

SIMODIS[®] insecticide: Emergency Use Permit for Chilli thrip in berries

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Thrips are notorious for developing insecticide resistance so any control strategy must use a combination of methods including cultural and biological controls and a rotation of different chemistries.

SIMODIS[®] is classified as a Group 30 insecticide (active ingredient Isocycloseram). It is the first Group 30 insecticide to be permitted on berries and adds to the rotation of chemistries that can be used during the vegetative stage of the crop cycle.

This chemical is not permitted for use during flowering and fruiting

SIMODIS[®] is a foliar applied contact insecticide, with no translaminar (systemic) movement in the plant. The active ingredient is absorbed by insect pests either through contact or by ingestion while feeding. Within 1 - 3 hours of contact or ingestion, insect pests stop moving.

SIMODIS[®] suppresses Chilli thrips with the first application. The second application 7 to 10 days later controls the thrip.

To help manage resistance to this new chemistry, a maximum of two applications per season are permitted.

SIMODIS[®] is toxic to bees and beneficial arthropods. It cannot be used on flowering berry crops and any nearby managed hives must be moved away from sprayed areas and provided with a safe source of nectar and pollen. Bees and predators used in IPM programs can be released into the crop 28 days after the final application of SIMODIS[®].

Mode of Action

SIMODIS[®] insecticide works on the insect's nervous system to block an important mechanism for controlling nerve to muscle communication. The target site in the nervous system is in the GABA (gamma-aminobutyric acid) receptor. These receptors control how electrical signals pass from one nerve cell to another. When the active ingredient in SIMODIS[®] insecticide stops the receptors from working, the nervous system goes into overload, resulting in muscular cramps and paralysis of the insect pest. Treated insects and mites are no longer able to move or feed properly, and eventually die from starvation. This novel mode of action has been classified as Group 30 as outlined in the Insecticide Resistance Action Committee guidelines.

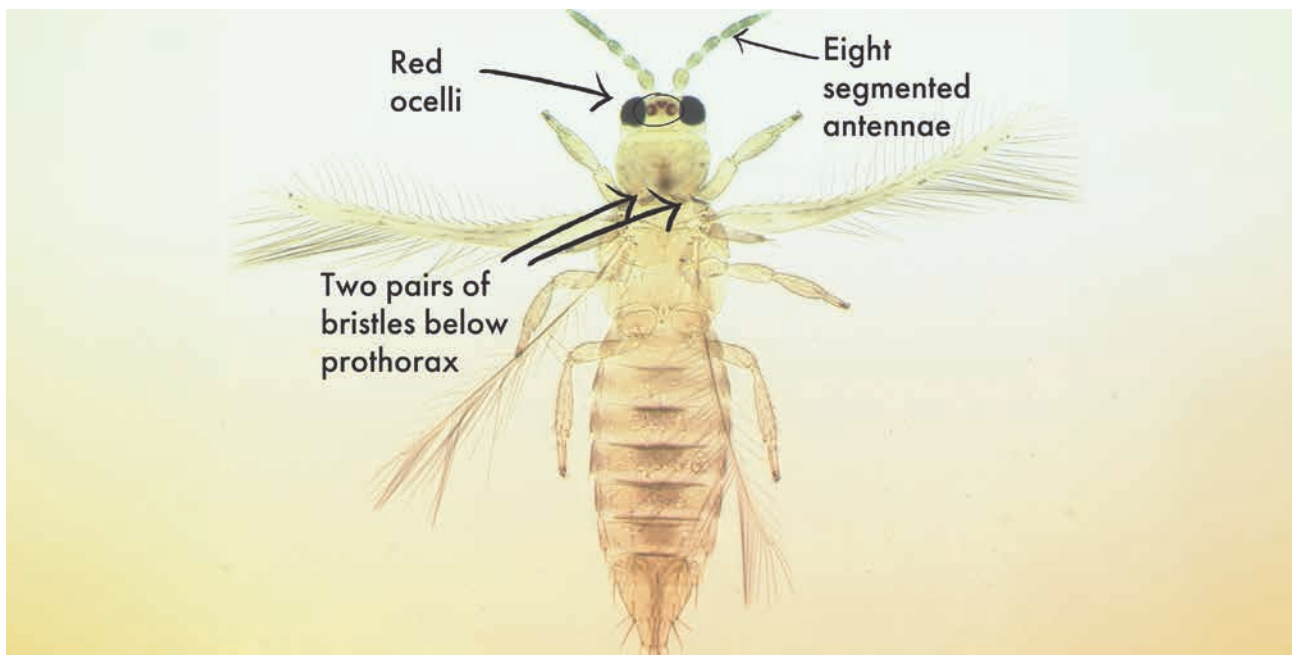


Figure 1. Chilli thrips are pale yellow in colour. They are very small (0.5-1.2mm long) and hard to distinguish from other thrips species without a microscope. Key distinguishing features are shown here.

How Simodis can be used under the Emergency Use Permit

SIMODIS® is registered for use in a variety of vegetable crops where it demonstrates excellent crop safety and helps growers manage resistance in a range of Lepidoptera species, mites, and thrips. Below is a guide to how the chemical can be used on berry crops under Emergency Use Permit PER94616.

Rubus: Only use after pruning/planting when Chilli thrips are present and new growth is developing throughout summer and before flowering. Apply 300mL/ha with a non-ionic surfactant using a vertical sprayer. Ensure thorough coverage of the crop using 500-1000 L/ha.

Blueberries: Only use in evergreen production, apply when Chilli thrips are present after pruning when new growth is developing throughout summer and before flowering. Apply 300mL/ha with a non-ionic surfactant using a vertical sprayer. Ensure thorough coverage of the crop using 600 L/ha.

Strawberries: Only use on second-year plants when Chilli thrips are present in the weeks before they are cut back for second-year production. Apply 300mL/ha with a non-ionic surfactant using a boomspray. Ensure thorough coverage of the crop using 1000 L/ha.

Other considerations

SIMODIS® must not be applied if heavy rains or storms that might cause runoff are forecast within 3 days. Overhead irrigation that wets foliage to the point of runoff must also be avoided for at least 3 days after application.

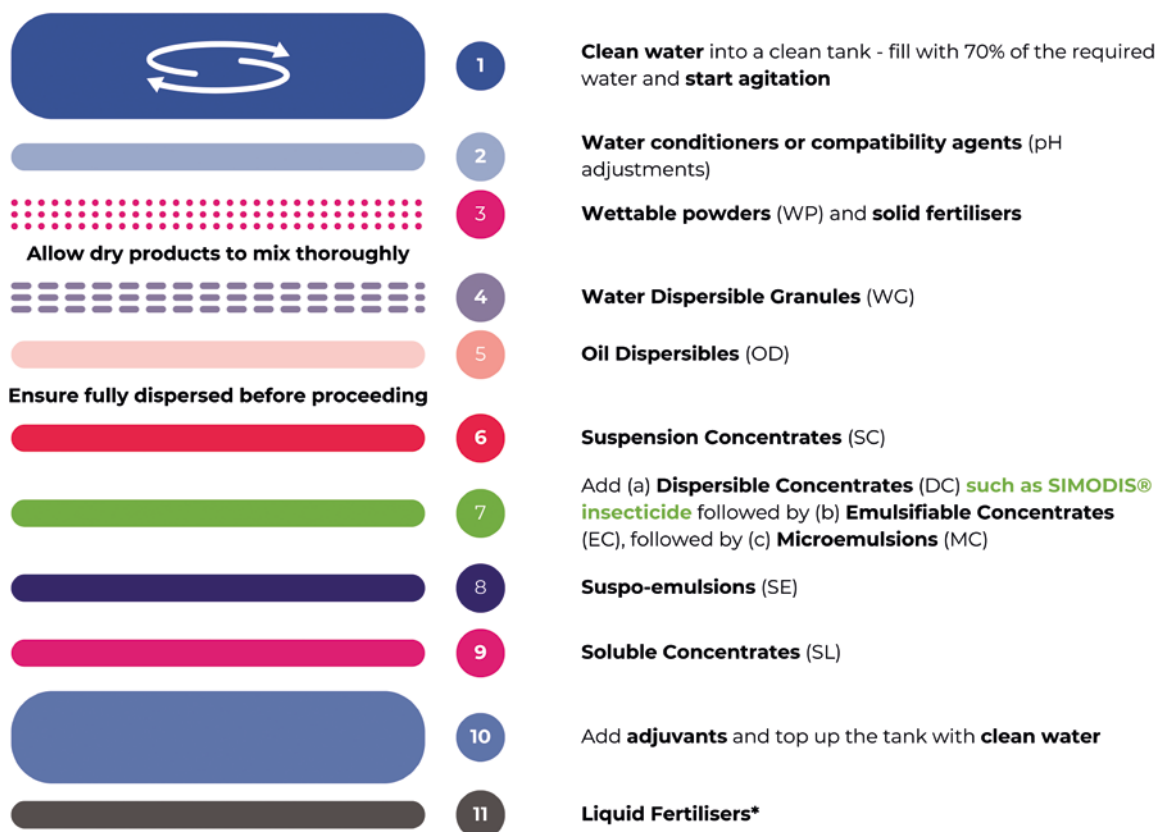
Spray drift restraints including mandatory downwind buffers between the sprayed crop and natural aquatic areas are also required:

- For second-year strawberry crops, a minimum buffer of 350m between the sprayed and natural aquatic areas is required. Boom sprayers must be set no more than 0.5m above the crop and spray droplets must be no smaller than the 'COARSE' spray droplet size category.
- For blueberry and Rubus crops, spray must not be directed above the target canopy and the outside of the sprayer must be turned off when turning at the end of rows and when spraying the outer row on each side of the application site. Where dilute water rates are used, a minimum buffer of 75m between the sprayed and natural aquatic areas is required.

Notes on the formulation

SIMODIS® is a liquid formulation, known as a dispersible concentrate (DC), similar to emulsifiable concentrates (EC). When added to water it completely mixes to give a uniform dispersion. It can be added directly to the spray tank, however, to ensure good compatibility with other tank-mix partners, the following tank-mix order is recommended:

This tank mix information and chart, produced with information provided by Syngenta, is not intended to replace product labels. Always check product labels and manufacturer's tank mix recommendations. If unsure of compatibility, perform a jar test. The physical and chemical properties of various manufacturer's formulations may differ.



*When adding fertiliser, consider the compatibilities and the impact on the tank pH levels

Download the 'Tank Mixing Chemicals' Factsheet from the website RESOURCE LIBRARY by visiting berries.net.au/resource-library and typing 'tank mixing chemicals' in the Search box.

More Information

If you would like to use SIMODIS® on your crop, speak to your local supplier for a detailed overview of the stewardship requirements associated with its use, and always follow the directions of the APVMA permit.

Permit on APVMA website: <https://permits.apvma.gov.au/PER94616.PDF>

Syngenta Simodis web page: <https://www.syngenta.com.au/simodis>

IPM Notes: Chilli Thrips (Spring 2023 issue of the Australian Berry Journal): Find this article online at our website RESOURCE LIBRARY by visiting berries.net.au/resource-library and typing 'chilli thrip' in the Search box.