Citrus gall wasp (CGW)

*Bruchophagus fellis*

**What is Citrus gall wasp?**

Citrus gall wasp (*Bruchophagus fellis*) is a pest of citrus and a threat to the citrus industry in South 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 first reported in Adelaide in 2010. This pest is now widespread across the Adelaide metropolitan area. It is not a declared pest under South Australia’s *Plant Health Act 2009*, meaning that it is not a notifiable pest and Biosecurity SA will not be treating or applying any specific measures of control.

**How does Citrus gall wasp 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.

**What can be done?**

There are multiple things you can do, but with all of them getting timing right is as important as anything else.

**Understanding the pest life cycle**

The citrus gall wasp has a life cycle that spans one calendar year. The adult wasp emerges from its woody gall in late spring or early summer. The emergence of the wasp is determined by the temperature. Most
wasps emerge around the same time (within 20 days of each other). Warmer springs will see them emerge earlier than cooler springs.

Once the wasp has emerged, it has only 5 to 7 days to mate and then lay up to 100 eggs under the green bark of a citrus tree.

The eggs hatch after 2 to 3 weeks and feed within the stem for the next 9 to 10 months. During this time the tree will promote woody growth around the infected area. These galls become visible from about December and will gradually enlarge through autumn and winter.

After a short pupation period in spring, the adults emerge from little holes in the galls and the cycle continues.

**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
- involving neighbours in an area wide management approach will provide the best results.

**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 (spring). Discarded branches should be destroyed or disposed of in a way that the larva or pre emerging adults cannot continue to develop. The method will depend on the amount and what resources are available. Common destruction methods are to mulch, burn, freeze (24 hours), deep bury (at least >0.5 meters) or tightly sealed plastic bag and placed in general waste bin. Do not dispose of pruned gall off-cuts in normal household waste, green verge collection, or garden bags as it does not eliminate the pest – it spreads the pest to other areas.

**Chemical control**
Chemical and non-chemical treatments may be available from your local nursery or garden center. Please contact them for the most appropriate treatment options for your situation.

Citrus gall wasp is an established pest and no longer a notifiable pest in SA.