

CITRUS CANKER SURVEILLANCE INFORMATION

AUGUST 2018

Citrus canker surveillance information

Why look for citrus canker?

Citrus canker (*Xanthomonas citri* subsp. *citri*) is a high priority disease of citrus that causes significant damage to leaves, stems, thorns and fruit.

Citrus canker has been found in parts of the Northern Territory and Western Australia and is currently being eradicated. Citrus canker has previously been detected in and eradicated from Australia.

If it was to establish in Australia it would cause significant yield losses, quality downgrades, and could cause market access issues.

What should I look for?

Citrus canker causes spots, lesions or scabs on leaves, fruit, stems and thorns.

- These look like brown to grey spots or lesions 2–10mm in diameter that take on a scabby appearance as they age.
- Spots or lesions on fruit and leaves often have a yellow halo.
- On close inspection the edges of the spot or lesion may have a watery or oily appearance.
- Spots or lesions on stems and thorns tend to be tan coloured.
- Spots or lesions are more common after heavy rain, high temperatures or during leaf flushes.

Spots or lesions are raised, rough and can be seen and felt on both sides of the leaf.

Similar symptoms may be caused by citrus scab (*Elsinoe fawcettii*). Citrus scab occurs in Australia but the rough spots or lesions only affect one side of the leaf. Citrus scab also causes leaf distortions, while citrus canker lesions occur on both sides of the leaf and do not cause leaf distortions.

When and where do I look?

Citrus canker symptoms are most obvious during warm (>20°C), humid conditions.

Surveillance is best carried out in the wet season in northern Australia. In southern Australia surveillance is best carried out after warm, humid conditions.

Surveillance can be conducted at any time in areas that are watered using overhead irrigation systems that create a humid microclimate (such as in urban areas or nurseries).



Symptoms on fruit: note that the spots or lesions are surrounded by a yellow halo (indicated by arrow)

Jonas Janner Hamann, Universidade Federal de Santa Maria (UFSM), Bugwood.org



A distinguishing feature of citrus canker lesions is that they can be seen and felt on both sides of the leaf

Timothy Schubert, Florida Department of Agriculture and Consumer Services, Bugwood.org



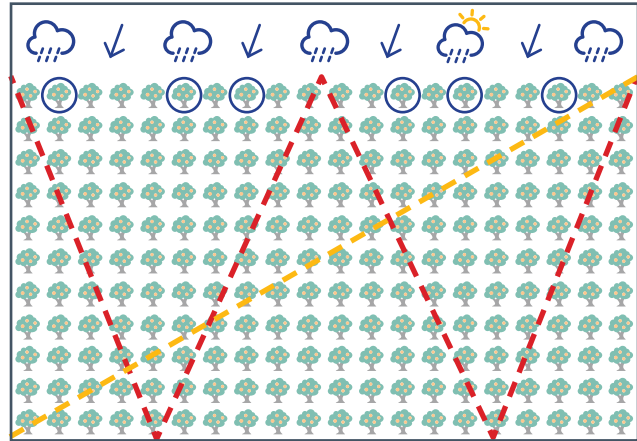
Citrus scab symptoms, note that lesions are only on one side of the leaf and the opposite side is distorted

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How do I survey citrus orchards?

1. If there are fewer than 25 citrus trees, check each tree for symptoms.
2. If there are more than 25 trees, select blocks to survey based on which block is most likely to be infected. These include:
 - sites near entry points to the property
 - areas of higher traffic
 - blocks facing prevailing wind and rain.
3. Survey using a transect or W pattern across each block until up to 50 trees have been inspected. Survey trees along the side of the block that faces the prevailing wind and rain.
4. If any suspect lesions are seen on leaves or stems, call the **Exotic Plant Pest Hotline on 1800 084 881** for instructions on sending samples for diagnosis.
5. If no symptoms are detected, note date and location of surveillance and that no evidence of citrus canker was found.



If you have more than 25 trees, randomly inspect up to 50 trees per block following a transect (yellow) or W pattern (red). When inspecting the block also survey trees along the side that faces the prevailing wind and rain (blue)



Symptoms on a leaf: note the yellow halo surrounding the lesions

Florida Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Bugwood.org

How to assess each tree

1. Scan selected tree for symptoms of spots or lesions on leaves or fruit. Pay particular attention to young leaves.
2. If any symptoms are found focus on at least 10 leaves or fruit and look for the symptoms described.

Below is an example of a surveillance record. You can fill in your own findings here or use this table as a template to create a record sheet for use on your property.

Block and property name	Person conducting surveillance	Date of surveillance	Latitude	Longitude	Host plant	Pest name	Symptoms present/absent	Notes
Example: Block 1 Bill's orchard	Bill Smith	01/01/2018	-17.0030	145.4530	Orange	Citrus canker	Absent	

EXOTIC PEST – CALL THE HOTLINE IF SUSPECTED ON 1800 084 881

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How do I inspect fruit in packing sheds?

In packing sheds periodically inspect fruit for citrus canker symptoms such as rough scabs or raised spots or lesions surrounded by a yellow halo.

If symptoms are found call the **Exotic Plant Pest Hotline on 1800 084 881** for instructions on sending samples for diagnosis.

How to report

If suspect symptoms are detected immediately call the **Exotic Plant Pest Hotline on 1800 084 881**. Early reporting improves the chance of successfully eradicating new pests.

More information

For further information refer to the Citrus Australia website citrusaustralia.com.au/policy-representation/quarantine-biosecurity or the Plant Health Australia website planthealthaustralia.com.au/pests/citrus-canker/

For information on the management of exotic pest and disease outbreaks visit outbreak.gov.au



On close inspection, the edges of lesions may have a watery or oily appearance

Jeffrey W. Lotz, Florida Department of Agriculture and Consumer Services, Bugwood.org



Spots or lesions on stems tend to be tan coloured

DPI&F archives, PaDIL padil.gov.au

**IF YOU SEE ANYTHING UNUSUAL,
CALL THE EXOTIC PLANT PEST HOTLINE**

1800 084 881



Australian Government
Department of Agriculture
and Water Resources

This initiative is part of the Australian Government's *Agricultural Competitiveness White Paper*, the government's plan for stronger farmers and a stronger economy.



Plant Health AUSTRALIA



Hort Innovation
Strategic levy investment

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DISCLAIMER: Biosecurity is everyone's responsibility and you have a moral and legal obligation to report suspected exotic pests to your state or territory government. Plant Health Australia and all persons acting for Plant Health Australia expressly disclaim liability with respect to anything done in reliance on this publication.