



Australian Government
**Australian Pesticides and
Veterinary Medicines Authority**

**PERMIT TO ALLOW MINOR USE OF A REGISTERED AGVET CHEMICAL
PRODUCT FOR CONTROL OF LEPIDOPTERA IN (NON-FOOD)
NURSERY STOCK, INCLUDING SEEDLINGS, TUBES, PLUGS, POTTED COLOUR,
TREES, SHRUBS, FOLIAGE PLANTS, PALMS, GRASSES, FRUIT PLANTS, CUT
FLOWERS* AND ORNAMENTALS**

PERMIT NUMBER – PER91923

This permit is issued to the Permit Holder in response to an application granted by the APVMA under section 112 of the Agvet Codes of the jurisdictions set out below. This permit allows a person, as stipulated below, to use the product in the manner specified in this permit in the designated jurisdictions. This permit also allows the Permit Holder and any person stipulated below to claim that the product can be used in the manner specified in this permit.

THIS PERMIT IS IN FORCE FROM 17 MAY 2022 TO 31 MAY 2027

Permit Holder:

GREENLIFE INDUSTRY AUSTRALIA LIMITED
c/- AGAWARE CONSULTING PTY LTD
21 Rosella Avenue
STRATHFIELDSAYE VIC 3551

Persons who can use the product under this permit:

Persons generally.

CONDITIONS OF USE

Products to be used:

Chlorantraniliprole

CORAGEN INSECTICIDE (APVMA No. 61519)

PLUS OTHER REGISTERED PRODUCTS

Containing: 200 g/L CHLORANTRANILIPROLE as the only active constituent.

ACELEPRYN GR TURF INSECTICIDE (APVMA No. 85185)

PLUS OTHER REGISTERED PRODUCTS

Containing: 2 g/kg CHLORANTRANILIPROLE as the only active constituent.

Clitoria Ternatea Extract

SERO-X PESTICIDE (APVMA No. 81070)

PLUS OTHER REGISTERED PRODUCTS

Containing: 400 g/L CLITORIA TERNATEA EXTRACT as the only active constituent.

Cyclaniliprole

TEPPAN 50SL INSECTICIDE (APVMA No. 68689)

PLUS OTHER REGISTERED PRODUCTS

Containing: 50 g/L CYCLANILIPROLE as the only active constituent.

Emamectin

PROCLAIM INSECTICIDE (APVMA No. 50919)

PLUS OTHER REGISTERED PRODUCTS

Containing: 44 g/kg EMAMECTIN present as emamectin benzoate as the only active constituent.

Fenoxycarb

INSEGAR WG INSECT GROWTH REGULATOR (APVMA No. 51224)

PLUS OTHER REGISTERED PRODUCTS

Containing: 250 g/kg FENOXYCARB as the only active constituent.

Methoxyfenozone

PRODIGY INSECTICIDE (APVMA No. 61605)

PLUS OTHER REGISTERED PRODUCTS

Containing: 240 g/L METHOXYFENOZONE as the only active constituent.

Pyrethrins

PYGANIC ORGANIC INSECTICIDE (APVMA No. 59684)

PLUS OTHER REGISTERED PRODUCTS

Containing: 13 g/L PYRETHRINS as the only active constituent.

Directions for Use:

Refer to the *Application Rates*, *Critical Use Comments* and *Additional Conditions* listed in **Table 1** below.

Withholding Period:

DO NOT use on plants grown for human or animal consumption.

Jurisdiction:

All States and Territories

Additional Conditions:

This permit allows for the use of a product in a manner specified on the permit. Persons who wish to prepare for use and/or use products for the purposes specified in this permit must read, or have read to them, the details and conditions of this permit. Unless otherwise stated, the use of the product must be in accordance with the product label.

To Avoid Crop Damage

Nursery stock is not known to be sensitive to the chemical insecticide products listed in this permit when used in strict accordance with the rate, conditions of use and other warnings.

However, the large number of disparate crop lines produced in commercial production nurseries means that not all these products have been fully evaluated for crop safety on all species, or in all situations where treatment may be undertaken. Some of these insecticides may demonstrate toxicity under certain situations, application methods, application rates and weather conditions to susceptible nursery stock. Some insecticides may also leave undesirable spray residue on foliage and flowers.

If unsure of crop tolerance, users must treat a sample number of plants or a small area prior to whole crop treatment and monitor any phytotoxic effects that will compromise production goals. This action cannot guarantee crop safety as application, environmental and crop conditions may vary from test treatment to whole of crop treatment. Any instances of phytotoxic damage should be reported immediately to the permit holder.

Resistance Management

Use insecticide products in accordance with existing *Insecticide Resistance Management Strategies* and in accordance with best practice. Insecticide products should be used as part of an integrated pest management program, which incorporates as many control options as possible to minimise pest pressure. It is important that approved insecticide products are rotated between different chemical mode of action (MoA) groups at regular intervals within a structured disease management plan.

Insecticide Resistance Management Strategies have been developed by CropLife Australia. An updated version of these strategies is available from CropLife Australia's website at: <http://www.croplife.org.au/industry-stewardship/resistance-management> or search on-line for Resistance Management CropLife Australia.

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* Includes wildflower crops. Refer to Wildflower crops list in Appendix 1.

DIRECTIONS FOR USE:

Table 1: Lepidoptera control in nursery stock (non-food) and ornamentals

Including (non-food) – seedlings, tubes, potted colour, trees, shrubs, foliage plants, palms, grasses, fruit plants (non-bearing), cut flowers* and ornamentals.

| Pest | Product (MoA) | Rate | Critical Use Comments | Additional Conditions |
|--|--|---|--|--|
| <p>Apple looper (<i>Phrissogonus laticostata</i>)</p> <p>Fall Armyworm (<i>Spodoptera frugiperda</i>)</p> <p>Heliothis (<i>Helicoverpa</i> spp.)</p> <p>Lightbrown apple moth (<i>Epiphyas postvittana</i>)</p> <p>Soybean looper (<i>Chrysodeixis includens</i>).</p> | <p>200 g/L chlorantraniliprole (28)</p> | <p>10 mL/100 L OR 100 mL/ha</p> | <ul style="list-style-type: none"> •Apply spray treatment as egg and larvae reach economic thresholds and damage is observed. •Apply by a ground-based sprayer (hydraulic spray equipment or equivalent). •Apply maximum 3 foliar spray applications within an annual production cycle. •Thorough coverage of foliage is essential: apply diluent to the point of run-off. •Consecutive treatments should be applied 7 to 10 days apart. •DO NOT apply more than 2 consecutive applications. •Use in accordance with existing CropLife resistance and industry IPM strategies and in accordance with best practice. •Add a non-ionic surfactant at specified label rates. Refer to label directions for mixing instructions. | <p>DO NOT apply if rainfall is expected within 2 hours of application.</p> <p>DO NOT allow effluent or run-off from protected cropping systems containing this product to enter dams, streams, ponds or other waterways.</p> |
| <p>Fall Armyworm (<i>Spodoptera frugiperda</i>)</p> | <p>2 g/kg chlorantraniliprole (28)</p> | <p>75 g/m²</p> | <ul style="list-style-type: none"> •Incorporate in potting media prior to planting/transplanting of nursery stock. Reapply as new infestations occur. •DO NOT apply more than 280 kg product per hectare per year in broadcast applications to turf. | <p>DO NOT apply when the soil is saturated with water as adequate distribution of the active ingredient vertically in the soil profile cannot be achieved under this condition.</p> |

| Pest | Product (MoA) | Rate | Critical Use Comments | Additional Conditions |
|---|--|------------------------------|---|--|
| Heliiothis (<i>Helicoverpa</i> spp.) | 400 g/L <i>Clitoria ternatea</i> extract (UN) | 200 mL/100 L OR 2 L/ha | <ul style="list-style-type: none"> •Monitor the crop and apply a foliar spray when pests are first observed. Time the applications to coincide with egg hatch and when larvae are up to 5 mm in length. Repeat applications as necessary. •Apply by air-blast sprayer, air-shear sprayer, back-pack mister, hand lance sprayer, spray boom or equivalent. •Thorough coverage is essential. Apply as a high volume application ensuring all foliage is treated. •DO NOT apply more than 5 applications per crop. •DO NOT apply less than 7 days after the last treatment. | Use in conjunction with an Integrated Pest Management program. |

| Pest | Product (MoA) | Rate | Critical Use Comments | Additional Conditions |
|---|-----------------------|-------------------------------------|--|---|
| Cluster Caterpillar (<i>Spodoptera litura</i>) Fall Armyworm (<i>Spodoptera frugiperda</i>) Heliothis (<i>Helicoverpa</i> spp.) Lightbrown apple moth (<i>Epiphyas postvittana</i>) | 44 g/kg emamectin (6) | 15-25 g/100 L OR 150-250 g/ha | <ul style="list-style-type: none"> •For optimum performance, apply cover spray immediately following egg hatch and/or presence of early nymphal stages. •Thorough coverage of foliage is essential for optimum performance. •Use the lower rate on low to moderate infestations. Use higher rate under heavier infestation pressure, or during periods of hot weather. •DO NOT apply more than 2 applications per crop, with a minimum re-treatment interval of 7 days between applications. •DO NOT apply more than 4 spray applications of emamectin within an annual nursery production cycle. •Dangerous to bees. DO NOT spray any plants in flower while bees are foraging. | DO NOT apply spray if rainfall is imminent, or spray conditions are unfavourable. |
| Diamondback moth (<i>Plutella xylostella</i>) Loopers (<i>Lepidoptera</i>) | | 25-30 g/100 L OR 250-300 g/ha | | |

| Pest | Product (MoA) | Rate | Critical Use Comments | Additional Conditions |
|--|---------------------------------|-------------------------|--|--|
| <p>Heliiothis (<i>Helicoverpa</i> spp.)</p> <p>Lightbrown apple moth (<i>Epiphyas</i> <i>postvittana</i>).</p> | <p>250 g/kg fenoxycarb (7B)</p> | <p>20 or 40 g/100 L</p> | <ul style="list-style-type: none"> •Use the appropriate rate depending on plant size, canopy stage and density, time of year and pest pressure. •Apply maximum of 2 applications per crop by dilute or concentrate spraying. A minimum re-treatment interval of 10 days must be observed. •Commence application at first signs of egg laying. •Ensure thorough coverage of all plant surfaces. •DO NOT spray if rainfall is expected before spray has dried. •DO NOT treat plants in flower to prevent contamination of pollen and possible effects on bees. | <p>Safety directions</p> <p>Avoid contact with eyes and skin. Wash hands after use. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist (or long sleeve shirt and long pants) and face shield or goggles. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or long sleeve shirt and long pants). After each day's use, wash face shield, goggles and contaminated clothing.</p> <p>Re-entry statement</p> <p>Do not allow entry into treated areas until the spray has dried, unless wearing cotton overalls buttoned to the neck and wrist (or long sleeve shirt and long pants) and chemical resistant gloves. Clothing must be laundered after each day's use.</p> |

| Pest | Product (MoA) | Rate | Critical Use Comments | Additional Conditions |
|---|--|------------------|--|--|
| Fall Armyworm <i>(Spodoptera frugiperda)</i> Lepidopteran larvae (Lepidoptera) | 240 g/L methoxyfenozone (18) | 125-175 mL/100 L | <ul style="list-style-type: none"> •Apply at the first signs of infestation, or when pest thresholds are reached. •Regularly scout crops to monitor for eggs and larvae. Treat when pests appear, targeting eggs at hatch or small larvae (prior to third instar stage) before the pest becomes entrenched. •Apply a maximum of 3 applications per crop per season, at a minimum 10-day interval. •Ensure spray application provides thorough coverage of all plant foliage. Adjust water spray volume to crop density and growth stage. •Use suitable and correctly calibrated ground application equipment. For foliar application use air-blast sprayer, air-shear sprayer, hand-lance sprayer, boom spray or equivalent equipment. •Use the higher rate when longer residual control is required, or during periods of high pest pressure or rapid crop growth, or when crops are well advanced, or when insect infestation is high, or when conditions favour high pest pressure. •Refer to the CropLife Resistance Management Strategy for Fall Armyworm. | <p>DO NOT apply using spray equipment carried on the back of the user.</p> <p>DO NOT use in covered or protected situations such as glasshouses, greenhouses, shade houses or plastic tunnels.</p> <p>DO NOT apply if rain or overhead irrigation is expected within 6 hours. Retain the first flush of irrigation tailwater/storm water in the tailwater dam after application.</p> <p>DO NOT use more than 3 sprays per season in any single crop.</p> |

| Pest | Product (MoA) | Rate | Critical Use Comments | Additional Conditions |
|---|-------------------------------|---------------------|---|--|
| <p>Heliiothis (<i>Helioverpa</i> spp.)</p> <p>Lightbrown Apple Moth (<i>Epiphyas</i> <i>postvittana</i>)</p> | <p>13 g/L pyrethrins (3A)</p> | <p>200 mL/100 L</p> | <ul style="list-style-type: none"> •For optimum performance, apply cover spray immediately following egg hatch to capture early larval stages. •Apply by a ground-based sprayer (hydraulic spray equipment or equivalent). •Thorough coverage of foliage is essential for optimum performance. •DO NOT apply more than 4 applications per crop. Consecutive treatments should be applied 7 to 10 days apart. •DO NOT apply more than 5 spray applications of pyrethrins within an annual nursery production cycle. •This product is not intended to be the only method of insect pest control and should be used as part of an integrated pest management program. •Pyrethrins have broad range insecticidal activity and will kill beneficial insects when present. •Refer to the CropLife Resistance Management Strategy for Fall Armyworm. | <p>DO NOT apply spray if rainfall is imminent, or spray conditions are unfavourable.</p> |
| <p>Cluster Caterpillar (<i>Spodoptera</i> <i>litura</i>)</p> <p>Diamondback moth (<i>Plutella</i> <i>xylostella</i>)</p> <p>Fall Armyworm (<i>Spodoptera</i> <i>frugiperda</i>)</p> | | <p>240 mL/100 L</p> | | |

| Pest | Product (MoA) | Rate | Critical Use Comments | Additional Conditions |
|--|-----------------------------------|------------------|--|---|
| Lepidopteran adults, larvae and hatched eggs (Lepidoptera) | 50 g/L cyclaniliprole (28) | 80-120 mL /100 L | <ul style="list-style-type: none"> • Monitor crops and commence application when pests are first detected. Targeting the younger insect growth stages (e.g. nymphs/crawlers) will be most efficacious. • Apply as a foliar application by hydraulic spray equipment, backpack sprayer, or equivalent. • Use a spray volume sufficient to ensure thorough coverage of all plant surfaces. • Apply spray mixture near to the point of run-off to ensure thorough coverage of all plant surfaces. • DO NOT apply more than 2 applications per crop. • DO NOT apply less than 10 days after the initial treatment. • The addition of a non-ionic wetter (eg. Agral at 10 mL/100 L or Activator 90 at 50 mL/100 L) will assist with coverage and improve efficacy on beetles and sucking pest. The addition of a methylated seed oil (eg. Banjo or Hasten at 200 mL/100 L up to 1 L/ha) will assist with the control of aphids. • Apply a maximum of 3 applications of any Group 28 insecticides to the crop. | <p>Comply with <i>Spray drift restraints for use of Cyclaniliprole listed on the next page</i></p> <p>DO NOT apply by a boom sprayer.</p> <p>DO NOT apply if heavy rains or storms are forecast within 3 days.</p> <p>DO NOT irrigate to the point of runoff for at least 3 days after application.</p> <p>Integrated Pest Management Toxic to beneficial arthropods. Not compatible with integrated pest management (IPM) programs utilising beneficial arthropods. Minimise spray drift to reduce harmful effects on beneficial arthropods in non-crop areas.</p> <p>Protection of Wildlife, Fish, Crustaceans and Environment Very toxic to aquatic life. DO NOT contaminate wetlands or watercourses with this product or used containers.</p> <p>Protection of Honey Bees and Other Insect Pollinators Toxic to bees. Harmful to bee brood. DO NOT apply to crops from the onset of flowering until flowering is complete. DO NOT allow spray drift to flowering weeds or flowering crops in the vicinity of the treatment area. Before spraying, notify beekeepers to move hives to a safe location with an untreated source of nectar and pollen, if there is potential for managed hives to be affected by the spray or spray drift.</p> |

Spray drift restraints for use of Cyclaniliprole

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift.

DO NOT allow bystanders to come into contact with the spray cloud.

DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the relevant buffer zone table below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between three and 20 kilometres per hour at the application site during the time of application.

DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

DO NOT apply by a vertical sprayer unless the following requirements are met:

- Spray is not directed above the target canopy.
- The outside of the sprayer is turned off when turning at the end of rows and when spraying the outer row on each side of the application site.
- For dilute water rates up to the maximum listed for each type of canopy specified, minimum distances between the application site and downwind sensitive areas are observed (see the following table titled 'Buffer zones for vertical sprayers').

Buffer zones for vertical sprayers

| Type of target canopy and dilute water rate | Mandatory downwind buffer zones |
|---|---------------------------------|
| | Natural aquatic areas |
| 2 metres tall and shorter, maximum dilute water rate of 1200 L/ha | 10 metres |
| Taller than 2 metres (not fully-foliated), maximum dilute water rate of 1200 L/ha | 20 metres |
| Taller than 2 metres (fully-foliated), maximum dilute water rate of 1200 L/ha | 15 metres |

Appendix 1

Wildflower crops

Banksia species (*Banksia* spp.) - cultivars and hybrids

Berzelia or button brush (*Berzelia* spp.)

Black kangaroo paw species (*Macropidia* spp.) - cultivars and hybrids

Christmas bells (*Blandfordia grandiflora*)

Christmas bush (*Ceratopetalum gummiferum*)

Geraldton wax, Waxflower species (*Chamelaucium* spp.) - cultivars and hybrids

Kangaroo paw species (*Anigozanthos* spp.) - cultivars and hybrids

Leucadendron species - cultivars and hybrids

Leucospermum species (*Leucospermum* spp.) - cultivars and hybrids (pincushions)

Protea species (*Protea* spp.) - cultivars and hybrids

Riceflower (*Ozothamnus diosmifolius*)

Waratah species (*Telopea speciosissima*) - cultivars and hybrids