

BIOSECURITY SA – Plant Health

Exotic Plant Pest Hotline: **1800 084 881** (available 24 hours)

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BIOSECURITY SA
PIRSA

Citrus Blight disease



Typical citrus blight symptoms on Valencia sweet orange. Note wilting in leaves and presence of off season bloom.
Photo courtesy of S.M. Garnsey USDA-ARS, Orlando (US)

Citrus blight is a citrus tree overall decline disease and causes serious losses in the citrus industry worldwide. Although it was described more than one hundred years ago, its causal agent remains unknown and its pathophysiology is not well determined, which hampers understanding of the disease and design of suitable disease management.

The disease is found in many citrus-producing regions including North America, the Caribbean, South America, South Africa and Australia. Blight is found in mostly tropical or semitropical regions with moderate to heavy rainfall but is not reported in more arid regions such as the Mediterranean Basin and California.

Symptoms

Trees affected by blight grow normally until they reach five to six years of age or older and then begin to wilt and to exhibit leaf loss, reduced growth flushes, die back and general decline. In early stages of blight, the symptoms may be restricted to one sector of the tree and then expand to the entire tree. Trees remain in various stages of decline and become unproductive, but they rarely die. As the tree declines, vegetative sprouts may be produced on the trunk or on

larger interior branches near the trunk. As the trees decline, water uptake within the xylem (wood) is reduced, zinc accumulates in the bark and outer xylem tissue, and zinc deficiency patterns develop in the leaves. As the xylem vessels in the trunk become plugged with amorphous occlusions, water transport is reduced, causing a general wilt appearance. New xylem vessels are produced in higher numbers but are smaller in size and eventually become plugged.



Zinc deficiency associated with citrus blight. Normal flow of water and zinc from root to canopy is disrupted by blight and zinc actually accumulates in the wood of blighted trees.
Photo courtesy of S.M. Garnsey USDA-ARS, Orlando (US)

What type of citrus is affected?

Blight affects all major rootstocks and seedlings to varying degrees but is most severe on rough lemon, Rangpur lime, trifoliolate orange and citrange rootstocks.

Trees grown on sweet orange, sour orange, mandarin and some citrumelo rootstocks usually have lower incidences of blight and usually do not exhibit symptoms before trees are 15 to 20 years old.

Spread

When blight first appears within a grove, the distribution pattern of affected trees appears to be random. Thereafter, the disease spreads to adjacent trees within the row more frequently than across rows. Blight has not been transmitted by ordinary budding or grafting practices. However, grafting roots of blight-infected trees to healthy ones will cause the healthy tree to develop blight symptoms in about two years. Natural root grafting of adjacent trees has been associated with the spread of the disease.

Strategies

At present, the only control measure for blight is to replace declining trees with trees on rootstocks that are less susceptible to the disease. Be vigilant for signs of blight and report suspect symptoms immediately.

**If you see anything unusual, call the
Exotic Plant Pest Hotline**

