

## Citrus canker (091)

### Summary

- Widespread distribution. On citrus including grapefruit, kumquat, lemon, lime, mandarin, orange, pomelo and tangerine, as well as other genera in the citrus family. An important disease.
- Bacterial spots on both sides of leaves and fruit causing them to fall early. Fruit unsightly. Spots up to 10 mm, with haloes on the leaves. Cankers cause twig dieback.
- Worse on grapefruit, lemon, lime and sweet orange.
- Spreads in wind-driven rain, water splash, and nursery plants. Enters through natural openings, wounds (e.g., leafminers). Survival is in leaf litter, and weeds.
- Cultural control: ensure nursery is canker-free; keep out of orchard when leaves wet; plant windbreaks around and between rows; Valencia orange and mandarin tolerant.
- Chemical control: 2-3 copper fungicide sprays 3 weeks apart, beginning when fruits are about 5 mm diameter.

### Common Name

Citrus bacterial canker

### Scientific Name

*Xanthomonas citri* (also known as *Xanthomonas citri* pv. *citri*, and *Xanthomonas citri* subsp. *citri*).



Photo 1. Spots - blister or craters - caused by citrus canker, *Xanthomonas citri*. Note the spots are surrounded by a yellow halo or margin, and that the leaves are not distorted as they are by citrus scab, *Elsinoë fawcettii*.



Photo 2. Close-up of the pustules formed by citrus canker, *Xanthomonas citri*, showing yellow haloes.



Photo 4. Underside of the leaf in Photo 3, showing pustules of citrus canker, *Xanthomonas citri*, without haloes. (Note the dark margins to the spots is not typical of scab, *Elsinoë fawcettii*).



Photo 3. Top side of the leaf showing pustules of citrus canker, *Xanthomonas citri*, without haloes.



Photo 5. Raised pustules on the surface of a lemon, caused by citrus canker, *Xanthomonas citri*, without yellow haloes.



Photo 6. Citrus root stocks infected with citrus canker, *Xanthomonas citri*.

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Information from CABI (2020) *Xanthomonas citri* (citrus canker). Crop Protection Compendium. (<https://www.cabi.org/cpc/datasheet/56921>); Citrus canker (2020) Department of Agriculture, Water and the Environment. (<https://www.agriculture.gov.au/pests-diseases-weeds/plant/citrus-canker>); Citrus canker (2019). Business Queensland. Queensland Government. (<https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/crop-growing/priority-pest-disease/citrus-canker>); and Plant Biosecurity and Product Integrity (2017) Citrus canker. Department of Primary Industries. NSW. Australia; and from Citrus canker (2019) Agriculture and Food. Department of Primary Industries and Regional Development. Government of Western Australia. (<https://www.agric.wa.gov.au/citruscanker/citrus-canker>). Photo 2 Kohler F, et al. (1997) *Diseases of cultivated crops in Pacific Island countries*. South Pacific Commission. Pirie Printers Pty Limited, Canberra, Australia. Photos 3-5 Richard Markham, ACIAR, Canberra.

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