



## Citrus canker *Xanthomonas axonopodis* pv *citri*

### Exotic threat to Western Australia

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Reviewed August 2006

### Background

Citrus canker is a highly damaging disease of citrus crops caused by the bacterium *Xanthomonas axonopodis* pv *citri*. Severe infection can lead to defoliation, dieback, blemished fruit and premature fruit drop.

### Distribution

The disease most likely originated in South-East Asia and has spread worldwide, primarily to warm, moist, coastal regions. It is recorded widely in Asia, the Middle East, some countries of Central and Western Africa, parts of the Pacific, South and Central America and parts of North America. Two previous detections of citrus canker in the Northern Territory in the 1900s were successfully eradicated. In June 2004, citrus canker was detected on one property in Queensland. Eradication of the disease is being carried out and surveillance has not detected any further outbreaks.

### Plants affected

The disease affects plants in the Rutaceae family, including those from the genera *Citrus*, *Fortunella* and *Poncirus*. The most virulent strain of the bacterium is found in Asia and is a serious disease of grapefruit, lime, mandarin, tangerine, satsuma and kumquat. Citrus canker also affects trifoliolate orange rootstock.

### Season of occurrence

Citrus canker occurs in any season on younger trees when there is a flush of new growth. However, the disease becomes sporadic as trees reach full fruit development and fewer new shoots are produced. Disease severity also depends on the susceptibility of the host plant species and cultivar.



Figure 1. Citrus canker symptoms on immature orange fruits

### Symptoms and damage

Symptoms of the disease can appear on fruits, leaves and twigs of infected plants, and typically consist of small, round blister-like formations called lesions. These lesions are usually raised, crater-like, tan to brown in colour and surrounded by an oily, water-soaked margin or a yellow ring or halo. On fruit, the lesions appear scab-like or corky and the yellow halo may be absent. On leaves, the lesions can be seen on both sides of the leaf.



Figure 2. Citrus canker symptoms on fruit and leaf



Figure 3. Typical citrus canker symptoms on young twig

### Important Disclaimer

The Chief Executive Officer of the Department of Agriculture and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.

## **Further information**

If you have seen plants with citrus canker like symptoms, please call the Pest and Disease Information Service on 1800 084 881 or alternatively the Quarantine Plant Pathologist on 9368 3264.

## **Acknowledgment**

Photograph of canker symptoms from Dean W Gabriel, Plant Pathology Department, University of Florida; <http://www.biotech.ufl.edu/PlantContainment/canker.htm>.