

2018-0523  
2018-05-23  
Based on 2017-3446

**(Container)**



# Entrust™ Insecticide

GROUP	5	INSECTICIDE
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COMMERCIAL

READ THE LABEL AND BOOKLET BEFORE USING  
KEEP OUT OF REACH OF CHILDREN

ACTIVE INGREDIENT: spinosad                                  240 g/L  
Suspension concentrate

REGISTRATION NO. 30382 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 1 L - bulk

**Dow AgroSciences Canada Inc.**  
**2400, 215 - 2<sup>nd</sup> Street SW**  
**Calgary Alberta**  
**T2P 1M4**  
1-800-667-3852

®™Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

**PRECAUTIONS****KEEP OUT OF REACH OF CHILDREN****DO NOT APPLY BY AIR**

Avoid contact with eyes, skin and clothing. During mixing and loading, application, and cleanup and repair activities, wear long-sleeved shirt and long pants, shoes plus socks and chemical resistant gloves. Applicators must wear a chemical resistant hat when using open cab airblast application equipment. During application, clean-up and repair activities wear long-sleeved shirt and long pants, shoes plus socks and chemical resistant gloves. For Caneberries (Crop Subgroup 13-07A), Bushberries (Crop Subgroup 13-07B; except highbush cranberries and lingonberries) and Low Growing Berries (Crop Subgroup 13-07G; except lowbush blueberries and cranberries), applicators must wear a chemical resistant hat when using open cab airblast application equipment. Wash thoroughly with soap and water after handling.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

For sweet corn, do not enter, or allow worker entry, into treated areas within 7 days after application to carry out detasselling or hand harvesting activities.

For crops in the Brassica Leafy Greens Crop Subgroup 4-13B and Brassica Head and Stem Vegetables Crop Group 5-13 and Kohlrabi, do not enter, or allow worker entry, into treated areas for 3 days to carry out hand harvesting, irrigating, pruning, topping, thinning, or tying activities.

For potatoes, greenhouse lettuce, cucumbers, peppers, tomatoes and eggplant do not enter, or allow worker entry, into treated areas during the restricted entry interval (REI) of 12 hours after application.

For grapes, do not enter, or allow worker entry, into treated areas within 15 days after application to carry out girdling or cane-turning activities or within 7 days after application to carry out training, tying, hand harvesting, hand pruning and thinning. For all other activities including mechanical harvesting, do not enter, or allow worker entry, into treated areas until pesticide residues have dried.

For all other activities, do not enter, or allow workers, adults, children or pets to enter into treated areas until pesticide residues have dried.

**FIRST AID**

**Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.**

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**TOXICOLOGICAL INFORMATION**

No specific antidote. Employ supportive care. Treatment should be based on the judgment of the physician in response to reactions of the patient.

**AGRICULTURAL CHEMICAL**

Do not ship or store with food, feeds, drugs or clothing.

**ENVIRONMENTAL HAZARDS**

This product is highly toxic to bees exposed to direct treatment, drift or residues on blooming plants. Do not apply this product or allow it to drift to blooming plants if bees are visiting the treatment area. This product is harmful to parasitoids and predatory mites and slightly harmful to foliage-dwelling predators. Care should be taken when using this product in an integrated pest management program where users are relying on the presence of beneficial arthropods.

This product is highly toxic to aquatic invertebrates. Do not contaminate aquatic habitats, such as lakes, rivers, sloughs, ponds, coulees, prairie potholes, creeks, marshes, streams, reservoirs, and wetlands, when cleaning and rinsing spray equipment or containers.

This product contains an active ingredient and aromatic petroleum distillates which are toxic to aquatic organisms.

To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to: heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g., soils that are compacted or fine textured such as clay).

Avoid application of this product when heavy rain is in the forecast, or immediately after a rainfall.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip (buffer zone) between the treated area and the edge of the water body.

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty.

**[Airblast or Mist blower] application**

DO NOT direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. DO NOT apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side. A buffer zone of 2 metres (early season) or 1 metre (late season) is required between the point of direct application and closest downwind edge of sensitive aquatic habitats if the aquatic habitats are less than 1 metre in depth.

**Field sprayer application**

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification. Boom height must be 60 cm or less above the crop or ground.

**STORAGE**

Avoid freezing. Store in original container in a secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Keep away from food and feed.

**DISPOSAL****Recyclable Containers:**

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

**Returnable Containers:**

Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in any way that is inconsistent with the directions on the label.

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**PRECAUTIONS****KEEP OUT OF REACH OF CHILDREN****DO NOT APPLY BY AIR**

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Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

For sweet corn, do not enter, or allow worker entry, into treated areas within 7 days after application to carry out detasselling or hand harvesting activities.

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**TOXICOLOGICAL INFORMATION**

No specific antidote. Employ supportive care. Treatment should be based on the judgment of the physician in response to reactions of the patient.

**AGRICULTURAL CHEMICAL**

Do not ship or store with food, feeds, drugs or clothing.

**ENVIRONMENTAL HAZARDS**

This product is highly toxic to bees exposed to direct treatment, drift or residues on blooming plants. Do not apply this product or allow it to drift to blooming plants if bees are visiting the treatment area. This product is harmful to parasitoids and predatory mites and slightly harmful to foliage-dwelling predators. Care should be taken when using this product in an integrated pest management program where users are relying on the presence of beneficial arthropods.

This product is highly toxic to aquatic invertebrates. Do not contaminate aquatic habitats, such as lakes, rivers, sloughs, ponds, coulees, prairie potholes, creeks, marshes, streams, reservoirs, and wetlands, when cleaning and rinsing spray equipment or containers.

This product contains an active ingredient and aromatic petroleum distillates which are toxic to aquatic organisms.

To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to: heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g., soils that are compacted or fine textured such as clay).

Avoid application of this product when heavy rain is in the forecast, or immediately after a rainfall.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip (buffer zone) between the treated area and the edge of the water body.

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty.

**[Airblast or Mist blower] application**

DO NOT direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. DO NOT apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side. A buffer zone of 2 metres (early season) or 1 metre (late season) is required between the point of direct application and closest downwind edge of sensitive aquatic habitats if the aquatic habitats are less than 1 metre in depth.

**Field sprayer application**

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification. Boom height must be 60 cm or less above the crop or ground.

**STORAGE**

Avoid freezing. Store in original container in a secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Keep away from food and feed.

**DISPOSAL****Recyclable Containers:**

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

**Returnable Containers:**

Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**DIRECTIONS FOR USE - APPLES**

Entrust Insecticide is derived from the fermentation of *Saccharopolyspora spinosa*. Entrust Insecticide is recommended for use in integrated pest management programs. Entrust Insecticide should be applied when scouting indicates that target pest densities have reached the economic threshold. Follow the specific use instructions given in this label to control target pests. Entrust Insecticide should be mixed with water and applied with ground application equipment only. Any insect control agent can become less effective over time if target insects develop resistance to its mode of action. Adherence to local integrated pest management strategies helps to prolong the usefulness of all insect control products.

Do not enter, or allow worker entry into treated areas until pesticide residues have dried.

**Application Rate**

Always shake well before use. Avoid freezing. Use the following table.

Insect Pest	Application Rate (mL product/ha)	Maximum Number of Applications per Crop per Year
Oblique banded leafroller larvae	364	3

**Application Instructions**

Apply product in a minimum of 1000 L water per hectare (amount of water will vary according to tree size). If adequate spray coverage of plant canopy requires less solution per hectare, adjust spray volume accordingly while using the same spray concentration (mL product/L water). Do not exceed 364 mL product/ha per application. Mix the recommended dosage of Entrust Insecticide in sufficient water to ensure adequate coverage and apply as a dilute spray using ground airblast equipment.

Attention should be given to sprayer speed and calibration, wind speed, and tree foliar canopy to ensure adequate spray coverage of Entrust Insecticide. Ensure all plant parts are thoroughly wetted, to the point of runoff, with spray solution. To determine the number of litres of spray per hectare required in your apple orchard, consult the provincial fruit recommendations guide, or pest management advisors and extension specialists.

**Application Timing**

Monitor larval population in the spring, and apply when larvae begin emerging and are actively feeding, but before they roll up in the leaves. For control of the summer generation, monitor adult moth flight and larval densities to determine correct timing application. A repeat application 7 to 10 days after the initial application may be necessary for control. Apply only if treatment thresholds are exceeded. A maximum seasonal rate of 1.1 L product/ha of Entrust Insecticide may be applied. Avoid treating sequential generations with the same class of insect control products to delay resistance selection. Consult provincial guidelines and local extension experts for monitoring protocols and thresholds for treatment.

**Preharvest Interval: Do not apply within 7 days of harvest.**



**DIRECTIONS FOR USE - POTATOES****Application Rate**

<b>Pest</b>	<b>Application Rate (mL product/ha)</b>	<b>Maximum Number of Applications per Crop per Year</b>	<b>Maximum Seasonal Rate (mL product/ha/year)</b>
Colorado potato beetle larvae	167-334	Up to 2	500 mL
European corn borer larvae	250	Up to 2	

**Application Instructions**

Always shake well before use. Avoid freezing. Fill the spray tank with water to 1/2 of the total spray volume required. Start agitation and add the required amount of Entrust Insecticide. Continue mixing and agitation while filling the spray tank to the required spray volume. Maintain sufficient agitation during application to ensure uniformity of the spray mix. Do not allow water or spray mixture to back-siphon into the water source. Use power-operated ground spray equipment capable of thorough coverage of the target crop. Orient the boom and the nozzles to obtain uniform crop coverage. Follow manufacturers recommendations for ideal nozzle spacing and spray pressure to optimize uniformity of coverage and maximize deposition within the target area.

**Application Timing**

Use Entrust Insecticide at the dosages indicated, applied as a foliar spray to control Colorado potato beetle larvae and European corn borer larvae in potato crops. For control of Colorado potato beetle larvae, target eggs at hatch or small larvae. Use the higher application rate for higher pest pressure, or when extended egg hatch is anticipated. A repeat application 7 to 10 days after the initial application may be necessary. For control of European corn borer, time the application of Entrust Insecticide to coincide with peak egg hatch. Scout for European corn borer by monitoring egg laying and egg hatch to determine application timing. A repeat application after 7 days may be necessary if egg hatch is extended. Mix the required dosage in sufficient water to ensure thorough and complete coverage of the foliage. A maximum seasonal rate of 500 mL product/ha of Entrust Insecticide may be applied. Avoid treating sequential generations with the same class of insect control products to delay resistance selection. Consult with local and provincial pest control advisors and extension specialists to determine specific application timings or additional use recommendations for your area.

**Pre-harvest interval: Do not apply Entrust Insecticide within 7 days of harvest.**

**DIRECTIONS FOR USE - TURF AND OUTDOOR ORNAMENTALS**

Entrust Insecticide contains the active ingredient spinosad which is derived from a naturally occurring organism. Entrust Insecticide is recommended for use in integrated pest management programs and can be applied when field scouting indicates that target pest densities have reached the economic threshold. Use: Consult provincial guidelines and/or local extension experts. Follow the specific use instructions given in this label to control target pests.

**Application Rate**

Always shake well before use. Avoid freezing. Use Entrust Insecticide to control ornamental insect pests listed in the following table. Dilute Entrust Insecticide in water and apply using suitable hand or power-operated application equipment to provide complete uniform plant coverage. Attempt to penetrate dense foliage, but avoid over-spraying to the point of excessive runoff. Uniform coverage is critical for effective insect control.

Insect Pest	Application Rate (mL product/1000 L)	Maximum Number of Applications per Crop per Year
conifer sawfly larvae, eastern tent caterpillar, elm leaf beetle, gypsy moth, willow leaf beetle	50	4
western flower thrips	100	3

### Application Timing

Do not reapply within less than 7 days for all insect pests.

**Leaf beetles (such as Elm leaf and Willow leaf beetle)** - for effective control of elm leaf and willow leaf beetle larvae, applications should be made in the spring or early summer when feeding is observed.

**Western flower thrips** - for effective control of exposed western flower thrips on outdoor ornamentals, monitor and apply when populations reach damaging levels. For best results, apply at the floral stage of development and repeat at 7-14 day intervals as required by population pressure.

**Tent caterpillar (such as eastern tent caterpillar)** - for effective control of tent caterpillar, applications should be made early when webs are first observed and the spray should be directed into the web and surrounding foliage within at least 1 metre of the nest.

**Conifer sawfly larvae** - for effective control of sawfly larvae, applications should be made as soon as larvae appear (2<sup>nd</sup> -4<sup>th</sup> instar).

**Gypsy moth** - for effective control of gypsy moth larvae, applications should be timed for when larvae are small and majority of eggs are hatched.

### Ornamental Phytotoxicity

Entrust Insecticide has been tested on a variety of herbaceous and woody ornamental plants without phytotoxic symptoms. However, because it is not possible to test all ornamental plant species, varieties and cultivars, and because environmental factors and varietal and plant growth stage may affect phytotoxic expression, it is recommended that a small group of test plants be treated at the anticipated use rate and observed for at least 5 - 7 days to determine phytotoxicity before treating large numbers of those plants. The applicator/user assumes responsibility for determining if Entrust Insecticide is safe to treated plants under commercial growing conditions.

### TURFGRASS (LAWNS, SOD AND SEED FARMS, AND GOLF COURSES)

#### Application Rate

Use Entrust Insecticide to control sod webworm. Dilute Entrust Insecticide in water and apply using suitable hand or power-operated application equipment. Select the higher application rate when pest pressure is high.

Insect Pest	Application Rate (mL product/ha)	Maximum Number of Applications per Commodity per Year
Sod webworm	100-200	4

**Sod webworm:** For control of sod webworm larvae, applications during the late afternoon or early evening can maximize control. Delay watering or mowing of the treated area for 12 to 24 hours after treatment. Do not reapply within less than 7 days.

### Mixing Instructions

Fill the spray tank with water to ½ of the total spray volume required. Start agitation and add the required amount of Entrust Insecticide. Continue mixing and agitation while filling the spray tank to the required spray volume. Maintain sufficient agitation during application to ensure uniformity of the spray mix.

Use ground based spray equipment capable of thorough coverage of the target. Orient the boom and the nozzles to obtain uniform crop coverage. Follow manufacturers' recommendations for ideal nozzle spacing and spray pressure and minimize boom height to optimize uniformity of coverage and maximize depositions within the target area.

**NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS:**

The DIRECTIONS FOR USE for this product for the use(s) described below were developed by persons other than Dow AgroSciences Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Dow AgroSciences Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crop(s) listed below.

Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Dow AgroSciences Canada Inc. harmless from any claims based on efficacy and/or phytotoxicity in connection with the use(s) described below.

**DIRECTIONS FOR USE**

**Field sprayer application**

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification. Boom height must be 60 cm or less above the crop or ground.

**Airblast Application.**

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. DO NOT apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side.

DO NOT apply by air.

**ROOT AND TUBER VEGETABLES**

Host(s): Horseradish, radish, Oriental radish, rutabaga, turnip  
 Pest(s): cabbage looper, imported cabbage worm, diamondback moth, and suppression of flea beetle (*Phyllotreta spp.*, *Psylliodes napi*, *Systema frontalis*)  
 Rate: 364 mL product/ha  
 Application: Apply 364 mL Entrust Insecticide per hectare in sufficient water to ensure thorough and complete coverage of the foliage. Apply up to a maximum of 3 applications per year. Allow 7 - 10 days between applications. Do not apply within 3 days of harvesting.  
 Timing: Monitor larval population and apply when treatment thresholds are exceeded. Consult provincial guidelines and local extension specialists for monitoring protocols and treatment thresholds. For the suppression of flea beetle, apply at the emergence of adult flea beetles and reapply in 7-10 day intervals as necessary.

**SWEET CORN**

Host(s): Sweet corn  
 Pest(s): European corn borer  
 Rate: 167 mL product/ha

Application:	Apply 167 mL Entrust Insecticide in 1000 L water per hectare up to a maximum of 2 applications per year. If adequate spray coverage of plant canopy requires less solution per hectare, adjust spray volume accordingly while using the same spray concentration (mL product/L water). Do not exceed 167 mL product per hectare per application. A second application 7 to 10 days after the initial application may be necessary to achieve effective control. Do not apply within 7 days of harvesting. Do not apply within 28 days of fodder harvest or within 7 days of forage harvest.
Timing:	Scout for European corn borer to monitor egg laying and egg hatch. In order to achieve effective control, applications of Entrust Insecticide must be timed to coincide with peak egg hatch.

### LEAFY VEGETABLES, 4-13

#### LEAFY GREENS: CROP SUBGROUP 4-13A

Host(s):	Amaranth, Chinese; Amaranth, leafy; Aster, Indian; Blackjack; Cat's Whiskers; Cham-chwi; Cham-na-mul; Chervil, fresh leaves; Chipilin; Chrysanthemum, garland; Cilantro, fresh leaves; Corn salad; Cosmos; Dandelion; Dang-gwi; Dillweed, fresh leaves; Dock; Dol-nam-mul; Ebolo; Endive; Escarole; Fameflower; Feather cockscomb; Good King Henry; Huauzontle; Jute leaves; Lettuce, bitter; Lettuce, head; Lettuce, leaf (Romaine); Orach; Parsley, fresh leaves; Plantain, buckhorn; Primrose, English; Purslane, garden; Purslane, winter; Radicchio (Red Chicory); Spinach; Spinach, Malabar; Spinach, New Zealand; Spinach, tree (Giant Lambsquarter); Swiss chard; Tanier spinach; Violet, Chinese
Pest(s):	cabbage looper, imported cabbage worm, diamondback moth
Rate:	364 mL product/ha
Application:	Apply 364 mL Entrust Insecticide per hectare in sufficient water to ensure thorough and complete coverage of the foliage. Apply up to a maximum of 3 applications per year. Allow 7-10 days between applications. Do not apply within 1 day of harvesting.
Timing:	Monitor larval populations and apply when treatment thresholds are exceeded. Consult provincial guidelines and local extension specialists for monitoring protocols and treatment thresholds.

#### BRASSICA LEAFY GREENS: CROP SUBGROUP 4-13B

Host(s):	Arugula; Broccoli raab; Broccoli, Chinese; Cabbage, Abyssinian; Cabbage, seakale; Chinese cabbage, bok choy; Collards; Cress, garden; Cress, upland; Hanover salad; Kale; Maca; Mizuna; Mustard greens; Radish, leaves; Rape greens; Rocket, wild; Shepherd's purse; Turnip greens; Watercress
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#### **For control of cabbage looper, imported cabbage worm, diamondback moth; for suppression of crucifer flea beetle**

Rate:	364 mL product/ha
Application:	Apply 364 mL Entrust Insecticide per hectare in sufficient water to ensure thorough and complete coverage of the foliage. Apply up to a maximum of 3 applications per year. Allow 7 - 10 days between applications. Do not apply within 3 days of harvesting.
Timing:	Monitor larval population and apply when treatment thresholds are exceeded. Consult provincial guidelines and local extension specialists for monitoring protocols and treatment thresholds. For the suppression of crucifer flea beetle, apply at the emergence of adult flea beetles and reapply in 7-10 day intervals as necessary.

#### **For suppression of thrips and reduction in damage from Swede midge**

Rate:	292 mL product/ha
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- Application: Apply 292 mL Entrust Insecticide per hectare. A foliar spray of 300 to 500 L of water per hectare is recommended to ensure thorough coverage of foliage.
- Timing: For thrips, apply when the pest first appears. For Swede midge, apply when local treatment thresholds have been reached as determined by monitoring. Reapply at 7 to 10 day intervals if monitoring indicates this is necessary. Use a maximum of three applications per year. Do not apply within 3 days to harvest.

### **FRUITING VEGETABLES CG 8-09**

- Host(s): Fruiting vegetables CG 8-09 (African eggplant, , currant tomato, eggplant, garden huckleberry, goji berry, groundcherry, martynia, , okra, pea eggplant, pepino, bell pepper, nonbell pepper, , scarlet eggplant, sunberry, tomatillo, tomato, , cultivars, varieties and hybrids of these commodities.)
- Pest(s): European corn borer, Colorado potato beetle, cabbage looper, imported cabbage worm, diamondback moth, spotted wing drosophila
- Rate: I) 167 mL product/ha for European corn borer, Colorado potato beetle  
II) 364 mL product/ha for cabbage looper, imported cabbage worm, diamondback moth, spotted wing drosophila

#### **European corn borer**

- Application: Apply 167 mL Entrust Insecticide per hectare in sufficient water to ensure thorough and complete coverage of the foliage. Apply up to a maximum of 2 applications per year. A second application 7 to 10 days after the initial application may be necessary to achieve effective control. Do not apply within 1 day of harvesting.
- Timing: Scout for European corn borer to monitor egg laying and egg hatch. In order to achieve effective control, applications of Entrust Insecticide must be timed to coincide with peak egg hatch.

#### **Colorado potato beetle**

- Application: Apply 167 mL Entrust Insecticide per hectare in sufficient water to ensure thorough and complete coverage of the foliage. Apply up to a maximum of 3 applications per year. Allow 7 - 10 days between applications. Do not apply within 1 day of harvesting.
- Timing: Monitor larval population and apply when treatment thresholds are exceeded. Consult provincial guidelines and local extension specialists for monitoring protocols and treatment thresholds.

#### **Cabbage looper, imported cabbage worm, diamondback moth**

- Application: Apply 364 mL Entrust Insecticide per hectare in sufficient water to ensure thorough and complete coverage of the foliage. Apply up to a maximum of 3 applications per year. Allow 7 - 10 days between applications. Do not apply within 1 day of harvesting.
- Timing: Monitor larval population and apply when treatment thresholds are exceeded. Consult provincial guidelines and local extension specialists for monitoring protocols and treatment thresholds.

#### **Spotted wing drosophila**

- Application: Apply Entrust Insecticide at the rate of 364 mL of product per hectare in sufficient water to ensure thorough and complete coverage of the foliage. Maximum of 3 applications per year with 7 -10 days between applications. Do not apply within 1 day of harvesting.
- Timing: Application should be based on the presence of adult pests (flies) as determined by local monitoring. Consult provincial guidelines and local extension specialists for monitoring protocols and treatment thresholds.  
Do not make more than 2 consecutive applications of Group 5 insecticides (e.g. spinosad)

and spinetoram).

#### **POME FRUITS CG 11-09**

- Host(s):** Pome fruits CG 11-09 (apple, azarole, crabapple, , mayhaw, medlar pear, pear, Asian; quince, quince, Chinese; quince, Japanese; tejocote, cultivars, varieties and/or hybrids of these commodities.)
- Pest(s):** oblique-banded leafroller, three-lined leafroller, fruittree leafroller, European leafroller, eye-spotted budmoth. For the suppression of codling moth.
- Rate:** 364 mL product/ha
- Application:** Apply 364 mL Entrust Insecticide in a minimum of 1000 L water per hectare. Apply up to a maximum of 3 applications per year. If adequate spray coverage of plant canopy requires less solution per hectare, adjust spray volume accordingly while using the same spray concentration (mL product/L water). Do not exceed 364 mL product per hectare per application. Allow 7 - 10 days between applications. Do not apply within 7 days of harvesting.
- Timing:** Monitor larval population in the spring, and apply when they begin emerging and are actively feeding, but before they roll up in the leaves. For control of the summer generation, monitor adult moth flights and larval densities to determine correct timing for application. Apply only if treatment thresholds are exceeded. For the suppression of codling moth, apply at first egg hatch and repeat at 7 to 10 day intervals. Codling moth larvae must be controlled before they enter the fruit. Consult provincial guidelines and local extension experts for monitoring protocols and thresholds for treatment. Avoid use when bees are actively foraging.

#### **BRASSICA HEAD AND STEM VEGETABLES CG 5-13 and Kohlrabi**

- Host(s):** CG 5-13: (broccoli, Brussels sprouts, cabbage, Chinese cabbage, cauliflower, cultivars, hybrids and varieties of these commodities)  
Kohlrabi
- Pest(s):** For control of cabbage looper, imported cabbage worm, diamondback moth; for suppression of crucifer flea beetle and thrips and reduction in damage from Swede midge
- Rate:** 364 mL product/ha for cabbage looper , imported cabbage worm, diamondback moth, crucifer flea beetle  
292 mL product/ha for thrips and swede midge

#### **Cabbage looper, imported cabbage worm, diamondback moth, crucifer flea beetle**

- Application:** Apply 364 mL Entrust Insecticide per hectare in sufficient water to ensure thorough and complete coverage of the foliage. Apply up to a maximum of 3 applications per year. Allow 7 - 10 days between applications. Do not apply within 3 days of harvesting.
- Timing:** Monitor larval population and apply when treatment thresholds are exceeded. Consult provincial guidelines and local extension specialists for monitoring protocols and treatment thresholds. For the suppression of crucifer flea beetle, apply at the emergence of adult flea beetles and reapply in 7-10 day intervals as necessary.

#### **Thrips and Swede midge**

- Application:** Apply 292 mL Entrust Insecticide per hectare. A foliar spray of 300 to 500 L of water per hectare is recommended to ensure thorough coverage of foliage.
- Timing:** For thrips, apply when the pest first appears. For Swede midge, apply when local treatment thresholds have been reached as determined by monitoring. Reapply at 7 to 10 day intervals if monitoring indicates this is necessary. Use a maximum of three applications per year. Do not apply within 3 days to harvest.

#### **STONE FRUITS CG 12-09**

- Host(s):** Stone fruits CG 12-09 (apricot, Japanese apricot, , black cherry, Nanking, cherry, sweet cherry, tart cherry, Chinese jujube, nectarine, peach, plum, American plum, beach plum, Canada plum, cherry plum, chickasaw plum, damson plum, Japanese plum, Klamath plum, prune, plumcot, sloe, cultivars, varieties, and hybrids of these commodities.)

Pest(s): oblique-banded leafroller, three-lined leafroller, fruittree leafroller, European leafroller, eye-spotted budmoth, spotted wing drosophila (*Drosophila suzukii*)  
 Rate: 364 mL product/ha

**For oblique-banded leafroller, three-lined leafroller, fruittree leafroller, European leafroller, eye-spotted budmoth**

Application: Apply 364 mL Entrust Insecticide in a minimum of 1000 L water per hectare. Apply up to a maximum of 3 applications per year. If adequate spray coverage of plant canopy requires less solution per hectare, adjust spray volume accordingly while using the same spray concentration (mL product/L water). Do not exceed 364 mL product per hectare per application.

Crop sub-group 12-09A cherry subgroup : PHI of 3 days. If 3 applications are made, the first may be made up to 28 days before harvest, the second up to 10 days before harvest and the final application at 3 days before harvest.

Crop sub-group 12-09B peach subgroup: PHI of 1 day For peach and nectarine: Allow 7 – 10 days between applications.

Crop sub-group 12-09C plum subgroup : PHI of 3 days For plums and prunes and apricots:  
 Allow 7 – 10 days between applications.

Timing: Monitor larval population in the spring, and apply when they begin emerging and are actively feeding, but before they roll up in the leaves. For control of the summer generation, monitor adult moth flights and larval densities to determine correct timing for application. Apply only if treatment thresholds are exceeded. Consult provincial guidelines and local extension experts for monitoring protocols and thresholds for treatment. Avoid use when bees are actively foraging.

For spotted wing drosophila (*Drosophila suzukii*)

Application: Apply 364 mL Entrust Insecticide in a minimum of 1000 L of water per hectare. If adequate spray coverage of plant canopy requires less solution per hectare, adjust spray volume accordingly while using the same spray concentration (mL product/L water). Do not exceed 364 mL product per hectare per application. Maximum of 3 applications per year.

Crop sub-group 12-09A cherry subgroup: PHI of 3 days. If 3 applications are made, the first may be made up to 28 days before harvest, the second up to 10 days before harvest and the final application at 3 days before harvest.

Crop sub-group 12-09B peach subgroup: PHI of 1 day for peach and nectarine: Allow 7-10 days between applications.

Crop sub-group 12-09C plum subgroup: PHI of 3 days for plums, prunes and apricots:  
 Allow 7-10 days between applications.

Timing: Timing of applications should be based on the presence of ripe fruit.

Host(s): Nectarines

Pest(s): Suppression of Western flower thrips

Rate: 364 mL product/ha

Application: Apply 364 mL Entrust Insecticide in a minimum of 1000 L water per hectare. Maximum of 3 applications per season for control/suppression of all pests on nectarines. If adequate spray coverage of plant canopy requires less solution per hectare, adjust spray volume accordingly while using the same spray concentration (mL product/L water). Do

- not exceed 364 mL product per hectare per application. Do not apply within 14 days of harvest.
- Timing: Apply from early petal fall to husk fall. Consult provincial guidelines and local extension experts for monitoring protocols and thresholds for treatment. If monitoring indicates that more than one application is required, allow 7-10 days between applications.
- Host(s): Peaches
- Pest(s): Suppression of Peach twig borer (*Amarsia lineatella*)
- Rate: 364 mL product/ha
- Application: Apply 364 mL Entrust Insecticide in a minimum of 1000 L water per hectare. If adequate spray coverage of plant canopy requires less solution per hectare, adjust spray volume accordingly while using the same spray concentration (ml product/L water). Maximum of 3 applications per season. Do not apply within 14 days of harvest.
- Timing: For over-wintering generations monitor larval population in the spring, and apply when over-wintering larvae become active, from early petal fall to husk fall. For summer generations, monitor adult moth flight, and apply at first egg hatch. Consult provincial guidelines and local extension experts for monitoring protocols and thresholds for treatment. If monitoring indicates that more than one application is required, allow 7-10 days between applications. Avoid use when bees are actively foraging.

### **SWEET CHERRY, TART CHERRY**

- Host(s): Sweet cherry, tart cherry
- Pest(s): Cherry fruit fly
- Rate: 364 mL product/ha
- Application: Apply 364 mL Entrust Insecticide in a minimum of 1000 L of water per hectare. Thorough coverage of foliage is necessary for optimal control. Consult provincial guidelines and local extension experts for monitoring protocols and thresholds for treatment. Apply up to a maximum of four (4) foliar applications of Entrust Insecticide per crop per year. If adequate spray coverage of plant canopy requires less solution per hectare, adjust spray volume accordingly while using the same spray concentration (mL product/L water). Do not exceed 364 mL product per hectare per application. Allow 5-7 days between applications, shortening the application interval during rainy periods and as fruit ripens. Do not apply within 7 days of harvest.
- Timing: Monitor for adult cherry fruit fly and apply as a foliar spray within 6 days of first fly emergence.

### **SNAP BEAN**

- Host(s): Snap bean
- Pest(s): European corn borer
- Rate: 167 mL product/ha
- Application: Apply 167 mL Entrust Insecticide per hectare in sufficient water to ensure thorough and complete coverage of the foliage. Apply up to a maximum of 2 applications per year. A second application 7 to 10 days after the initial application may be necessary to achieve effective control. Do not apply within 3 days of harvesting.
- Timing: Scout for European corn borer to monitor egg laying and egg hatch. In order to achieve effective control, applications of Entrust Insecticide must be timed to coincide with peak egg hatch.

### **CRANBERRY**

- Host(s): Cranberry
- Pest(s): Blackheaded fireworm (*Rhopobota naevana*), Sparganothis fruitworm (*Sparganothis sulfureana*), suppression of Cranberry fruitworm (*Acrobasis vaccinii*)
- Rate: 727 mL product/ha for Cranberry fruitworm; 364 mL product/ha for blackheaded fireworm and Sparganothis fruitworm

### **Cranberry fruitworm (suppression only)**



- Application: Apply 727 mL Entrust Insecticide per hectare in a minimum of 500 L of water to ensure thorough and complete coverage of the foliage. Apply 1 to 3 applications per year at 7-10 day intervals. Do not apply within 21 days of harvest.
- Timing: Based on phenological stage of the plant: 3 to 7 days after the fruit set has reached 50%, which corresponds to the beginning of egg hatch.

### **Blackheaded fireworm and Sparganothis fruitworm**

- Application: Apply 364 mL Entrust Insecticide per hectare in a minimum of 500 L of water to ensure thorough and complete coverage of the foliage. If Cranberry fruitworm is present at the same time as blackheaded fireworm or Sparganothis fruitworm, the higher rate of 727 mL per hectare in a minimum of 500 L of water may be used. Apply 1 to 3 applications per year at 7-10 day intervals. Do not apply within 21 days of harvest.
- Timing: Target eggs at hatch or small larvae. Monitoring is critical for proper timing. Consult provincial guidelines and local extension experts for monitoring protocols and thresholds for treatment.

**DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. To minimize surface water contamination when used on cranberries, all effluent water must be impounded and released when levels of the active ingredient are 49 µg ai/L.

Entrust may be applied to cranberries by field sprayer (ground boom), airblast application or chemigation. For application by chemigation, read the section below.

### **Directions for Chemigation**

**DO NOT apply Entrust by chemigation to other crops listed on this label.** Entrust may be applied through a solid set overhead sprinkler irrigation system that will apply water uniformly and within the confines of a closed perimeter of dykes. Do not apply this product through any other type of irrigation system. Sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units are not recommended. Non-uniform distribution of treated water may reduce effectiveness or result in illegal pesticide residues on the crop.

Proper calibration of the chemigation system is essential to deliver the desired rate per hectare in a uniform manner and to minimize wash-off time. If you have questions about calibration, contact the equipment manufacturer or other expert.

### **Equipment Requirements**

- The system must contain an air gap, or approved backflow prevention device, or approved functional check valve, vacuum relief valve (including inspection port), and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow unless the water is from a man-made self-contained source on private land.
- The pesticide injection pipeline must contain a functional, automatic quick-closing check valve or one-way valve to prevent the flow of fluid back toward the injection pump. A secondary containment system around the injection port area must be in place.
- The pesticide injection pipeline must also contain a functional, normally closed, valve located on the intake side of the injection system to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection when the water pressure drops or water flow stops. Alternatively, in the absence of such an automatic system, the injection procedure must be continuously monitored by an operator who is able to manually shut off pesticide injection under the same circumstances.
- Systems must use a metering device, such as a positive displacement injection pump (or flow meter on eductor) effectively designed and compatible with pesticides and capable of being fitted with a system interlock.
- The tank holding the insecticide mixture should be free of rust, fertilizer, sediment, and foreign material, and equipped with an in-line strainer situated between the tank and the injection point.

- To insure uniform mixing of the insecticide in the water line, inject the mixture in the center of the pipe diameter or just ahead of an elbow or tee in the irrigation line so the turbulence created at those points will assist in mixing. The injection point must be located after all back-flow prevention devices on the water line unless the water is from a man-made self-contained source on private land.

### Precautions

- **DO NOT** connect an irrigation system used for pesticide application to a public water system unless the required safety devices for public water systems are in place. Specific local regulations may apply and must be followed.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall operate the system and shall shut the system down to make necessary adjustments should the need arise.
- **DO NOT** apply when wind speed causes non-uniform distribution.
- **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the prescribed American Society of Agricultural Engineers (ASAE) fine classification. Applications must be conducted **WITHOUT** the use of end guns.
- **DO NOT** allow spray pattern to exceed the enclosed bed area.

### BERRIES

#### Lowbush blueberry

- Host(s): Lowbush blueberry  
 Pest(s): Suppression of blueberry flea beetle  
 Rate: 334-440 mL of product per hectare  
 Application: Apply 334-440 mL Entrust Insecticide per hectare in sufficient water to ensure thorough and complete coverage of the foliage. Use the maximum rate when insect pressure is high. Use a maximum of three applications per season. Do not apply within 3 days of harvest.  
 Timing: For best results, apply Entrust Insecticide when blueberry flea beetles are in the early larval stage. If monitoring indicates that more than one application is required, allow 7-10 days between applications.

**Caneberry subgroup (Crop group 13-07A)** including blackberry (*Rubus* spp.; including Andean blackberry, Arctic blackberry, Bingleberry; Black satin berry; Boysenberry; Brombeere; California blackberry; Chesterberry; Cherokee blackberry; Cheyenne blackberry; Common blackberry; Coryberry; Darrowberry; Dewberry; Dirksen thornless berry; Evergreen blackberry; Himalayaberry; Hullberry; Lavacaberry; Loganberry; Lowberry; Lucretiaberry; Mammoth blackberry; Marionberry; Moras; Mures deronce; Nectarberry; Northern dewberry; Olallieberry; Oregon evergreen berry; Phenomenalberry; Rangeberry; Ravenberry; Rossberry; Shawnee blackberry; Southern dewberry; Tayberry; Youngberry; Zarzamora and varieties and/or hybrids of these); Raspberry, red and black (*Rubus* spp.); Wild Raspberry (*Rubus muelleri*); Cultivars, varieties and /or hybrids of these.

- Pest(s): Control of oblique banded leafroller, cabbage looper, spanworm and winter moth  
 Rate: 64-87.4 g ai/ha (267-364 mL of product/ha)  
 Application: Apply 267-364 mL Entrust Insecticide per hectare in 300 to 500 L of water to ensure thorough coverage. Use the upper rate under high insect pressure and/or on large larvae. Apply a maximum of three applications per year with a pre-harvest interval of 1 day.  
 Timing: Monitor the population of the pest on a regular schedule and time treatment for control at egg hatch or small larvae. Repeat applications at 7 to 10 day intervals if necessary.
- Pest(s): Spotted wing Drosophila  
 Rate: 334-440 mL of product/ha  
 Application: Apply Entrust Insecticide at the rate of 334-440 mL of product per hectare in sufficient water to ensure thorough and complete coverage. Maximum of three applications per year with a minimum re-treatment interval of 5 days and a preharvest interval of 1 day.

Timing: Application should be based on the presence of adult pests (flies) as determined by local monitoring. Consult provincial guidelines and local extension specialists for monitoring protocols and treatment thresholds.

**Bushberry subgroup (Crop group 13-07B)** including Bushberry subgroup including Aronia berry; Blueberry, highbush (*Vaccinium* spp.); Blueberry, lowbush (*Vaccinium angustifolium* Aiton); Buffalo currant; Chilean guava; Currant, black (*Ribes nigrum* L.); Current, red (*Ribes rubrum* L.); Elderberry; European Barberry; Gooseberry; Highbush cranberry; Honeysuckle edible; Huckleberry; Jostaberry; Juneberry (Saskatoon berry); Native currant; Salal; Sea buckthorn; Cultivars, varieties and/or hybrids of these.

Pest(s): Control of oblique banded leafroller, spanworm and winter moth

Rate: 64-87.4 g ai/ha (267-364 mL of product/ha)

Application: Apply 267-364 mL Entrust Insecticide per hectare in 300 to 500 L of water to ensure thorough coverage. Use the upper rate under high insect pressure and/or on large larvae. Apply a maximum of three applications per year with a treatment harvest interval of three days.

Timing: Monitor the population of the pest on a regular schedule and time treatment for control at egg hatch or small larvae. Repeat applications at 7 to 10 day intervals if necessary.

Hosts: Bushberry subgroup (Crop group 13-07B) except highbush cranberries and lingonberries) Aronia berry; Blueberry, highbush (*Vaccinium* spp.); Blueberry, lowbush (*Vaccinium angustifolium* Aiton); Buffalo currant; Chilean guava; Currant, black (*Ribes nigrum* L.); Current, red (*Ribes rubrum* L.); Elderberry; European Barberry; Gooseberry;; Honeysuckle edible; Huckleberry; Jostaberry; Juneberry (Saskatoon berry); Native currant; Salal; Sea buckthorn; Cultivars, varieties and/or hybrids of these.

Pest(s): Spotted wing Drosophila

Rate: 334-440 mL of product/ha

Application: Apply Entrust Insecticide at the rate of 334-440 mL of product per hectare in sufficient water to ensure thorough and complete coverage. Maximum of three applications per year with a minimum re-treatment interval of 5 days and a preharvest interval of 1 day.

Timing: Application should be based on the presence of adult pests (flies) as determined by local monitoring. Consult provincial guidelines and local extension specialists for monitoring protocols and treatment thresholds.

**Low growing berry subgroup (Crop group 13-07G)** including Bearberry; Bilberry; Blueberry, lowbush (*Vaccinium angustifolium* Aiton); Cloudberry; Cranberry; Lingonberry; Muntries; Partridgeberry; Strawberry; Cultivars, varieties and/or hybrids of these

Pest(s): Control of oblique banded leafroller, cabbage looper, and winter moth

Rate: 64-87.4 g ai/ha (267-364 mL of product/ha)

Application: Apply 267-364 mL Entrust Insecticide per hectare in 300 to 500 L of water to ensure thorough coverage. Use the upper rate under high insect pressure and/or on large larvae. Apply a maximum of three applications per year with a pre-harvest interval of 1 day.

Timing: Monitor the population of the pest on a regular schedule and time treatment for control at egg hatch or small larvae. Repeat applications at 7 to 10 day intervals if necessary.

Hosts: Low growing berry subgroup (Crop group 13-07G; except lowbush blueberries and cranberries ) Bearberry; Bilberry; Cloudberry; Lingonberry; Muntries; Partridgeberry; Strawberry; Cultivars, varieties and/or hybrids of these

Pest(s): Spotted Wing Drosophila

Rate: 292-364 mL of product/ha

Application: Apply Entrust Insecticide at the rate of 292-364 mL of product per hectare in sufficient water to ensure thorough and complete coverage. Maximum of three applications per year with a minimum re-treatment interval of 5 days and preharvest interval of 1 day.

Timing: Application should be based on the presence of adult pests (flies) as determined by local monitoring. Consult provincial guidelines and local extension specialists for monitoring

protocols and treatment thresholds.

Do not make more than 2 consecutive applications of Group 5 insecticides (spinosad and spinetoram)

### **ASPARAGUS**

Host(s): Asparagus

Pest(s): Asparagus beetle

Rate: 294 mL of product/ha

Application: This product is to be used for the control of asparagus beetle on the ferns only (post harvest to the spears). Apply 294 mL of Entrust Insecticide per hectare in sufficient water to ensure thorough coverage with a maximum of 3 applications per year. Do not apply within 60 days of harvesting.

Timing: Monitor the population of the pest on a regular schedule and time treatment for just after egg hatch to target early instar larvae. Reapply at an interval of 7 to 10 days if monitoring indicates the need.

### **STALK, STEM, AND LEAF PETIOLES, CROP GROUP 22**

#### **STALK AND STEM VEGETABLES: CROP SUBGROUP 22A**

Host(s): Bamboo, shoots; Cactus (Prickly pear); Celtuce; Fennel, Florence; Fern, edible; Kale, sea;; Palm hearts

Pest(s): cabbage looper, imported cabbage worm, diamondback moth

Rate: 364 mL product/ha

Application: Apply 364 mL Entrust Insecticide per hectare in sufficient water to ensure thorough and complete coverage of the foliage. Apply up to a maximum of 3 applications per year. Allow 7-10 days between applications. Do not apply within 1 day of harvesting.

Timing: Monitor larval populations and apply when treatment thresholds are exceeded. Consult provincial guidelines and local extension specialists for monitoring protocols and treatment thresholds.

Host(s): Asparagus

Pest(s): Asparagus beetle

Rate: 294 mL product/ha

Application: This product is to be used for the control of asparagus beetle on the ferns only (post harvest to the spears). Apply 294 mL of Entrust Insecticide per hectare in sufficient water to ensure thorough coverage with a maximum of 3 applications per year. Do not apply within 60 days of harvesting.

Timing: Monitor the population of the pest on a regular schedule and time treatment for just after egg hatch to target early instar larvae. Reapply at an interval of 7-10 days if monitoring indicates the need.

#### **LEAF PETIOLE VEGETABLES: CROP SUBGROUP 22B**

Host(s): Cardoon; Celery; Celery, Chinese; Fuki; Rhubarb; Udo; Zuiki

Pest(s): cabbage looper, imported cabbage worm, diamondback moth

Rate: 364 mL product/ha

Application: Apply 364 mL Entrust Insecticide per hectare in sufficient water to ensure thorough and complete coverage of the foliage. Apply up to a maximum of 3 applications per year. Allow 7-10 days between applications. Do not apply within 1 day of harvesting.

Timing: Monitor larval populations and apply when treatment thresholds are exceeded. Consult provincial guidelines and local extension specialists for monitoring protocols and treatment thresholds.

### **GRAPES**

Host(s): Grapes

Pest(s): Suppression of Western flower thrips and grape berry moth

Rate: 364 mL product/ha

**Application:** Apply 364 mL Entrust Insecticide per hectare in sufficient water to ensure thorough coverage of foliage. Maximum of three applications per season for the control/suppression of all pests on grapes. Allow 7 days between applications. Do not apply within 7 days of harvest.

**Timing:** For grape berry moth, make initial application at egg hatch. For thrips, begin applications when monitoring indicates treatment is required. Consult provincial guidelines and local extension experts for monitoring protocols and thresholds for treatment. Do not enter, or allow worker entry, into treated areas within 15 days after application to carry out girdling or cane-turning activities or within 7 days after application to carry out training, tying, hand harvesting, hand pruning and thinning. For all other activities including mechanical harvesting, do not enter, or allow worker entry, into treated areas until pesticide residues have dried.

### **GREENHOUSE VEGETABLES**

**Host(s):** Greenhouse cucumber, greenhouse pepper, greenhouse tomato, greenhouse eggplant  
**Pest(s):** Cabbage looper, European corn borer and exposed western flower thrip (suppression only)

**Host(s):** Greenhouse lettuce  
**Pest(s):** Cabbage looper, suppression of European corn borer and exposed western flower thrips  
**Rate:** 240 mL of product for control of cabbage looper; 100 mL of product for suppression of exposed western flower thrip and control of European corn borer. Rates are mL of product per 1000 L of water

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

#### **Cabbage looper**

**Application:** Apply Entrust at the rate of 240 mL of product per 1000 L of water as a dilute spray. The maximum application volume that can be used is 1000 L/ha for greenhouse peppers, green house cucumbers greenhouse tomatoes and greenhouse eggplant, and 500 L/ha for greenhouse lettuce. Please note that the use of this product for control of cabbage looper is restricted to plant growth stages for which thorough coverage can be achieved by application volumes of 1000 L/ha or less. Apply when eggs hatch and first instar larvae are present. Do not apply by a fogger or mister. Monitoring is critical for the proper timing of the insecticide. Repeat applications as determined by further monitoring of pest pressure. Three applications of Entrust can be used per crop cycle, with a minimum of 7 days between applications. Do not apply within 2 days of harvest.

#### **European corn borer and exposed western flower thrips (suppression only)**

**Application:** Apply Entrust at the rate of 100 mL of product per 1000 L of water as a dilute spray. Applications must be made in water volumes that ensure thorough coverage. The maximum application volume that can be used is 2000 L/ha. Please note that the use of this product for control of European corn borer and suppression of exposed western flower thrips is restricted to plant growth stages for which thorough coverage can be achieved by application volumes of 2000 L/ha or less. For European corn borer, apply when eggs hatch and first instar larvae are present. For exposed western flower thrips, apply when pest first appears. Do not apply by a fogger or mister. Monitoring is critical for the proper timing of the insecticide. Repeat applications as determined by further monitoring of pest pressure. Three applications of Entrust can be used per crop cycle, with a minimum of 7 days between applications. Do not apply within 2 days of harvest.

### **CROP GROUP 3-07-BULB VEGETABLES**

**Host(s):** Garlic, great-headed (elephant) garlic, dry bulb onion, green onions, leeks, chives (fresh leaves), Chinese Chives (fresh leaves), shallots, wild leek, bunching onion (Beltsville bunching onion), tree onion (tops), and Welsh onion

**Pest(s):** Suppression of onion thrips and leek moth

**Rate:** 437-527 mL of product/ha

- Application:** Apply Entrust at the rate of 437-527 mL of product per hectare in sufficient water for thorough coverage. The recommended water volume is 300-500 L/ha. Use sufficiently high pressure to ensure the spray solution penetrates into the leaf axils. Use the higher rates when insect pressure is high and/or insects are in an advanced growth stage. After application, monitor populations to determine if re-treatment is required. Allow 7-10 days between applications. Multiple applications may be required to achieve suppression of onion thrips and leek moth.
- Do not use more than two consecutive applications of Group 5 insecticides. Rotate to another class of effective insecticides for at least one application. Use a maximum of three applications per year. Do not apply within three days of harvest.
- Timing:** Onion thrips: Apply when onion thrips first appear targeting egg hatch or small nymphs.  
Leek moth: Apply one week after peak pheromone trap capture targeting egg hatch or small larvae.

### **WALNUTS**

- Host(s):** Walnuts
- Pest(s):** Control of oblique-banded leafroller, three lined leafroller, fruit tree leafroller, European leafroller; suppression of codling moth
- Rate:** 87.4 g ai/ha (364 mL of product/ha)
- Application:** Apply 364 mL of product per hectare in a minimum of 1000 L water per hectare. If adequate spray coverage of plant canopy requires less solution per hectare, adjust spray volume accordingly while using the same spray concentration (g product/L water). Apply a maximum of three applications per year. The minimum reapplication interval is 7 days. Do not apply within 14 days to harvest.

### **Oblique-banded leafroller, three lined leafroller, fruit tree leafroller, European leafroller**

- Timing:** Under high insect pressure, an application timed to target the overwintered generation is recommended to reduce summer populations. For control of over wintering (spring generation), monitor larval populations and apply when larvae have emerged and are actively feeding, but before they roll up in the leaves. For control of summer generation, monitor adult moth flights and larval densities to determine correct timing for application. Apply only if treatment thresholds are exceeded. Repeat application in 7-10 days if required based on population monitoring.

### **Codling moth**

- Timing:** Apply at first egg hatch based on pheromone trap catches and degree days after biofix dates. These pests must be controlled before the larvae penetrate the nut so early timing is critical. Repeat in 7-10 days if populations warrant.

### **BASIL (FRESH AND DRIED), DILL SEED**

- Hosts(s):** Basil (fresh and dried), dill seed
- Pest(s):** Control of cabbage loopers and suppression of thrips
- Rate:** 364 mL of product per hectare in sufficient water volume for complete coverage of the plant foliage
- Application:** For the control of cabbage looper and suppression of thrips, apply Entrust at the rate of 364 mL of product per hectare in sufficient water volume for complete coverage of the plant foliage. Repeat applications based on monitoring of insect populations. Allow 7-10 days between applications. Apply a maximum of 3 applications per year. Do not apply within 1 day of harvest for basil and do not apply within 14 days of harvest for dill seed.
- Timing:** Applications should be timed at egg hatch or to small larvae.

### **POTATOES**

- Hosts (s):** Potatoes

**Pest(s):** Control of cabbage loopers (*Trichoplusia ni*)  
Suppression of tuber flea beetles (*Epitrix tuberis*)

**Rate:** 334 mL of product/ ha (80 g of a.i. per ha)

**Application:** Apply 334 mL of Entrust Insecticide per hectare in sufficient water to ensure complete coverage of foliage. Maximum seasonal rate of 500 mL. Do not apply within 7 days of harvest.

**Timing:** Loopers: monitor larval populations and apply when treatment thresholds are exceeded

Tuber flea beetles: apply Entrust when one adult beetle is seen per field edge for crawling samples (overwintered tuber flea beetles), or when eight are seen per edge for sweep net samples (second and third generation tuber flea beetles).

**GINSENG**

**Hosts(s):** Ginseng

**Pest(s):** Control of leafrollers

**Rate:** 290 to 364 mL of product per hectare in sufficient water volume for complete coverage of the plant foliage

**Application:** For the control of leafrollers, apply Entrust at the rate of 290 to 364 mL of product per hectare in sufficient water volume for complete coverage of the plant foliage. Use the upper rate under high insect pressure and/or for large larvae. Repeat applications based on monitoring of insect populations. Allow 7-10 days between applications. Apply a maximum of 3 applications per year. Do not apply within 3 days of harvest.

**Timing:** Applications should be timed at egg hatch or to small larvae.

**BROCCOLI GREENHOUSE TRANSPLANTS**

**Host(s):** Broccoli greenhouse transplants

**Pest(s):** Cabbage maggot

**Rate:** 25 mL per 1000 plants

**Application:** Apply Entrust as a drench before transplanting into the field. Apply 25 mL of Entrust as a drench in 2 L of water per 1000 plants. Immediately after applying, apply 2 L of water per 1000 plants to rinse the product off the plants and into the soil. Do not rinse the product out of the transplant medium. Apply 1 application per year.

**Timing:** Apply before transplanting to the field.

**Precautions:** Do not enter, or allow worker entry, into treated areas for 3 days to carry out hand harvesting, irrigating, pruning, topping, thinning, or tying activities.

For greenhouse drench applications, do not enter, or allow worker entry, into treated areas during the restricted entry interval (REI) of 24 hours after application.

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

**Refer to the main Entrust Insecticide label for additional details and instructions.**

**WALNUTS**

**Host(s):** Walnuts

**Pest(s):** Control of oblique-banded leafroller, three lined leafroller, fruit tree leafroller, European leafroller; suppression of codling moth

**Rate:** 87.4 g ai/ha (364 mL of product/ha)

**Application:** Apply 364 mL of product per hectare in a minimum of 1000 L water per hectare. If adequate spray coverage of plant canopy requires less solution per hectare, adjust spray volume accordingly while using the same spray concentration (g product/L water). Apply a maximum of three applications per year. The minimum reapplication interval is 7 days. Do not apply within 14 days to harvest.

**Oblique-banded leafroller, three lined leafroller, fruit tree leafroller, European leafroller**

**Timing:** Under high insect pressure, an application timed to target the overwintered generation is

recommended to reduce summer populations. For control of over wintering (spring generation), monitor larval populations and apply when larvae have emerged and are actively feeding, but before they roll up in the leaves. For control of summer generation, monitor adult moth flights and larval densities to determine correct timing for application. Apply only if treatment thresholds are exceeded. Repeat application in 7-10 days if required based on population monitoring.

#### **Codling moth**

Timing: Apply at first egg hatch based on pheromone trap catches and degree days after biofix dates. These pests must be controlled before the larvae penetrate the nut so early timing is critical. Repeat in 7-10 days if populations warrant.

#### **BASIL (FRESH AND DRIED), DILL SEED**

Hosts(s): Basil (fresh and dried), dill seed

Pest(s): Control of cabbage loopers and suppression of thrips

Rate: 364 mL of product per hectare in sufficient water volume for complete coverage of the plant foliage

Application: For the control of cabbage looper and suppression of thrips, apply Entrust at the rate of 364 mL of product per hectare in sufficient water volume for complete coverage of the plant foliage. Repeat applications based on monitoring of insect populations. Allow 7-10 days between applications. Apply a maximum of 3 applications per year. Do not apply within 1 day of harvest for basil and do not apply within 14 days of harvest for dill seed.

Timing: Applications should be timed at egg hatch or to small larvae.

#### **POTATOES**

Hosts (s): Potatoes

Pest(s): Control of cabbage loopers (*Trichoplusia ni*)  
Suppression of tuber flea beetles (*Epitrix tuberis*)

Rate: 334 mL of product/ ha (80 g of a.i. per ha)

Application: Apply 334 mL of Entrust Insecticide per hectare in sufficient water to ensure complete coverage of foliage. Maximum seasonal rate of 500 mL. Do not apply within 7 days of harvest.

Timing: Loopers: monitor larval populations and apply when treatment thresholds are exceeded

Tuber flea beetles: apply Entrust when one adult beetle is seen per field edge for crawling samples (overwintered tuber flea beetles), or when eight are seen per edge for sweep net samples (second and third generation tuber flea beetles).

#### **GINSENG**

Hosts(s): Ginseng

Pest(s): Control of leafrollers

Rate: 290 to 364 mL of product per hectare in sufficient water volume for complete coverage of the plant foliage

Application: For the control of leafrollers, apply Entrust at the rate of 290 to 364 mL of product per hectare in sufficient water volume for complete coverage of the plant foliage. Use the upper rate under high insect pressure and/or for large larvae. Repeat applications based on monitoring of insect populations. Allow 7-10 days between applications. Apply a maximum of 3 applications per year. Do not apply within 3 days of harvest.

Timing: Applications should be timed at egg hatch or to small larvae.

**Greenhouse Transplants of Crop Subgroup 4-13B:** Brassica Leafy Greens (Arugula (*Eruca sativa*), Broccoli raab (*Brassica ruvo*), Broccoli, Chinese (*Brassica oleracea* var. *alboglabra*), Cabbage, Abyssinian (*Brassica carinata*), Cabbage, seakale (*Brassica oleracea* var. *costata*),



Chinese cabbage, bok choy (*Brassica rapa* subsp. *chinensis*), Collards (*Brassica oleracea* var. *viridis*), Cress, garden (*Lepidium sativum*), Cress, upland (*Barbarea vulgaris*), Hanover salad (*Brassica napus* var. *pabularia*), Kale (*Brassica oleracea* var. *sabellica*), Maca (*Lepidium meyenii*), Mizuna (*Brassica rapa* subsp. *nipposinica*), Mustard greens (*Brassica juncea* subsp. including *Brassica juncea* subsp. *integrifolia* and *Brassica juncea* subsp. *tsatsai*), Radish, leaves (*Raphanus sativus* var. *sativus*; including *Raphanus sativus* var. *mougri*, *Raphanus sativus* var. *oleiformis*), Rape greens (*Brassica napus* var. *napus* including *Brassica rapa* subsp. *trilocularis*; *Brassica rapa* subsp. *dichotoma*, *Brassica rapa* subsp. *oleifera*), Rocket, wild (*Diplotaxis tenuifolia*), Shepherd's purse (*Capsella bursa-pastoris*), Turnip greens (*Brassica rapa* subsp. *rapa*), Watercress (*Nasturtium officinale*), Cultivars, varieties and/or hybrids of these

Host(s): Greenhouse transplants  
 Pest(s): Cabbage maggot  
 Rate: 25 mL per 1000 plants  
 Application: Apply Entrust as a drench before transplanting into the field. Apply 25 millilitres of Entrust as a drench in 2 litres of water per 1000 plants. Immediately after applying, apply 2 litres of water per 1000 plants to rinse the product off the plants and into the soil. Do not rinse the product out of the transplant medium. Apply 1 application per year.  
 Timing: Apply before transplanting to the field.

Precautions: Do not enter, or allow worker entry, into treated areas for 3 days to carry out hand harvesting, irrigating, pruning, topping, thinning, or tying activities.

For greenhouse drench applications, do not enter, or allow worker entry, into treated areas during the restricted entry interval (REI) of 24 hours after application.

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

**Greenhouse transplants of Crop Group 5-13:** Brassica Head and Stem Vegetables (Broccoli (*Brassica oleracea* var. *italica*), Brussels sprouts (*Brassica oleracea* var. *gemmifera*), Cabbage (*Brassica oleracea* var. *capitata*), Cabbage, Chinese, napa (*Brassica rapa* subsp. *pekinensis*), Cauliflower (*Brassica oleracea* var. *capitata*), Cultivars, varieties and/or hybrids of these)

Host(s): CG 5-13 *Brassica* greenhouse transplants  
 Pest(s): Cabbage maggot  
 Rate: 25 mL per 1000 plants  
 Application: Apply Entrust as a drench before transplanting into the field. Apply 25 mL of Entrust as a drench in 2 L of water per 1000 plants. Immediately after applying, apply 2 L of water per 1000 plants to rinse the product off the plants and into the soil. Do not rinse the product out of the transplant medium. Apply 1 application per year.  
 Timing: Apply before transplanting to the field.

Precautions: Do not enter, or allow worker entry, into treated areas for 3 days to carry out hand harvesting, irrigating, pruning, topping, thinning, or tying activities.

For greenhouse drench applications, do not enter, or allow worker entry, into treated areas during the restricted entry interval (REI) of 24 hours after application.

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

**Refer to the main Entrust Insecticide label for additional details and instructions.**

#### RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that Entrust Insecticide contains a Group 5 insecticide. Any insect population may contain individuals naturally resistant to Entrust Insecticide and other Group 5

insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance management strategies should be followed.

To delay insect resistance:

- Where possible, rotate the use of Entrust Insecticide or other Group 5 insecticides with different groups that control the same pests in a field.
- Use tank mixtures with insecticides from a different group that is effective on the target pest when such use is permitted.
- Insecticide use should be based on an IPM program that includes scouting and record keeping, and considers cultural, biological and other chemical control practices. Monitor treated pest populations for resistance development.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance, contact Dow AgroSciences Canada Inc. at 1-800-667-3852 or at [www.dowagro.ca](http://www.dowagro.ca)

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in any way that is inconsistent with the directions on the label.