#### (Container)



# Intrepid<sup>TM</sup> Insecticide

GROUP 18	INSECTICIDE
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For the control of listed lepidopteran larvae in fruits, vegetables, tree nuts and herbs (subgroup 19-A), except chives

#### **AGRICULTURAL**

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

ACTIVE INGREDIENT: Methoxyfenozide: 240 grams per litre Contains 1,2-benzisothiazoline-3-one at 0.03% as a preservative OR

Contains 5-Chloro-2-methyl-4-isothiazolin-3-one at 0.0017%, 2-Methyl-4-isothiazolin-3-one at 0.000555% as preservatives

Suspension

REGISTRATION NO. 27786 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 4 L - bulk

Corteva Agriscience Canada Company 2450, 215 – 2<sup>nd</sup> Street SW Calgary, Alberta T2P 1M4 1-800-667-3852

™Trademark of Corteva Agriscience and its affiliated companies.

#### **PRECAUTIONS**

KEEP OUT OF REACH OF CHILDREN

DO NOT apply using aerial application equipment

Avoid contact with eyes, skin or clothing. Avoid breathing spray mist.

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 speeds, wind direction, temperature inversions, application equipment and sprayer settings.

#### PROTECTIVE CLOTHING AND EQUIPMENT

Wear long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. Chemical-resistant gloves are not required while operating groundboom sprayers.

#### **OPERATOR USE PRECAUTIONS**

After using this product, users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

#### REENTRY AND WORKER PROTECTION

**DO NOT** enter or allow worker entry into treated areas for 12 hours following application.

#### **FIRST AID**

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

**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 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 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.

**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.

#### **TOXICOLOGICAL INFORMATION**

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

#### **AGRICULTURAL CHEMICAL**

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

#### **ENVIRONMENTAL PRECAUTIONS**

TOXIC to aquatic organisms. Observe buffer zones specified under DIRECTIONS FOR USE. Methoxyfenozide is **persistent and will carryover**; it is recommended that the product, Intrepid Insecticide containing methoxyfenozide, not be used in areas treated with this product during the previous season.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g., sandy soil) and/or the depth to the water table is shallow.

#### **STORAGE**

Keep product in original container during storage. To prevent contamination, store this product away from food or feed.

#### **DISPOSAL**

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.

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 a way that is inconsistent with the directions on the label.

#### (Booklet)



## Intrepid<sup>TM</sup> Insecticide

GROUP 18 INSECTICIDE

For the control of listed lepidopteran larvae in fruits, vegetables, tree nuts and herbs (subgroup 19-A), except chives

#### **AGRICULTURAL**

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#### **PRECAUTIONS**

KEEP OUT OF REACH OF CHILDREN

DO NOT apply using aerial application equipment

Avoid contact with eyes, skin or clothing. Avoid breathing spray mist.

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 speeds, wind direction, temperature inversions, application equipment and sprayer settings.

#### PROTECTIVE CLOTHING AND EQUIPMENT

Wear long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. Chemical-resistant gloves are not required while operating groundboom sprayers.

#### **OPERATOR USE PRECAUTIONS**

After using this product, users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

#### REENTRY AND WORKER PROTECTION

**DO NOT** enter or allow worker entry into treated areas for 12 hours following application.

#### **FIRST AID**

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

**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.

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**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.

#### **TOXICOLOGICAL INFORMATION**

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

#### AGRICULTURAL CHEMICAL

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

#### **ENVIRONMENTAL PRECAUTIONS**

TOXIC to aquatic organisms. Observe buffer zones specified under DIRECTIONS FOR USE. Methoxyfenozide is **persistent and will carryover**; it is recommended that the product, Intrepid Insecticide containing methoxyfenozide, not be used in areas treated with this product during the previous season.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g., sandy soil) and/or the depth to the water table is shallow.

#### **STORAGE**

Keep product in original container during storage. To prevent contamination, store this product away from food or 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.

#### **GENERAL INFORMATION**

Intrepid Insecticide is a suspension concentrate product for the control of listed lepidopteran larvae in fruits, vegetables and tree nuts.

#### **MODE OF ACTION**

Intrepid Insecticide belongs to the diacylhydrazine class of insecticides and mimics the action of the molting hormone of larval Lepidoptera. Upon ingestion, larvae undergo an incomplete and developmentally premature molt which is ultimately lethal. This process interrupts and rapidly halts their feeding. Feeding typically ceases within hours of ingestion although complete mortality of the larvae may take several days. Affected larvae often become lethargic and develop discoloured areas or bands between segments.

#### **GENERAL USE PRECAUTIONS**

Do not feed apple pomace to livestock.

#### **Spray Equipment Precautions**

Thoroughly clean spray equipment after use. Cleaning should occur as soon as possible after application. All rinsate material should be collected in a suitable container and disposed of according to label directions (i.e., applying it to cropland to be planted to crops recommended on this label) or in a locally approved manner (see Disposal section). **DO NOT** contaminate irrigation/drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes. Spray equipment should be cleaned after use by the following procedure:

Drain the sprayer tank.

- 1. Hose down the interior surfaces of the tank. Flush tank, hoses, boom and nozzles with clean water for 10 minutes. Fill the tank with water and re-circulate for 15 minutes. Spray part of the mixture through the hoses, boom and nozzles and drain the tank.
- 2. Remove the nozzles and screens and clean them separately.

3. If the spray equipment will be used on crops other than those listed on this label, repeat steps 1 and 2 again and thoroughly wash the spray mixture from the outside of spray tank and the boom.

#### **DIRECTIONS FOR USE**

As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests. **DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

#### 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) fine 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.

#### Chemigation

**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) fine classification. Applications **MUST** be conducted **WITHOUT** the use of end guns.

#### DO NOT apply using aerial application equipment.

#### **Ground Application**

Make applications of Intrepid Insecticide by conventional ground application equipment. Thorough uniform coverage of all foliage and fruit is essential for good insect control. Apply in sufficient spray volume to ensure uniform coverage of the treated crop. A minimum of 300 litres of water per hectare is generally recommended for ground application. For tree crops, a minimum spray volume of 1,000 litres of water per hectare is generally recommended to ensure thorough coverage of the crop. If adequate spray coverage of plant canopy requires less solution per hectare, adjust spray volume accordingly while using the same spray concentration (ratio of liters of product to litres of water).

#### **Application Directions**

Carefully read, understand and follow label use rates, recommendations and restrictions. Apply the amount specified in the following tables with properly calibrated ground spray equipment. Prepare only the amount of spray solution required to treat the measured hectares. DO NOT exceed the application rates (litres of product/ha) listed under "DIRECTIONS FOR USE". DO NOT exceed 2 L product/ha/year.

#### **Application Timing**

Proper timing of application is critical with this product. If application is delayed beyond the recommended time, switch to another registered insecticide. Monitor other insect pests and apply other registered insecticides as required.

The activity of Intrepid Insecticide is expressed primarily through ingestion by the target larvae. Consequently, the timing of application is dependent on the feeding behavior of the target pest. For larvae which feed internally within fruits or shoots, application must be made prior to the time that internal feeding occurs e.g., just prior to initiation of egg hatch. For foliar or surface feeding larvae, application may be made while active feeding is occurring.

Re-application may be required to protect new flushes of growth or extended infestations. The reapplication interval will vary depending on how rapidly the crop is growing, the generation time of the target pest and the duration of the infestation. Refer to specific crop for minimum reapplication intervals. Intrepid Insecticide is effective against all larval instars; however, it is good practice to make applications to early instars to minimize feeding damage. For best results, begin applications when threshold levels of adults, eggs or larvae occur. Consult provincial extension personnel, provincial guidelines, or your local Corteva Agriscience representative, to determine the appropriate threshold and timing for application in your area.

#### **Mixing Instructions**

Fill the spray tank one-third to one-half full of clean water and slowly pour Intrepid Insecticide into the spray tank. Maintain agitation in the spray tank during mixing, loading and application. Triple-rinse empty container and add rinsate to the spray tank.

#### **DIRECTIONS FOR USE**

READ ALL DIRECTIONS CAREFULLY BEFORE APPLYING. FAILURE TO FOLLOW LABEL INSTRUCTIONS MAY RESULT IN ERRATIC INSECT CONTROL.

A restricted plant-back interval (PBI) of 365 days is established for any crops not currently appearing on the label.

DO NOT exceed the application rates (litres of product/ha) listed in the tables below. DO NOT exceed 2 L product/ha/year.

**APPLES** 

DO NOT apply within 14 days of harvest.

	Application Rate	
Target Pests	L product/ha	Application Timing
Codling moth	1.0	For control of the first generation, apply before first egg hatch (80-110 degree days Celsius after BIOFIX). Monitor populations and reapply 10-14 days later if required. BIOFIX is determined to be set when a first consistent moth catch has been attained within the orchard. For the determination of degree days for codling moth, a lower and upper threshold of 10 and 31°C is used. For control of the second generation of codling moth, timing of the first application is based on first egg hatch after establishing a new BIOFIX as above. Monitor populations and reapply 10-14 days later if required.
Oriental Fruit Moth	1.0	Apply at first egg hatch of the targeted generation. Monitor populations and reapply 10-14 days later if required. If using trap catches to monitor populations, BIOFIX is determined to be set when a first consistent moth catch has been attained within the orchard. For degree day determination, a lower and upper threshold of 7.2 and 32.2°C is used.
Oblique-banded leafroller , Three- lined leafroller (over- wintering generation)	0.75	Apply during late bloom to early petal fall when larvae are actively feeding and before they roll up in rapidly growing terminals. Under conditions of high insect pressure, an application timed to target the over-wintering generation is recommended to reduce subsequent populations.

Oblique-banded leafroller, Three-lined leafroller (suppression of summer generation)	0.75	Apply at first egg hatch (110-170 DDC after BIOFIX). A second application can be made 10-14 days later if monitoring indicates this is needed. BIOFIX is set when the first moth catch is followed up by subsequent moth catches within the orchard. The lower development threshold is 6.1°C for Obliquebanded leafroller. The lower and upper development thresholds are 5 and 29°C for Three-lined leafroller.
Winter moth (suppression)	0.75	Monitor apple buds for winter moth larvae. Apply at tight cluster to full pink stage of apple development. Consult provincial guidelines for treatment thresholds and application timing.
Spotted tentiform leafminer, western tentiform leafminer (first generation only)	0.5	Apply at first egg hatch of the first generation.

#### **PEARS**

DO NOT apply within 14 days of harvest.

Target Pests	Application Rate L product/ha	Application Timing
Oriental Fruit Moth	1.0	Apply at first egg hatch of the targeted generation. Monitor populations and reapply 10-14 days later if required. If using trap catches to monitor populations, BIOFIX is determined to be set when a first consistent moth catch has been attained within the orchard. For degree day determination, a lower and upper threshold of 7.2 and 32.2°C is used.

**CROP GROUP 13-07B: BUSHBERRY SUBGROUP** (Highbush blueberry, lowbush blueberry, black currant, red currant, elderberry, gooseberry, huckleberry, aronia berry, Buffalo currant, European barberry, highbush cranberry, honeysuckle edible, jostaberry, juneberry (Saskatoon berry), lingonberry, native currant, salal, sea buckthorn, cultivars, varieties and/or hybrids of these)

DO NOT apply within 7 days of harvest.

Target Pests	Application Rate L product/ha	Application Timing
Spanworms	0.5	Apply when feeding damage is detected or when infestations reach thresholds as determined by local monitoring standards. Repeat applications after 7-14 days if required based on population monitoring.
Oblique-banded leafroller	0.5	Apply to overwintering larvae as soon as they start feeding in the spring or at the beginning of egg hatch for the summer generation. Repeat applications after 7-14 days if required based on population monitoring.

Highbush blueberry, lowbush blueberry, highbush cranberry, huckleberry, lingonberry

Cranberry fruitworm	0.5	Apply at the beginning of egg hatch. Repeat applications after 7-14 days if required based on
		population monitoring.

**CROP GROUP 5: BRASSICA (Cole) LEAFY VEGETABLES** (Broccoli, Chinese broccoli, broccoli raab (rapini), Brussels sprouts, cabbage, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese cabbage (mustard; gai choy), cauliflower, cavolo broccolo, collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens)

DO NOT apply within 1 day of harvest

Target Pests	Application Rate L product/ha	Application Timing
	0.3 - 0.6	Apply at first sign of feeding damage or when
Cabbage looper		infestations reach threshold levels as determined
		by insect monitoring. Tank-mix with a nonionic
Imported		surfactant such as Agral 90 or Companion at the
cabbageworm		rate of 0.25% v/v. Repeat applications after 7-14
		days if required based on population monitoring.
Diamondback moth		Use the higher rate for heavy infestations or
(suppression)		advanced growth stages of the target pest.

#### FIELD CORN, SWEET CORN, SEED CORN AND POPCORN

DO NOT apply within 3 days of harvest for sweet corn and 21 days of harvest for field corn and

popcorn.

Target Pests	Application Rate L product/ha	Application Timing
European corn borer	0.3 – 0.6	Apply at the first signs of feeding damage before the insect enters the fruit. Monitoring of insect populations is key to controlling this pest. Direct application at the whorl for early season (first generation) infestations. Repeat applications after 5-10 days if required based on population monitoring. Use the higher rate for heavy infestations, or larger crop canopies.

#### **CRANBERRY**

DO NOT apply within 14 days of harvest.

Target Pests	Application Rate L product/ha	Application Timing
Blackheaded fireworm, Sparganothis fruitworm, Cranberry fruitworm, Spanworms	0.75 – 1.16	Apply to overwintering generation larvae or at early egg hatch for summer generation insects. Apply before the larvae penetrate the fruit. Repeat applications after 10-18 days if required based on population monitoring to protect rapidly expanding fruit. Use the higher rate for heavy infestations or advanced growth stages of the target pest.

Intrepid Insecticide may be applied to cranberry by chemigation. For application directions, read the chemigation section below.

#### **General Directions for Chemigation**

Do not apply Intrepid Insecticide by chemigation to other labeled crops. Intrepid Insecticide may be applied through overhead sprinkler irrigation systems that will apply water uniformly, including: lateral move, end tow, side (wheel) roll, traveler, solid set, micro sprinkler, or hand move. 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.

For sprinkler systems that do not move during operation (fixed system), limit rinse time to less than 10 minutes. Establishing a rinse time can be done by running a concentrated dye solution through your system. The goal of the dye test is to determine how long to operate the chemigation application and observe application performance. Dye tests should be run every 1-3 years or anytime significant modifications are made to your irrigation system. Refer to Best Management Practices Guide for chemigation in cranberries for guidelines on how to run a dye test to verify rinse time and/or if your rinse time is more than 10 minutes. Excessive wash-off times (wash-off time = rinse time — travel time) will adversely affect pesticide performance. Wash-off time is the amount of time the system will be 'washing off' the applied material.

For continuously moving systems, the mixture containing Intrepid Insecticide must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. If continuously moving irrigation equipment is used, apply in no more than 6 millilitres of water.

#### Preparation

- 1. Determine the irrigation rate and the number of minutes for the system to cover the treatment area;
- 2. Calculate the total litres of insecticide mixture needed to cover the area. Divide the total litres of insecticide mixture needed by the number of minutes (minus time to flush out) to cover the treatment area. This value equals the L/min output that the injector must deliver. Convert the L/min to mL/ min, if needed.
- 3. Calibrate the injector pump with the system in operation at the desired irrigation rate. It is suggested that the injector pump/system be calibrated at least twice before operation, and the system should be monitored during operation. 4) Continually agitate the mixture during mixing and application.

#### Operation

- 1. Ensure that all sprinkler heads are turning freely and check for uniformity and make repairs before any chemigation takes place.
- 2. Start the water pump and irrigation system, and let the system achieve the desired pressure and speed before starting the injector. Start the injection system and calibrate according to manufactures recommendations. This procedure is necessary to deliver the desired rate per hectare in a uniform manner. When the application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system.

#### **Precautions**

- Lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- If you have questions about calibration, you should contact the equipment manufacturer or other experts.
- Do not connect an irrigation system used for pesticide application (including greenhouse systems) to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place with current certification. 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 shut the system down and make necessary adjustments should the need arise and continuously monitor the injection
- Do not apply when wind speed causes non-uniform distribution and/or favors drift beyond the area intended for treatment. End guns must be turned off during the application, if they irrigate non target areas.
- Do not allow irrigation water to collect or runoff and pose a hazard to livestock, wells, or adjoining crops.
- Do not enter treated area during the reentry interval specified in the Agricultural Use Requirements section of this label unless required PPE is worn.
- Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.

#### **Suggested Equipment Requirements**

- 1. The system must contain an air gap, or approved backflow prevention device, or approved functional check valve, vacuum relief valve (including inspection port), and a 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
- 2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 3. The pesticide injection pipeline must also contain a functional interlock, e.g. 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.
- 4. The system must contain functional interlocking controls to automatically shut off the pesticide injection when the water pressure drops or water flow stops.
- 5. Use of public water supply requires approval of a backflow prevention device or air gap (preferred) by both local authorities.
- 6. Systems must use a metering device, such as a positive displacement injection pump (or flow meter on eductor) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system
- 7. 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 that 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.
- 8. 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 injector point.

**CROP GROUP 9: CUCURBIT VEGETABLES** (Chinese waxgourd, citron melon, cucumber, gherkin, edible gourd, edible (hyotan, cucuzza, hechima, Chinese okra), *Momordica* spp. (balsam apple, balsam pear, bitter melon, Chinese cucumber), muskmelon (hybrids and/or cultivars of *Cucumis melo*; true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon and snake melon), pumpkin, summer squash (crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), winter squash (butternut squash, calabaza, hubbard squash), *C. mixta, C. pepo* (acorn squash, spaghetti squash), watermelon (hybrids and/or varieties of *Citrullus lanatus*))

DO NOT apply within 3 days of harvest.

Target Pests	Application Rate L product/ha	Application Timing
Cabbage looper	0.3 – 0.6	Apply at the first sign of feeding damage or when infestations reach threshold levels as determined by insect monitoring. Repeat applications after 7-14 days if required based on population monitoring. Use the higher rate for heavy infestations or advanced growth stages of the target pest.

**CROP GROUP 8-09: FRUITING VEGETABLES** (African eggplant, currant tomato, eggplant, garden huckleberry, goji berry, groundcherry, martynia, okra, pea eggplant, pepino, bell pepper, nonbell pepper, scarlet eggplant, sunberry, tomatillo, tomato and cultivars, varieties and hybrids of these commodities)

DO NOT apply within 1 day of harvest.

Target Pests	Application Rate L product/ha	Application Timing
Cabbage looper	0.3 – 0.6	Apply at the first sign of feeding damage or when infestations reach threshold levels as determined by insect monitoring. Repeat applications after 7-14 days if required based on population monitoring. Use the higher rate for heavy infestations, advanced

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		growth stages of the target pest or larger crop canopies.
European corn borer	0.3 – 0.6	Apply at the first signs of feeding damage before the insect enters the fruit. Monitoring of insect populations is key to controlling this pest. Repeat applications after 7-14 days if required based on population monitoring. Use the higher rate for heavy infestations or larger crop canopies.

**CROP GROUP 4: LEAFY VEGETABLES** (Except Brassica vegetables) (Amaranth (leafy amaranth, Chinese spinach, tampala), arugula (Roquette), cardoon, celery, Chinese celery, celtuce, chervil, edible-leaved chrysanthemum, garland chrysanthemum, garland, corn salad, garden cress, upland cress (yellow rocket, winter cress), dandelion, dock (sorrel), endive (escarole), Florence fennel (finochio), head and leaf lettuce, orach, parsley, garden purslane, winter purslane, radicchio (red chicory), rhubarb, spinach, New Zealand spinach, vine spinach (malabar spinach, Indian spinach), Swiss chard)

DO NOT apply within 1 day of harvest.

Target Pests	Application Rate L product/ha	Application Timing
Cabbage looper	0.3 - 0.6	Apply at the first sign of feeding damage or when infestations reach threshold levels as determined by insect monitoring. Repeat applications after 7-14 days if required based on population monitoring. Use the higher rate for heavy infestations, advanced growth stages of the target pest or larger crop canopies.

#### LEGUME VEGETABLES (SUCCULENT OR DRIED)

**CROP GROUP 6A: EDIBLE-PODDED LEGUME VEGETABLES SUBGROUP** (Bean (*Phaseolus* spp.) (runner bean, snap bean, and wax bean), bean (*Vigna* spp.) (asparagus bean, Chinese longbean, moth bean, yardlong bean), pea (*Pisum* spp.) (dwarf pea, edible-pod pea, snow pea, sugar snap pea), soybean (immature seed))

**CROP GROUP 6B: SUCCULENT SHELLED PEA AND BEAN SUBGROUP** (Bean (*Phaseolus* spp.) (lima bean, green), bean (*Vigna* spp.) (blackeyed pea, cowpea, southern pea), broad bean (fava bean), pea (*Pisum* spp.) (English pea, garden pea, green pea))

**DRIED BEANS**: (Bean (*Lupinus* spp.) (grain lupin, sweet lupin, white lupin and white sweet lupin), bean (*Phaseolus* spp.) (field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean), bean (*Vigna* spp.) (adzuki bean, blackeyed pea, catjang cowpea, Crowder pea, moth bean, mung bean, southern pea), broad bean (fava bean), chickpea (garbanzo bean))

DO NOT apply within 7 days of harvest.

Target Pests	Application Rate L product/ha	Application Timing
Cabbage looper	0.3 – 0.6	Apply at the first signs of feeding damage before the insect enters the pods. Monitoring of insect populations is key to controlling this pest. Repeat applications after 7-14 days if required based on population monitoring. Use the higher rate for heavy infestations or larger crop canopies.
European corn borer	0.3 – 0.6	Apply at the first signs of feeding damage before the insect enters the pods. Repeat applications after 7-14 days if required based on population monitoring.

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- <b>3</b> -			
		Use the higher rate for heavy infestations or	
		advanced growth stages of the target pest.	

**CROP GROUP 1D: TUBEROUS AND CORM VEGETABLES** (Arrowroot, Chinese artichoke, Jerusalem artichoke, chufa, dasheen (taro), ginger, sweet potato)

DO NOT apply within 14 days of harvest

Target Pests	Application Rate L product/ha	Application Timing
Cabbage looper	0.3 – 0.6	Apply at the first sign of feeding damage or when infestations reach threshold levels as determined by insect monitoring. Repeat applications after 7-14 days if required based on population monitoring. Use the higher rate for heavy infestations or advanced growth stages of the target pest.

**CROP GROUP 12-09: STONE FRUITS** (Apricot, black cherry, Nanking cherry, sweet cherry, tart cherry, chokecherry, nectarine, peach, plum, American plum, beach plum, Canada plum, cherry plum, Damson plum, Japanese plum, Klamath plum, prune plum, plumcot, sloe and cultivars, varieties, and hybrids of these commodities)

DO NOT apply within 7 days of harvest.

Target Pests	Application Rate L product/ha	Application Timing
Obliquebanded leafroller	0.75	For overwintering larvae, apply when larvae are actively feeding and before they roll up in rapidly growing terminals. Apply at first egg hatch of the
Threelined leafroller		summer generation as determined by monitoring adult moth flights. Repeat in 10-14 days if monitoring of populations indicates a second application is required. Thorough coverage is necessary for optimal control.
Peach twig borer		For each generation, apply at initiation of egg hatch before larvae enter the shoots or fruit. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage, or under conditions of high infestation or sustained moth flight.

Apricot, nectarine, peach, plum, American plum, beach plum, Canada plum, cherry plum, Damson plum, Japanese plum, Klamath plum, prune plum

DO NOT apply within 14 days of harvest

Oriental fruit moth	1.5	Apply in a minimum of 1000 litres of water at first egg		
		hatch of the targeted generation, 50-100 Degree days C (Base 7.2 C) after biofix (first sustained moth		
		catch). Monitor from 10-14 days after application to determine whether another method of control is required.		
		This product can be applied only once per season.		

**CROP GROUP 14-11: TREE NUTS** (Almond, beechnut, bur oak, butternut, chestnut, chinquapin, ginkgo, hazelnut (filbert), heartnut, hickory nut, Japanese horse-chestnut, pecan, black walnut, English walnut, yellowhorn and cultivars, varieties, and/or hybrids of these commodities)

DO NOT apply within 14 days of harvest.

Target Pests	Application Rate L product/ha	Application Timing
Obliquebanded	0.75	For overwintering larvae, apply when larvae are
leafroller		actively feeding and before they roll up in rapidly growing terminals. Apply at first egg hatch of the
Threelined leafroller		summer generation as determined by monitoring adult moth flights. Repeat in 10-14 days if monitoring of populations indicates a second application is required. Thorough coverage is necessary for optimal control.

Butternut, Black walnut, English walnut					
Codling moth	1.0	Apply at first egg hatch and repeat in 10-14 days if			
(suppression)	required. Repeat in 10-14 days if monitoring of				
		populations indicates a second application is required.			
		Thorough coverage is necessary for optimal control.			

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS: The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Corteva Agriscience Canada Company under the User Requested Minor Use Label Expansion program. For these uses, Corteva Agriscience Canada Company has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The User should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

#### **DIRECTIONS FOR USE**

CONTROL OF OBLIQUE-BANDED LEAFROLLER AND THREE LINED LEAFROLLER ON THE POME FRUIT GROUP (Crop Group 11-09) - Apple, azarole, crabapple, mayhaw, medlar, pear, Asian pear, quince, Chinese quince, Japanese quince, and cultivars, varieties and/or hybrids of these commodities

Make applications of Intrepid Insecticide by conventional ground application equipment. Thorough uniform coverage of all foliage and fruit is essential for good insect control. A minimum spray volume of 1000 litres water/ha is recommended. If adequate spray coverage of plant canopy requires less solution per hectare, adjust spray volume accordingly while using the same spray concentration (ratio of litres of product to litres of water). Do not exceed 2 applications per year.

Overwintering generation: Apply 750 millilitres of Intrepid Insecticide, in a minimum spray volume of 1000 L per hectare, during late bloom to early petal fall when larvae are actively feeding and before they roll up in the rapidly growing terminals.

<u>Summer generation:</u> Suppression only. Apply 750 millilitres of Intrepid Insecticide, in a minimum spray volume of 1000 L per hectare, at first egg hatch (110-170 Degree Days Celsius after biofix). A second application can be made at 10-14 days after if monitoring indicated this is needed. Biofix is set when the first moth catch is followed up by subsequent moth catches within the orchard. The lower development threshold is 6.1 degrees Celsius for Oblique-banded leafroller. The lower and upper development thresholds are 5 and 29 degrees Celsius for Three-lined leafroller.

Do not harvest within 14 days of treatment. Maximum 2 applications per season.

#### **DIRECTIONS FOR USE**

#### FOR CONTROL OF GRAPEBERRY MOTH ON GRAPE

For the control of grape berry moth, apply 0.6 litres of Intrepid Insecticide per hectare at initiation of egg hatch. A repeat application may be required if populations of the pest are high and/or woodlots are near the vineyard. Apply in sufficient water to ensure thorough coverage of the foliage and fruit bunches. A minimum spray volume of 500 litres water/ha is recommended. Reapply within 10-14 days to ensure complete coverage of rapidly expanding fruit and foliage. Do not apply within 30 days of harvest. Do not apply more than three applications per year.

Refer to the main Intrepid Insecticide label for additional details and instructions before using.

#### **DIRECTIONS FOR USE**

#### Herbs, Crop Subgroup 19-A, except chives

For the control of cabbage looper, armyworm and garden webworm larvae on herbs, crop subgroup 19-A, except chives, apply 0.58 to 1.16 litres of Intrepid Insecticide in 200 to 500 litres of water per hectare when larvae are small and actively feeding. Use the higher rate when insect pressure is high and/or when larvae are large. Repeat applications as determined by further monitoring of pest pressure. Apply a maximum of three applications per year with a minimum of 10 days between treatments. DO NOT exceed 2 L product/ha/year. Do not apply within one day to harvest.

Refer to the main Intrepid Insecticide label for additional details and instructions before using.

#### **DIRECTIONS FOR USE**

CONTROL OF OBLIQUE-BANDED LEAFROLLER AND THREE-LINED LEAFROLLER on 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.

For the control of oblique-banded leafroller and three-lined leafroller apply 0.5 to 0.75 litres (120-180 g a.i./ha) of Intrepid Insecticide per hectare in sufficient water to ensure thorough coverage. DO NOT exceed 2 L product/ha/year. Use the upper rate under high insect pressure and/or on large larvae.

Monitor the population of the pest on a regular schedule and time treatment for control at egg hatch or small larvae. For overwintering larvae, apply as soon as they start feeding in the spring and before they roll up in leaves. For the summer generation, apply at first egg hatch as determined by monitoring adult moth flights. Repeat applications at 7 to 14 day intervals if required based on population monitoring.

Apply a maximum of 3 applications per year with a treatment harvest interval of 3 days.

#### **DIRECTIONS FOR USE**

#### FOR CONTROL OF CLIMBING CUTWORMS ON GRAPES

For the control of climbing cutworms, apply Intrepid at the rate of 0.6 litres per hectare at the first sign of feeding damage in the early spring. Apply to cordons only from dusk to dawn. Use sufficient water to ensure thorough coverage on cordons, unopened buds and tender shoots using an airblast or backpack sprayer. If required, a second application can be applied 10-14 days later. Use a maximum of two applications. Do not apply within 30 days of harvest.

#### **DIRECTIONS FOR USE**

FOR CONTROL OF WESTERN BEAN CUTWORM ON LEGUME VEGETABLES CROP GROUP 6A: EDIBLE-PODDED LEGUME VEGETABLES SUBGROUP Bean (Phaseolus spp.) (runner bean, snap bean, and wax bean), bean (Vigna spp.) (asparagus bean, Chinese longbean, moth bean, yardlong bean), pea (Pisum spp.) (dwarf pea, edible-pod pea, snow pea, sugar snap pea), soybean (immature seed)

CROP GROUP 6B: SUCCULENT SHELLED PEA AND BEAN SUBGROUP: Bean (Phaseolus spp.) (lima bean, green), bean (Vigna spp.) (blackeyed pea, cowpea, southern pea), broad bean (fava bean), pea (Pisum spp.) (English pea, garden pea, green pea)

DRIED BEANS: Bean (Lupinus spp.) (grain lupin, sweet lupin, white lupin and white sweet lupin), bean (Phaseolus spp.) (field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean), bean (Vigna spp.) (adzuki bean, blackeyed pea, catjang cowpea, Crowder pea, moth bean, mung bean, southern pea), broad bean (fava bean), chickpea (garbanzo bean)

For the control of Western bean cutworm, apply Intrepid Insecticide at the rate of 0.6 L of product per hectare in sufficient water volume for complete coverage of the plant foliage. Applications should be timed at egg hatch or to small larvae. Repeat applications based on monitoring of insect populations.

Apply a maximum of 3 application per year. Do not apply within 7 days of harvest.

#### **DIRECTIONS FOR USE**

## FOR CONTROL OF WESTERN BEAN CUTWORM ON CORN (FIELD CORN, SWEET CORN, SEED CORN AND POPCORN)

For the control of Western bean cutworm, apply Intrepid Insecticide at the rate of 0.6 L of product per hectare in sufficient water volume for complete coverage of the plant foliage. Applications should be timed at egg hatch or to small larvae. Repeat applications based on monitoring of insect populations.

Apply a maximum of 3 applications per year. Do not apply within 3 days of harvest for sweet corn. Do not apply within 21 days of harvest for field corn and popcorn.

Refer to the main Intrepid Insecticide label for additional details and instructions before using.

#### **BUFFER ZONES**

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

	Crop		Buffer Zones (metres) Required for the Protection of:			
Method of application			Freshwater Habitat of Depths:		Estuarine/Marine Habitats of Depths:	
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m
Field sprayer, or chemigation where permitted	All field crops		2	1	1	0
Airblast	Apple, pear, tree nuts, bushberries	Early growth stage	10	3	2	0
		Late growth stage	4	2	1	0
	Stone fruit	Early growth stage	5	2	1	0
		Late growth stage	3	2	1	0
	Grapes and	Early growth stage	10	3	2	0
	Caneberries Late growth stage		4	2	1	0

For tank mixes, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

**NOTE**: Applicators may recalculate a site-specific buffer zone by combining information on current weather conditions and spray configuration for the following applications: all airblast applications, and for field and aerial applications which specify the following droplet size category wording on the product label: 'DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) [Fine or Medium or Coarse] classification.' To access the Buffer Zone Calculator, please visit the Pesticide portion of the Canada.ca web site.

#### RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that Intrepid Insecticide contains a Group 18 insecticide. Any insect population may contain individuals naturally resistant to Intrepid Insecticide and other Group 18 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 insecticide resistance:

• Where possible, rotate the use of Intrepid Insecticide or other Group 18 insecticides with different groups that control the same pests in a field, i.e., use Intrepid Insecticide in one or more applications

to control a single generation of the insect pest then rotate to a product with a different mode of action for the next generation.

- 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, record keeping, and considers cultural, biological and other chemical control practices. This product is harmful to certain beneficial arthropods
- 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 Corteva Agriscience Canada Company at 1-800-667-3852 or at <a href="https://www.corteva.ca">www.corteva.ca</a>.

**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 a way that is inconsistent with the directions on the label.

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