

Citrus gall wasp

Prevent and eliminate pests that damage citrus fruit trees

Citrus gall wasp (*Bruchophagus fellsis*) is a pest of citrus and a threat to the citrus industry in Western Australia. It damages citrus production by producing galls that can weaken trees, making them unproductive. Heavy infestations can reduce crop yield and cause branch dieback.

A native wasp to eastern Australia, it was detected in suburban Perth in 2013. Citrus tree owners are required to prevent and eliminate this pest.

Stop the spread

While its natural host is the Australian finger lime (*Citrus australasica*), citrus gall wasp has become adapted to other citrus varieties. The spread of citrus gall wasp into orchards and backyard citrus trees is usually the result of the introduction of infested citrus plants and the lack of monitoring of gall development in branches.

Citrus gall wasps have a limited flying range meaning that infestations within a property occur by the close presence of infested citrus trees, including across the fence of urban properties. Spread over long distances is facilitated by the wind and by movement of infested trees or by untreated infested branches.

Understand pest lifecycle

The citrus gall wasp produces a single generation per year, spending most of its growth and development inside galls in branches.

Adult wasps emerge from galls in spring, when environmental conditions are suitable. Emergence is closely associated with the spring growth flush.

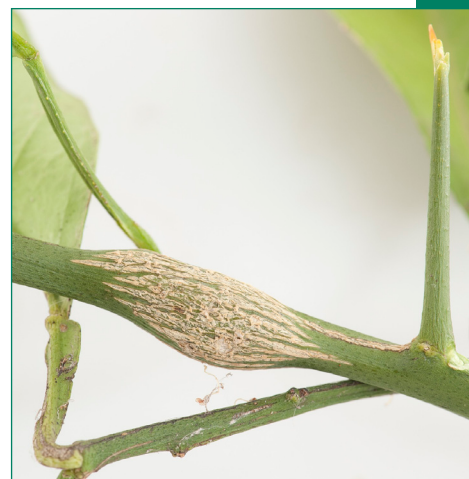
Adult wasps live for 3–14 days depending on the temperature. Each female can lay about 100 eggs, mostly laid under the bark of young spring shoots. Egg laying starts immediately after wasps emerge with most being laid within the first three days. The eggs hatch in 2–4 weeks and larvae then burrow into the bark. Woody tissue is formed around the larvae causing the distinctive swelling of the gall. By the following winter the larvae inside the gall pupate ready to emerge again as adults in spring.

Manage infestations

Galls in newly infested branches are small and difficult to spot. Check for light-green coloured shoots coming out at right angles from branches (spring to early autumn).

An integrated management approach is important to obtain effective and long lasting results. This will require the owners of citrus trees to:

- monitor all citrus trees in your property, looking for the stem thickenings (galls) that signal citrus gall wasp infestation
- target the different stages of the citrus gall wasp lifecycle
- encourage neighbours to take the same precautions to control citrus gall wasp on their properties and to prevent its spread
- report galls found on citrus trees to MyPestGuide Reporter.



News galls become visible from April

Report citrus gall wasp and other citrus pests.

Use MyPestGuide all year round.



Use these control methods

Cultural practices

Prune out branches affected by galls. This is essential for controlling the gall wasp. Prune and remove as many galls as possible at least one month prior to expected wasp emergence in spring

Avoid pruning out the galls in winter. This causes the tree to grow vigorously in spring and resulting in a flush of new foliage that the gall wasp prefers. Yearly pruning regimes such as this perpetuates the gall wasp cycle.

Avoid heavily fertilising trees in winter or spring. Over-fertilising (particularly heavy nitrogen applications) can promote excessive amounts of spring growth that the gall wasp prefers.

Avoid disposing of affected branches without treatment. Wasps can emerge from galls in pruning off-cuts if pruned too close to the normal emergence period. Discarded branches should be mulched, burned or deep buried (1m). People growing citrus trees need to understand that disposing of pruned gall off-cuts in **normal household waste, green verge collection or in garden bags does not eliminate** the pest – it spreads the pest to other areas.



Check plants before moving citrus trees into gardens or new areas

Management calendar

Timing of control actions varies with locations. Follow the citrus tree development suited to your region.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Citrus blossom and spring flush period*												
Time to fertilise*												
Citrus gall wasp adult emergence and egg laying												
Time to prune galls												
Monitor gall development												

*varies depending on variety and seasonal conditions



Report citrus gall wasp and other citrus pests
Use MyPestGuide reporter app or web tool – go to mypestguide.agric.wa.gov.au –
or call the Pest and Disease Information Service on (08) 9368 3080.

Natural enemies

The wasps *Megastigmus brevivalvus* and *M. trisulcus* insert their eggs directly into the egg where it slowly develops in the host larva, eventually killing it.

DPIRD has released these parasitic wasps in 2015 to determine its potential establishment as a biocontrol agent in Western Australia.

Chemical control

The effectiveness of insecticides depend on the timing of application and severity of the infestation. Methidathion (Suprathion®, Aako Ridacide®) is an insecticide registered for **the control of citrus gall wasp in commercial orchards**. Applied four weeks after gall wasp emergence is completed, this non-systemic pesticide kills adults on contact.

Clothiandin (Samurai®) is a systemic soil-applied insecticide used to control Mediterranean fruit fly which can significantly reduce galling.

Although petroleum spray oils and Confidor® Guard are used against other citrus insect pests, citrus growers can use these insecticides to deter gall wasp adults from laying eggs.

Always follow label instructions, withholding periods and permit conditions (apvma.gov.au). **Pesticides are extremely disruptive to integrated pest management and organic food production.**

NSW trials with calcined kaolin clay (Surround®) show promise to disrupt egg laying and reducing galls. Apply at least twice during spring when wasps emerge.

Important disclaimer

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