

CITRUS BIOSECURITY THREAT: Citrus Canker

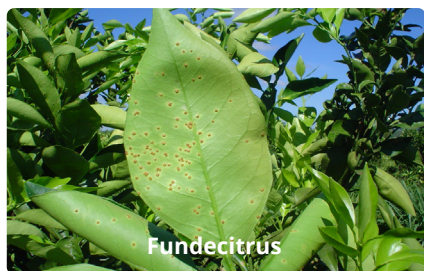
Symptoms

Leaf lesions first appear as pin-point spots that become small, light yellow, slightly raised pustules. Initially, these appear on the lower leaf surface and subsequently become visible on the upper leaf surface.

Young lesions are usually translucent and initially circular but may develop irregularly. Lesions become tan or brown, and as they develop become spongy or corky, and later crater-like with a raised margin and sunken centre, that may crack and/or drop out. The lesions become surrounded by characteristic yellow halos. The water-soaked, oily or greasy margin that develops around the central necrotic tissue is characteristic.

Lesions on young twigs and stems are superficially similar to those on leaves, but there may be little or no chlorosis. Lesions are generally irregularly shaped and may be sunken.

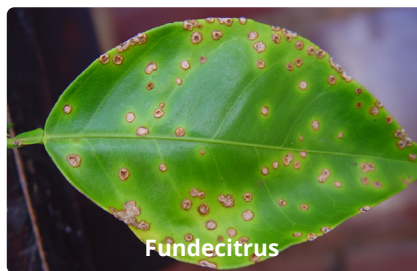
Fruit lesions are also superficially similar to those on leaves. The yellow halo may or may not be present. Old lesions are distinctly crater-like and appear as irregularly shaped, dark-brown, scabby masses on the fruit surface.



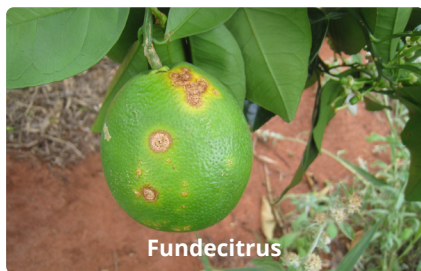
Tan raised pustules on the lower leaf surface



Spongy or corky lesions on the twig



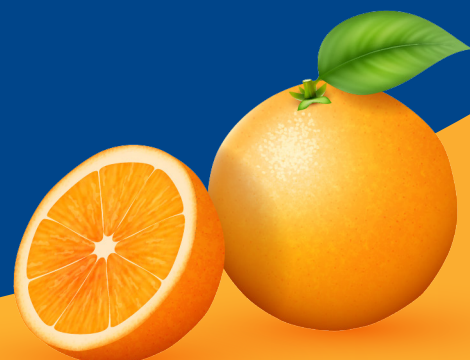
Raised, corky lesions on the leaf surface



Crater-like lesions with yellow halos surrounding them

The disease

- Citrus canker is caused by the bacterium *Xanthomonas citri*.
- It is a serious disease that results in severe economic losses, either in terms of damage to trees, reduced market value of blemished fresh fruit, reduced access to export markets, or the costs of its control.
- Fruit are not suitable for consumption or processing.
- Trees infected with canker become weak and unproductive.
- There is no treatment. Infected trees need to be removed.



Possible confusion with

Citrus canker can be confused with citrus scab, caused by *Elsinoë fawcettii* (lemon scab, present in SA), but scab lesions are drier than canker lesions and lack the characteristic yellow halo.

Host range

- All *Citrus* spp.

Current distribution

- Mexico
- America (North, Central, South)
- Asia
- Oceania
- Italy
- Many African countries



Citrus canker (left) vs scab (right)



Citrus scab lesion (left) vs canker lesion (right) on fruit

Method of spread

- **Infected plant material**
Citrus propagating material (trees, budwood, cuttings, grafts, rootstocks)
- **Fruit**
Movement of diseased fruit (lesions on marketable fruit), infected cull fruit, and processed fruit pulp
- **Seed**
Only poorly sanitised rootstock seed extracted from canker-infected fruit

Preventative actions

- Quarantine procedures for importation of citrus propagation material and fruit
- Plant certified disease-free citrus trees
- Awareness and surveillance to ensure early detection and rapid implementation of control measures
- Do not bring illegal plant material into South Africa and onto your farm!

For more information on this disease, or if you find anything unusual, contact Wayne Kirkman from CRI's Biosecurity Division: waynek@cri.co.za, 084 458 0349

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