

TECH UPDATE – SUMMER 2018/19 SAMURAI® FOR CONTROL OF CITRUS GALL WASP, LEAF MINER, FULLERS ROSE WEEVIL, CALIFORNIA RED SCALE IN GRAPEFRUIT, LEMONS, LIMES, MANDARINS AND ORANGES – REGISTRATION

In December 2018, the APVMA granted registration for the use of Samurai Systemic Insecticide to control Gall wasp, Leaf miner, Fullers rose weevil and California red scale in citrus.

This label replaces the previous permits.

This tech update is to explain how to get the best use of Samurai as per label directions.

Samurai Systemic Insecticide

500 g / kg clothianidin.

Directions for use

Crop	Pest	Rate
Citrus	Gall wasp, Leaf miner, Fullers rose weevil, California red scale	For application through micro – irrigation. 6 - 8 g per tree Use the higher rate for larger older trees (3.5 m or more tall), in high pest pressure situations or where application has been delayed. The lower rate may be used for smaller trees, higher density plantings with small trees and under lower pest pressure

Critical use comments

- Apply two weeks after flowering (petal drop) has finished. For most navel orange varieties, this is in late October or November.
- Where extended or multiple flowerings occur and where the previous seasons crop is still on the tree after flowering, SAMURAI should only be applied after the previous crop has been picked and there is a minimum of 20 weeks until the next harvest.
- The soil must be reasonably dry to start with. Run the irrigation for about 30 minutes and ensure water has reached all parts of the block and wet the soil. Determine the number of trees in the block to be treated. Multiply this by the rate per tree and add this amount to the chemigation tank for injection into the irrigation system. Ensure the volume of water in the tank is sufficient to reach and wet all parts of the block.
- Apply the required amount of SAMURAI through the irrigation system. Continue to run the irrigation system for about 5 hours to ensure thorough wetting of the soil profile to at least 15 cm depth. The soil in the irrigation zone should be free of weeds and heavy mulch. Some leaves and trash is acceptable provided sufficient water is applied to wash the SAMURAI down into the root zone. The speed of control achieved depends on how fast the product enters the root zone and is taken up by the tree actively growing. Quick uptake is particularly important for scale control as this becomes more difficult once they are on the fruit.

- Best results are achieved where drippers or microsprinklers apply water to a limited area under the tree drip line. Do not apply through larger sprinklers that wet beyond the drip line of the tree into the inter row. In these situations, a better result will be achieved by spraying a band of SAMURAI about 1m wide down either side of the tree trunk line under the drip line and then irrigating this in to the soil as described above, so the soil profile is wet to at least 15cm depth. To get the correct SAMURAI rate per hectare multiply the number of trees per hectare by the rate of 6 or 8 g to be used per tree. Do not leave soil applied SAMURAI exposed to sunlight on the surface. Irrigate to incorporate within 24 hours.
- Because of the nature of these pests and the variability of soil application and uptake, complete control is difficult to achieve. Treatment with SAMURAI should be in conjunction with other chemical or biological control measures. This is particularly the case with California red scale where additional control measures may be required about 4 months after treatment with SAMURAI.

General

- Soil treatment should not be applied until two weeks after flowering has finished to ensure bees are no longer foraging in the crop and bee keepers have moved their hives away from blocks to be treated.
- DO NOT apply more than 1 application per year.
- **Bee safety**: Samurai is dangerous to bees and may kill bees foraging in the citrus crop at the time of application. Mortality is most likely if bees drink from irrigation water or dew on the ground after irrigation. Application should not be before two weeks after flowering has finished to ensure all bees have stopped foraging in the crop and to give bee keepers time to move their hives away from blocks to be treated. Beekeepers that are known to have hives within 2 km of the orchard should be notified at least 48 hours prior to application.

Withholding period

Harvest: DO NOT harvest for 20 weeks after application. **Grazing**: DO NOT graze treated area or cut treated area for stock feed.





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Samurai[®] for control of Citrus gall wasp, Leaf miner, Fullers rose weevil, California red scalein grapefruit, lemons, limes, mandarins and oranges – registration

Export of produce

To allow treated fruit to be made available for consumption, the following MRLs have been established:

TABLE 1: Food commodity

Crop type	mg / kg
Citrus fruits	0.5

TABLE 2: Animal feed commodity

Feed type	mg / kg
Citrus pulp, dry	2

These limits only apply to produce marketed and consumed within Australia. If clothianidin treated citrus is to be exported, growers should have fruit residue tested and consult with their exporter for information on the MRLs in the destination country.

Samurai trial in lemons, gall wasp, Mundubbera Qld, 2016; 115-028-5009

Trees 4 metres tall with 12cm trunk diameter 0.5m above the ground. Mean number of new galls / 8 randomly selected new shoots per tree.



If pulp is to be supplied for annual feed it should be tested to ensure it complies with the MRL and ensure customers understand that the pulp should not comprise more than 10% daily intake for beef and dairy cattle for any prolonged period of time.



Citrus trees severely infested by citrus gall wasp showing galls from previous season



Last season gall



New season eggs / larvae

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Scan here to see more information about Samurai Systemic Insecticide

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