Symptoms

The first signs of verticillium wilt typically appear in late summer with the yellowing and sudden wilting of leaves. Symptoms sometimes progress from the base of the branch upwards. On cherry, dieback and leaf death occurs on one or more branches, usually on one-year-old wood. The fungus causes brownish discoloration or streaking in the vascular tissue in many woody hosts, but this symptom is not always apparent in cherry. Affected trees become unthrifty and may die, however diseased trees often recover spontaneously. Recovery is more likely when symptoms are mild.

Disease Cycle

This disease is caused by a soil-borne fungus which invades the tree roots and then colonizes and plugs the water conducting system. The fungus can survive in the soil as microsclerotia for many years. It may also overwinter in tree roots.

Damage is more likely to occur if trees are planted in land previously cropped with susceptible plants such as tomatoes, potatoes, peppers, eggplants, strawberries, melons or squash, or if these crops are interplanted in young stone fruit orchards. Verticillium wilt is more common in young orchards, but older cherry and apricot trees may also be affected. High populations of pathogenic nematodes in the soil can increase the amount of damage.

Cultural Control

- Avoid planting sites known to be infested with Verticillium, and sites where susceptible crops have recently been grown.
- Do not intercrop with other susceptible species such as tomatoes or strawberries
- Prune out dead wood.
- Do not overwater - the disease is more severe in wet soil.
- Proper fertilization of the orchard can help trees to recover.

Chemical Control

- There are no chemical treatments for trees infected with Verticillium wilt.
- Pre-plant soil fumigation will help to reduce the amount of Verticillium in the soil in known-infested sites.

