

**GROUP 3 INSECTICIDE**

**MATADOR® 120EC**  
Emulsifiable Concentrate Insecticide

COMMERCIAL - AGRICULTURAL

For the Control or Suppression of Labelled Insects on Labelled Crops.

**ACTIVE INGREDIENT:**

Lambda-cyhalothrin ..... 120 g/L

**READ THE LABEL AND THE PAMPHLET BEFORE USING  
KEEP OUT OF REACH OF CHILDREN**

**DANGER**



**POISON**

**CORROSIVE TO SKIN  
EYE IRRITANT  
POTENTIAL SKIN SENSITIZER**

REGISTRATION NO: **24984**  
PEST CONTROL PRODUCTS ACT

NET CONTENTS: **200 mL to 3.78 L**

**Syngenta Canada Inc.**  
140 Research Lane, Research Park  
Guelph, Ontario N1G 4Z3  
Telephone: 1-877-964-3682

Label

## 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.

## FIRST AID

**IF POISONING IS SUSPECTED, IMMEDIATELY** contact a doctor or a poison control centre. 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. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give **any** liquid to the person. 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 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 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

Contains petroleum distillate. Vomiting may cause aspiration pneumonia. Skin exposure may cause transient sensations (tingling, burning, itching, numbness).

## PRECAUTIONS

**KEEP OUT OF REACH OF CHILDREN AND ANIMALS.** Keep unused product in original container tightly closed, locked up and away from food.

Fatal/poisonous if swallowed. May be fatal if inhaled. **DO NOT** breathe sprays or vapours. May be harmful if absorbed through skin. Corrosive to skin. May irritate eyes. Skin sensitizer. Do not get in eyes or on skin.

Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Wash splashes from skin **IMMEDIATELY** with plenty of water. Remove PPE immediately after handling this product. Wash the outside of gloves with soap and water before removing. As soon as possible, wash thoroughly and change into clean clothing. After spraying, wash hands and shower thoroughly with soap and water. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Wear freshly laundered clothes daily.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

MATADOR 120EC may be applied by air only to those crops for which this use is specified on this label. **DO NOT** allow the pilot to mix chemicals to be loaded onto the aircraft. The pilot is allowed to load premixed chemicals with a closed system. It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

Apply only when the potential for drift beyond the area to be treated is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

**DO NOT** apply in greenhouses, unless otherwise specified in the crop-specific use directions.

**DO NOT** apply using handheld mistblower/airblast or handheld fogging equipment.

### **RESTRICTED ENTRY INTERVAL (REI)**

**DO NOT** enter or allow worker entry into treated areas during intervals specified in the following table:

<b>Crop(s)</b>	<b>Postapplication Activity</b>	<b>REI</b>
Conifer seed orchards	Hand set/ hand line irrigation related activities involving foliar contact	1 day
	All other activities	12 hours
Corn (sweet)	Hand harvesting	3 days
	All other activities	12 hours
Corn (seed)	Hand detasseling	3 days
	All other activities	12 hours
All other crops	All activities	12 hours

Workers shall be given oral warning of the restricted-entry interval.

When tank-mixes are permitted, read and observe all label directions, including rates and restrictions for each product used in the tank-mix. Follow the more stringent label precautionary measures for mixing, loading and applying stated on both product labels.

If this pest control product is to be used on a commodity that may be exported to other countries in the world and you require information on acceptable residue levels in these countries, please contact Syngenta Canada Inc. at 1-87-SYNGENTA / 1-877-964-3682.

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Follow the personal protective equipment, engineering control and restriction requirements for the appropriate mixer/loader and applicator scenario as described below. These restrictions are required to minimize exposure to the worker. Applications may be required over multiple days or using multiple applicators.

<b>Application Equipment</b>	<b>Personal Protective Equipment</b>
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<b>and Engineering Controls</b>	<b>Mixer/Loader / Clean-up and Repair</b>	<b>Applicator</b>
Aerial	Coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear and a respirator <sup>1</sup> .	Long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes. Gloves are not required within a closed cockpit.
Airblast – Open Cab	Chemical-resistant coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear, headgear <sup>2</sup> , protective eyewear (goggles or faceshield) and a respirator <sup>1</sup> .	
Airblast – Closed Cab	Chemical-resistant coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear, headgear <sup>2</sup> , protective eyewear (goggles or faceshield) and a respirator <sup>1</sup> .	Long-sleeved shirt, long pants, socks and shoes.
Groundboom – Open Cab	Coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear and a respirator <sup>1</sup> .	
Groundboom – Closed Cab <sup>3</sup>	Coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear and a respirator <sup>1</sup> .	Long-sleeved shirt, long pants, socks and shoes.
Handheld equipment <sup>4</sup>	Coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear and a respirator <sup>1</sup> .	

<sup>1</sup> Respirator must have a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides or a NIOSH-approved canister approved for pesticides.

<sup>2</sup> Chemical-resistant headgear includes Sou'Wester hat, chemical-resistant rain hat or large-brimmed waterproof hat and hood with sufficient neck protection.

<sup>3</sup> Use a closed cab tractor that provides both a physical barrier and respiratory protection (such as dust/mist filtering and/or vapour/gas purification system). The closed cab must have a chemical-resistant barrier that totally surrounds the occupant and prevents contact with pesticides outside the cab.

<sup>4</sup> Wear eye, head and respiratory protection when applying above waist height, including overhead.

## ENVIRONMENTAL PRECAUTIONS

This product contains an active ingredient and aromatic petroleum distillates, which are TOXIC to aquatic organisms. Observe spray buffer zones specified under DIRECTIONS FOR USE.

Toxic to small wild mammals.

Toxic to bees. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to the evening when most bees are not foraging. Avoid applications when bees are foraging in the treatment area in ground cover containing blooming weeds. To further minimize exposure to pollinators, refer to the complete guidance "Protecting Pollinators during Pesticide Spraying – Best Management Practices" on the

Health Canada website ([www.canada.ca/pollinators](http://www.canada.ca/pollinators)).

Toxic to certain beneficial arthropods (which may include predatory and parasitic insects, spiders, and mites). Minimize spray drift to reduce harmful effects on beneficial arthropods in habitats next to the application site such as hedgerows and woodland.

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.

To reduce risk to aquatic organisms from runoff, a vegetative filter strip of at least 10 metres wide between the field edge and adjacent, downhill aquatic habitats must be observed, as specified under DIRECTIONS FOR USE.

**Greenhouse use:** Toxic to beneficial arthropods (which may include predatory and parasitic insects, spiders, and mites). May harm beneficial arthropods, including those used in greenhouse production. Avoid application when beneficial arthropods are in the treatment area.

## STORAGE

Store this product away from food or feed. Store in a cool, well ventilated area out of the reach of children and animals. Store above 0°C. Storage below 0°C will not impair the effectiveness of MATADOR 120EC, however, following such storage, agitate well before use.

## SPILL CLEAN-UP

Wear appropriate protective equipment (gloves, glasses, apron) when attempting to clean up the spill. If the container is leaking, secure leak and place the container into a drum or heavy gauge plastic bag. Contact Syngenta Canada Inc. (See EMERGENCY NUMBER below) for further information.

For spills and leaks - contain the liquid with dikes of inert material (soil, clay, kitty litter, etc.). Absorb the spill onto inert material and shovel into a sealable waste container.

On hard surfaces - sprinkle spill area with detergent and scrub in a small quantity of water with a coarse broom. Let stand 10 minutes then absorb onto an inert material and shovel into the waste container. Dispose of all waste, including broom, in accordance with provincial requirements.

On soil - remove the top 15 cm of soil in the spill area and replace with fresh soil. Dispose of all waste in accordance with provincial requirements.

For more information on the disposal of waste and the clean-up of spills, contact the provincial regulatory agency and the manufacturer.

## DISPOSAL

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

**Recyclable Container:**

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/territorial requirements.

***IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL, FIRE OR POISONING,  
CALL 1-800-327-8633 (FASTMED)***

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Pamphlet

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## 1.0 NOTICE TO USER

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## 4.0 PRECAUTIONS

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after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Wear freshly laundered clothes daily.

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## 5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Follow the personal protective equipment, engineering control and restriction requirements for the appropriate mixer/loader and applicator scenario as described below. These restrictions are required to minimize exposure to the worker. Applications may be required over multiple days or

using multiple applicators.

Application Equipment and Engineering Controls	Personal Protective Equipment	
	Mixer/Loader / Clean-up and Repair	Applicator
Aerial	Coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear and a respirator <sup>1</sup> .	Long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes. Gloves are not required within a closed cockpit.
Airblast – Open Cab	Chemical-resistant coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear, headgear <sup>2</sup> , protective eyewear (goggles or faceshield) and a respirator <sup>1</sup> .	
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Groundboom – Open Cab	Coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear and a respirator <sup>1</sup> .	
Groundboom – Closed Cab <sup>3</sup>	Coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear and a respirator <sup>1</sup> .	Long-sleeved shirt, long pants, socks and shoes.
Handheld equipment <sup>4</sup>	Coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear and a respirator <sup>1</sup> .	

<sup>1</sup> Respirator must have a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides or a NIOSH-approved canister approved for pesticides.

<sup>2</sup> Chemical-resistant headgear includes Sou'Wester hat, chemical-resistant rain hat or large-brimmed waterproof hat and hood with sufficient neck protection.

<sup>3</sup> Use a closed cab tractor that provides both a physical barrier and respiratory protection (such as dust/mist filtering and/or vapour/gas purification system). The closed cab must have a chemical-resistant barrier that totally surrounds the occupant and prevents contact with pesticides outside the cab.

<sup>4</sup> Wear eye, head and respiratory protection when applying above waist height, including overhead.

## 6.0 ENVIRONMENTAL PRECAUTIONS

This product contains an active ingredient and aromatic petroleum distillates, which are TOXIC to aquatic organisms. Observe spray buffer zones specified under DIRECTIONS FOR USE.

Toxic to small wild mammals.

Toxic to bees. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site. Avoid application during the crop blooming period. If applications must be made

during the crop blooming period, restrict applications to the evening when most bees are not foraging. Avoid applications when bees are foraging in the treatment area in ground cover containing blooming weeds. To further minimize exposure to pollinators, refer to the complete guidance “Protecting Pollinators during Pesticide Spraying – Best Management Practices” on the Health Canada website ([www.canada.ca/pollinators](http://www.canada.ca/pollinators)).

Toxic to certain beneficial arthropods (which may include predatory and parasitic insects, spiders, and mites). Minimize spray drift to reduce harmful effects on beneficial arthropods in habitats next to the application site such as hedgerows and woodland.

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.

To reduce risk to aquatic organisms from runoff, a vegetative filter strip of at least 10 metres wide between the field edge and adjacent, downhill aquatic habitats must be observed, as specified under DIRECTIONS FOR USE.

**Greenhouse use:** Toxic to beneficial arthropods (which may include predatory and parasitic insects, spiders, and mites). May harm beneficial arthropods, including those used in greenhouse production. Avoid application when beneficial arthropods are in the treatment area.

## 7.0 STORAGE

Store this product away from food or feed. Store in a cool, well ventilated area out of the reach of children and animals. Store above 0°C. Storage below 0°C will not impair the effectiveness of MATADOR 120EC, however, following such storage, agitate well before use.

## SPILL CLEAN-UP

Wear appropriate protective equipment (gloves, glasses, apron) when attempting to clean up the spill. If the container is leaking, secure leak and place the container into a drum or heavy gauge plastic bag. Contact Syngenta Canada Inc. (See EMERGENCY NUMBER below) for further information.

For spills and leaks - contain the liquid with dikes of inert material (soil, clay, kitty litter, etc.). Absorb the spill onto inert material and shovel into a sealable waste container.

On hard surfaces - sprinkle spill area with detergent and scrub in a small quantity of water with a coarse broom. Let stand 10 minutes then absorb onto an inert material and shovel into the waste container. Dispose of all waste, including broom, in accordance with provincial requirements.

On soil - remove the top 15 cm of soil in the spill area and replace with fresh soil. Dispose of all waste in accordance with provincial requirements.

For more information on the disposal of waste and the clean-up of spills, contact the provincial regulatory agency and the manufacturer.

## 8.0 DISPOSAL

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

**Recyclable Container:**

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/territorial requirements.

***IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL, FIRE OR POISONING,  
CALL 1-800-327-8633 (FASTMED)***

**9.0 PRODUCT INFORMATION**

MATADOR 120EC is a photostable, synthetic pyrethroid insecticide. It is a fast acting stomach and contact insecticide effective against a broad spectrum of foliar pests. It has no fumigant or systemic activity. Best results will be obtained with MATADOR 120EC when applied against the early development stages of the pest as determined by regular monitoring.

**10.0 DIRECTIONS FOR USE**

10.1 General Information

Control of some insect species with pyrethroid insecticides decreases as temperature rises. For best results, apply MATADOR 120EC during the early morning before temperatures rise, and during the evening, past the heat of the day. Use sufficient water for thorough coverage, applied by ground sprayer.

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.

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing

the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Syngenta Canada Inc. at 1-87-SYNGENTA / 1-877-964-3682 for information before applying any tank mix that is not specifically recommended on this label.

Syngenta Canada Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) of all potential tank mixes under all environmental conditions or for all crop varieties. Tank mixes that are not specifically listed on this label should be tested on a small area first, under local conditions and using standard practices, to confirm the tank mix is suitable for widespread application.

To determine the physical compatibility of this product with other products, use a jar test.

Always read and follow label directions including WALES mixing order.

To protect pollinators, follow the instructions regarding bees in the Environmental Precautions section.

A Vegetative Filter Strip (VFS) of at least 10 metres wide must be constructed and maintained. The VFS is required between the field edge and adjacent, downhill aquatic habitats to reduce risk to aquatic organisms from run-off. Aquatic habitats include, but are not limited to, lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, and estuaries.

The VFS is to be composed of grasses and may also include shrubs, trees, or other vegetation. Additional guidance can be found on the PMRA Environmental Risk Mitigation webpages.

Both VFS and spray drift buffer zones must be observed.

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

Field sprayer application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 8 km/h at the site of application. DO NOT apply with spray droplets smaller than the American Society of Agricultural and Biological Engineers (ASABE S572.1) medium classification. Air induction nozzles must be used for the ground application of this product. 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.

Optimum application timing for the control or suppression of specific pest species is best determined by monitoring pest development and populations. In general, MATADOR 120EC is most effective against early developmental stages of surface feeding pests and against adults of pests which deposit eggs within plant parts. Follow recommendations provided by local pest monitoring services regarding appropriate application timing for your area. Follow provincial or territorial spray calendars for optimum timing of programmed spray applications.

Repeated applications are not advised for orchards where integrated pest management programs are being followed because severe reductions in beneficial arthropods may result. If pest monitoring services recommend repeated insecticide applications, consider alternating MATADOR 120EC applications with insecticides from different classes to prevent the development of resistant pest populations. Localized populations of some insect pests (e.g., Colorado Potato Beetle, Spotted Tentiform Leafminer) have developed resistance to other synthetic pyrethroid insecticides and can be expected to quickly develop resistance to MATADOR 120EC. Consult regional extension specialists regarding the susceptibility of local populations. Follow Integrated Pest Management (IPM) techniques to minimize the need for insecticide applications and ensure that needed applications are timed for optimum effectiveness.

## **10.2 Ground Application**

### **10.2.1 General Information**

Field sprayer application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 8 km/h at the site of application. DO NOT apply with spray droplets smaller than the American Society of Agricultural and Biological Engineers (ASABE S572.1) medium classification. Air-induction nozzles must be used for the ground application of this product. 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.

### **10.2.2 Mixing Instructions**

- Ensure that the sprayer interior is clean, then fill the spray tank with  $\frac{1}{2}$  the required amount of water and engage gentle agitation. Good agitation is indicated by a rippling or rolling action on the surface of the water.
- Add any WG or DF formulation mix partners and agitate to ensure complete mixing.
- Add any SC formulation mix partners and agitate to ensure complete mixing.
- Add MATADOR 120EC Insecticide (EC) and agitate to ensure complete mixing.
- Add any additional EC formulation mix partners and agitate to ensure complete mixing.
- Fill the tank to  $\frac{3}{4}$  the required amount of water.
- Add any solution (SN or SL) formulation mix partners and agitate to ensure complete mixing.
- Finish filling the sprayer with water, maintaining good agitation.
- After any break in spraying operations, agitate thoroughly before spraying again.
- Spray the pesticide suspension the same day as mixing.
- Do not mix, load or clean spray equipment where there is a potential to contaminate wells or aquatic systems.

### **10.2.3 Spraying Instructions**

- Water Volume: Apply in a minimum spray volume of 100 L/ha or as directed in the crop and pest specific instructions below, whichever is LARGER. Appropriate water volumes

aid good coverage.

- Spray Nozzles: 80° or 110° drift reducing flat fan (e.g. those with a pre-orifice or turbulence chamber) or air induction nozzles are recommended. Do not use flood type nozzles, controlled droplet application equipment, spray foils or hollow cone nozzles.
- Pressure: As recommended by the nozzle manufacturer to achieve ASABE medium sized droplets.
- Apply at uniform speed and avoid overlapping. Shut off spray boom while starting, turning, slowing or stopping to avoid potential crop injury from over application.

#### 10.2.4 Equipment Clean-Up

Before Spraying:

- Prior to using MATADOR 120EC Insecticide, ensure that the spray tank, lines and filter are thoroughly clean.

After Spraying:

- Thoroughly clean application equipment immediately after spraying. Do not allow MATADOR 120EC Insecticide residue to dry within the spray tank
- When using tank mixes, consult the tank-mix partner label for additional cleanup instructions.
- The following recommendations are provided:
- Drain and flush tank walls, boom and all hoses for ten minutes with a clean water/detergent mixture. Rinse with clean water. Do not clean the sprayer near desirable vegetation, flowering crops or weeds, wells or other water sources.
- Remove all nozzles and screens and wash separately.
- Dispose of all rinsate in accordance with provincial/territorial regulations.

### 10.3 AERIAL APPLICATION

#### 10.3.1 General Information

**DO NOT** apply by air unless otherwise specified in the crop-specific use directions.

Aerial application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 8 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural and Biological Engineers (ASABE S572.1) medium-coarse classification. **DO NOT** apply under weather conditions of less than 50% relative humidity and temperatures greater than 20°C. Nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate

marking devices.

### 10.3.2 Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *National Aerial Pesticide Application Manual*, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

### 10.3.3 Product Specific Precautions

Read and understand the entire label before using this product. If you have questions, call the manufacturer at 1-877-964-3682 or obtain technical advice from the distributor or your provincial/territorial agricultural representative.

For aerial applications, ensure the aircraft is equipped and calibrated to deliver a uniform spray coverage with a minimum potential for drift. To ensure uniform application, use an appropriate marking device. Apply in weather conditions that will not promote drift.

Use only medium or coarse nozzles rated as delivering droplets of volume median diameter of 340 microns or greater.

Apply in a spray volume of 40 litres per hectare.

### 10.3.4 Mixing Instructions

Mixing this product directly in the aircraft hopper **IS NOT** recommended. The use of chemical handling or managing equipment to load the hopper **IS** recommended. This product **MAY BE** inducted into a hopper which is prefilled with water or when the product and water are mixed prior to entering the hopper. This product **MAY BE** batch mixed and pumped into the hopper. In all cases the chemical handling equipment and hopper interior must be clean prior to use.

**NOTE:** WG and DF formulations are preferentially batch mixed.

**NOTE:** SC, SN, and SL formulations may be inducted or batch mixed.

**NOTE:** EC formulations are preferentially batch mixed.

It is **NOT** recommended to combine WG or DF formulations with tank mix partners within a single batch. Batch mix WG or DF formulations first, pump into the hopper, and then add tank mix partners by induction or as an additional batch mix.

- Pump water into the hopper to at least  $\frac{1}{4}$  to  $\frac{1}{2}$  of the desired spray volume. Engage hopper circulation, if possible.
- Thoroughly batch mix any WG or DF formulation mix partners and agitate to ensure complete mixing. Pump into the hopper
- Induct or thoroughly batch mix any SC formulations.
- Thoroughly batch mix MATADOR 120EC Insecticide and any other EC formulation mix partners. EC formulations may be added to the batch from Step 2, if desired.
- Induct or thoroughly batch mix any solution (SN or SL) formulation mix partners. SN/SL formulations may be added to the batch from Step 2, if desired.
- Pump batch mixed SC, EC, and/or SN/SL products into the hopper.
- Finish filling the hopper with water.
- If it was not possible to engage hopper agitation in Step 1, do so as soon as possible

- once airborne.
- Spray the pesticide suspension the same day as mixing.
- Do not mix, load or clean equipment where there is a potential to contaminate wells or aquatic systems.

### 10.3.5 Spraying Instructions

- Water Volume: Apply in a spray volume of 40 L/ha. Appropriate water volumes aid good coverage.
- Spray Nozzles: Use only ASABE medium or coarse nozzles rated as delivering droplets of volume median diameter of 340 microns or greater.
- Pressure: As recommended by the nozzle manufacturer to achieve ASABE coarse or medium sized droplets.
- Ensure hopper agitation is engaged whenever possible during flight.

### 10.3.6 Equipment Clean-Up

Before Spraying:

- Prior to using MATADOR 120EC Insecticide, ensure that the hopper, chemical handling equipment, lines and filter are thoroughly cleaned.

After Spraying:

- Thoroughly clean application equipment immediately after spraying. Do not allow MATADOR 120EC residue to dry within application equipment.
- When using tank mixes, consult the tank-mix partner label for additional cleanup instructions.
- The following recommendations are provided:
- Drain and flush tank walls, boom and all hoses for ten minutes with a clean water/detergent mixture. Rinse with clean water. Do not clean application equipment near desirable vegetation, flowering crops or weeds, wells or other water sources.
- Remove all nozzles and screens and wash separately.
- Dispose of all rinsate in accordance with provincial/territorial regulations.

## 10.4 SPRAY BUFFER ZONES

A spray buffer zone is NOT required for:

- Uses with hand-held application equipment permitted on this label.

The spray 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.

Method of application	Crop	Spray Buffer Zones (metres) Required for the Protection of:			
		Freshwater Habitats 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	Barley, buckwheat, pearl millet, proso millet, oats, rice, rye	10	5	3	1

	sorghum, teosinte, triticale, wheat, wild rice, carrots, celery, flax, mustard (oilseed type), canola, summer-fallow, poplar and willow, sweet potato, timothy (for seed production only), ferns of asparagus. Alfalfa/grass mixtures (for seed production only)				
	Corn (including field, pop and sweet types, and crops grown for seed production), Crop Group 9 – Cucurbit Vegetables: Chayote (fruit), chinese waxgourd, citron melon, cucumber, gherkin, edible gourd, momordica spp., muskmelon, pumpkin, summer squash, winter squash, watermelon, Brassica: Broccoli, chinese broccoli (gai lon), brussels sprouts, cabbage, chinese cabbage (napa), cauliflower, kohlrabi)	25	10	5	3
	Legume Vegetables (including Succulent and Dry Edible Beans, Succulent and Dry Peas, field peas, Chickpeas, Lentils, fava bean, Soybean)	30	15	5	3
	Potatoes, Tomatoes	10	5	4	2
	Strawberry	15	5	3	2
	Field tobacco	2	1	1	1
	Tobacco (soil treatment), tobacco (post planting treatment)	5	2	3	1
	Rye or wheat (tobacco cover crop treatment)	3	1	2	1

Method of application	Crop		Spray Buffer Zones (metres) Required for the Protection of:			
			Freshwater Habitats of Depths:		Estuarine/Marine Habitats of Depths:	
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m
Airblast	CONIFER SEED ORCHARDS (Douglas-fir, hemlocks, spruces, larches, pines and true firs)	Early growth stage	85	75	70	60
		Late growth stage	75	65	60	50
	Chokecherry, shelterbelts	Early growth stage	55	45	50	40
		Late growth stage	45	35	40	30
	Poplar (Populus spp.) and willow (Salix spp.) plantings, including	Early growth stage	70	60	50	40

	Short-Rotation-Intensive-Culture (SRIC), their hybrids and their planting stock	Late growth stage	60	50	40	35
	Pears	Early growth stage	60	50	50	40
		Late growth stage	50	40	40	35
	Saskatoon berries	Early growth stage	65	60	55	45
		Late growth stage	55	50	45	35
	Cherries, nectarines, plums, strawberries, Tree Nuts (Excluding Ginkgo, Monkey puzzle nut and Pine nuts) - Beechnut, Bur Oak, Butternut, Chestnut, Chinquapin, Hazelnut (Filbert), Heartnut, Hickory nut, Japanese horse-chestnut, Black walnut, English walnut, Yellowhorn, walnut, butternut, heartnut	Early growth stage	70	60	55	45
		Late growth stage	60	50	45	35

Method of application	Crop	Spray Buffer Zones (metres) Required for the Protection of:				
		Freshwater Habitats of Depths:		Estuarine/Marine Habitats of Depths:		
		Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Aerial	Alfalfa (for seed production only), flax, canola, mustard (oilseed type), grass mixtures (for seed production only), summer-fallow	Fixed wing	375	150	175	55
		Rotary wing	375	125	175	35
	Buckwheat, pearl millet, proso millet, rice, rye sorghum, teosinte, triticale, wild rice. Lentils, potatoes, barley, wheat, oats, succulent and dry edible beans, succulent peas, field peas, dry peas and soybeans Chickpeas, fava beans, Legume Vegetables,	Fixed wing	800	300	175	55
		Rotary wing	550	300	175	35

Dwarf pea, edible-pod pea, snow pea, sugar snap pea, English pea, garden pea, green pea, pigeon pea. Peas ( <i>Pisum</i> spp.) (includes field peas)						
Corn (including field, pop and sweet types, and crops grown for seed production)	Fixed wing	800	800	800	225	
	Rotary wing	800	575	475	225	
Poplar ( <i>Populus</i> spp.) and willow ( <i>Salix</i> spp.) plantings, including short-rotation-intensive-culture (SRIC), their hybrids and their planting stock	Fixed wing	775	300	175	55	
	Rotary wing	550	300	175	35	

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

The spray buffer zones for airblast application of this product can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca website. Spray buffer zones for field sprayer or aerial application CANNOT be modified using the Spray Buffer Zone Calculator. Clean and decontaminate protective clothing and application equipment regularly.

## 11.0 DIRECTIONS FOR USE

Refer to Crop Directions for Use for specific livestock grazing and feeding restrictions. **When applied as directed, MATADOR 120EC Insecticide will control the listed pests, unless otherwise indicated as suppression.**

### 11.1 Fruit Crops

FRUIT CROPS	
CROPS	CHERRIES
PEST	Plum Curculio, Cherry Maggot
RATE (mL/ha)	104
APPLICATION METHOD	Ground application
APPLICATION TIMING	<p><b>Plum Curculio:</b> Shuck stage, when the fruit is the size of a pea, and 10 to 12 days later if oviposition scars are detected.</p> <p><b>Cherry Maggot:</b> When the fruit is turning from green to pink. A second application may be required 10 days later.</p>

<b>NOTES</b>	Allow a 7 day interval between treatments. <b>DO NOT</b> apply within 7 days of harvest. <b>DO NOT</b> use more than 3 applications per year. <b>DO NOT APPLY BY AIR.</b>
<b>CROPS</b>	<b>NECTARINES</b>
<b>PEST</b>	Green Peach Aphid, Oriental Fruit Moth, Tarnished Plant Bug
<b>RATE (mL/ha)</b>	104
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
<b>NOTES</b>	Allow a 7 day interval between treatments. <b>DO NOT</b> apply within 7 days of harvest. <b>DO NOT</b> use more than 3 applications per year. <b>DO NOT APPLY BY AIR.</b>
<b>CROPS</b>	<b>PEARS</b>
<b>PEST</b>	Pear Psylla (Nymphs and Adults), Codling Moth
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
<b>NOTES</b>	<b>DO NOT</b> apply within 7 days of harvest. <b>DO NOT</b> use more than 1 application per year. <b>DO NOT APPLY BY AIR.</b>

<b>FRUIT CROPS</b>	
<b>CROPS</b>	<b>PLUMS</b>
<b>PEST</b>	Plum Curculio, Mealy Plum Aphid
<b>RATE (mL/ha)</b>	104
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	<b>Plum Curculio:</b> Shuck stage, when the fruit is the size of a pea, and 10 to 12 days later if oviposition scars are detected. <b>Mealy Plum aphid:</b> Control should be based on local monitoring for significant populations.
<b>NOTES</b>	Allow a 7 day interval between treatments. <b>DO NOT</b> apply within 7 days of harvest. <b>DO NOT</b> use more than 3 applications per year. <b>DO NOT APPLY BY AIR.</b>
<b>CROPS</b>	<b>STRAWBERRIES</b>
<b>PEST</b>	Bud (Clipper) Weevil, Meadow Spittle Bug and Tarnished Plant Bug
<b>RATE (mL/ha)</b>	104
<b>APPLICATION METHOD</b>	Ground application

<b>APPLICATION TIMING</b>	<p><b>Bud Weevil:</b> When buds are visible in crown and again when first buds show white.</p> <p><b>Spittle Bug:</b> When first noticed.</p> <p><b>Plant Bug:</b> 7 to 10 days after first bloom and repeat 7 to 10 days later.</p>
<b>NOTES</b>	<p>Allow a 7 day interval between treatments.</p> <p><b>DO NOT</b> apply within 7 days of harvest.</p> <p><b>DO NOT</b> use more than 3 applications per year.</p> <p><b>DO NOT APPLY BY AIR.</b></p>
<b>11.2 Vegetable Crops</b>	

<b>VEGETABLE CROPS</b>	
<b>CROPS</b>	<b>COLE CROPS</b> (Broccoli, Brussels Sprouts, Cabbage, Cauliflower)
<b>PEST</b>	Crucifer Flea Beetle, Diamondback Moth Larvae, Imported Cabbageworm
<b>RATE (mL/ha)</b>	42
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
<b>NOTES</b>	<p>Allow a 7 day interval between treatments.</p> <p><b>DO NOT</b> apply within 1 day of harvesting cabbage and 3 days of harvesting broccoli, Brussels sprouts or cauliflower.</p> <p><b>DO NOT</b> use more than 3 applications per year.</p> <p><b>DO NOT APPLY BY AIR.</b></p>

<b>VEGETABLE CROPS</b>	
<b>CROPS</b>	<b>COLE CROPS</b> (Broccoli, Brussels Sprouts, Cabbage, Cauliflower)
<b>PEST</b>	Cabbage Looper
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
<b>NOTES</b>	<p>Allow a 7 day interval between treatments.</p> <p><b>DO NOT</b> apply within 1 day of harvesting cabbage and 3 days of harvesting broccoli, Brussels sprouts or cauliflower.</p> <p><b>DO NOT</b> use more than 3 applications per year.</p> <p><b>DO NOT APPLY BY AIR.</b></p>
<b>CROPS</b>	<b>POTATOES</b>
<b>PEST</b>	Potato Flea Beetle, Potato Leafhopper, Tarnished Plant Bug, and Tuber Flea Beetle
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application

<b>APPLICATION TIMING</b>	When insects or damage appear. Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
<b>NOTES</b>	<p>Allow a 7 day interval between treatments.</p> <p>The maximum rate per season must not exceed 250 mL of product per hectare.</p> <p><b>DO NOT</b> apply within 7 days of harvest.</p> <p><b>DO NOT</b> use more than 3 applications per year if using the 83 mL per hectare rate.</p> <p><b>DO NOT</b> feed treated crops to livestock.</p> <p><b>Aerial Application: DO NOT</b> make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.</p> <p><b>Water Volume:</b> Use a minimum of 100 L water for ground application. Use sufficient water for thorough coverage.</p>

<b>VEGETABLE CROPS</b>	
<b>CROPS</b>	<b>POTATOES</b>
<b>PEST</b>	European Corn Borer
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	Spray at egg hatch and no later than when the first feeding damage is seen on foliage. Reapply at 4 to 7 day intervals if monitoring indicates that it is necessary. Consult provincial/territorial guidelines and local extension experts for monitoring protocols and thresholds for treatment.
<b>NOTES</b>	<p>The maximum rate per season must not exceed 250 mL of product per hectare.</p> <p>Allow a 4 to 7 day interval between treatments.</p> <p><b>DO NOT</b> apply within 7 days of harvest.</p> <p><b>DO NOT</b> use more than 3 applications per year if using the 83 mL per hectare rate.</p> <p><b>DO NOT</b> feed treated crops to livestock</p> <p><b>Aerial Application: DO NOT</b> make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.</p> <p><b>Water Volume:</b> Use a minimum of 100 L water for ground application. Use sufficient water for thorough coverage.</p>
<b>CROPS</b>	<b>POTATOES</b>
<b>PEST</b>	Colorado Potato Beetle: susceptibility to pyrethroid insecticides should be confirmed using an appropriate assay.
<b>RATE (mL/ha)</b>	83 - 125 for ground application 83 for aerial application
<b>APPLICATION METHOD</b>	Ground or aerial application (see rates above)

<b>APPLICATION TIMING</b>	Use 125 mL per hectare rate when Colorado Potato Beetle larvae are beyond the second instar stage of development or when populations are high.
<b>NOTES</b>	<p>The maximum rate per season must not exceed 250 mL of product per hectare.</p> <p>Allow a 7 day interval between treatments.</p> <p><b>DO NOT</b> apply within 7 days of harvest.</p> <p><b>DO NOT</b> use more than 3 applications per year if using the 83 mL per hectare rate.</p> <p><b>DO NOT</b> use more than 2 applications per year if using the 125 mL per hectare rate.</p> <p><b>DO NOT</b> feed treated crops to livestock</p> <p><b>Aerial Application: DO NOT</b> make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.</p> <p><b>Water Volume:</b></p> <p>Use a minimum of 100 L water for ground application. Use sufficient water for thorough coverage.</p>

<b>VEGETABLE CROPS</b>	
<b>CROPS</b>	<b>TOMATOES</b>
<b>PEST</b>	Potato Flea Beetle, Potato Leafhopper, Tarnished Plant Bug, Cutworms
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	<p>When insects or damage appear. Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.</p> <p><b>Cutworms:</b> Applications should be made under moist conditions in the evening or night when cutworm activity is highest. Do not disturb the soil surface for 5 days after treatment.</p>
<b>NOTES</b>	<p>Allow a 7 day interval between treatments.</p> <p>The maximum rate per season must not exceed 250 mL of product per hectare.</p> <p><b>DO NOT</b> apply within 7 days of harvest.</p> <p><b>DO NOT</b> use more than 3 applications per year if using the 83 mL per hectare rate.</p> <p><b>DO NOT</b> use more than 2 applications per year if using the 125 mL per hectare rate.</p> <p><b>DO NOT APPLY BY AIR.</b></p>
<b>CROPS</b>	<b>TOMATOES</b>
<b>PEST</b>	Colorado Potato Beetle: susceptibility to pyrethroid insecticides should be confirmed using an appropriate assay.
<b>RATE (mL/ha)</b>	83 - 125
<b>APPLICATION METHOD</b>	Ground application

<b>APPLICATION TIMING</b>	When insects or damage appear. Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring. <b>Colorado Potato Beetle:</b> Use 125 mL per hectare rate when Colorado Potato Beetle larvae are beyond the second instar stage of development, or when populations are high.
<b>NOTES</b>	Allow a 7 day interval between treatments. The maximum rate per season must not exceed 250 mL of product per hectare. <b>DO NOT</b> apply within 7 days of harvest. <b>DO NOT</b> use more than 3 applications per year if using the 83 mL per hectare rate. <b>DO NOT</b> use more than 2 applications per year if using the 125 mL per hectare rate. <b>DO NOT APPLY BY AIR.</b>

### 11.3 Tobacco

<b>TOBACCO</b>	
<b>CROPS</b>	<b>TOBACCO Seedlings, Greenhouse</b>
<b>PEST</b>	Cutworm (Darksided and White)
<b>RATE (mL/ha)</b>	2 mL/30 L water
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	Cutworm activity is greatest during the late evening and night. Application of MATADOR 120EC should be timed as close as possible to insect feeding activity.
<b>NOTES</b>	Mix 2 mL of MATADOR 120EC in 30 L of water and apply to 200 m <sup>2</sup> of plant bed. <b>DO NOT APPLY BY AIR.</b>
<b>CROPS</b>	<b>FIELD TOBACCO</b>
<b>PEST</b>	Cutworm (Darksided and White)
<b>RATE (mL/ha)</b>	2 mL/30 L water
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	Cutworm activity is greatest during the late evening and night. Application of MATADOR 120EC should be timed as close as possible to insect feeding activity.
<b>NOTES</b>	Apply the recommended rate of MATADOR 120EC in 225 to 450 L of water per hectare using spray pressure of 175 to 350 kPa. <b>DO NOT APPLY BY AIR.</b>

### 11.4 Cover Crop Treatment

<b>CROPS</b>	<b>WHEAT or RYE, used as TOBACCO COVER CROP TREATMENT</b>
<b>PEST</b>	Cutworm (Darksided and White)
<b>RATE (mL/ha)</b>	42
<b>APPLICATION METHOD</b>	Ground application

<b>APPLICATION TIMING</b>	When crop is 10 to 15 cm high, 4-5 days before ploughdown. Cutworm activity is greatest during the late evening and night. Application of MATADOR 120EC should be timed as close as possible to insect feeding activity.
<b>NOTES</b>	Apply 42 mL of MATADOR 120EC per hectare once to rye or wheat cover. Application should also be made to fence rows and to a 15 m strip into nearby cover crop.  <b>DO NOT</b> cut treated fields for hay/forage. <b>DO NOT</b> graze treated fields.  <b>DO NOT</b> APPLY BY AIR.

### 11.5 Soil Treatment

<b>CROPS</b>	<b>SOIL TREATMENT</b>
<b>PEST</b>	Cutworm (Darksided and White)
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	Apply once to the soil 5 days before transplanting. Cutworm activity is greatest during the late evening and night. Application of MATADOR 120EC should be timed as close as possible to insect feeding activity.
<b>NOTES</b>	<b>DO NOT</b> incorporate. <b>DO NOT</b> disturb the soil surface for at least 5 days following treatment since mixing of MATADOR 120EC with soil will reduce its effectiveness. Application should also be made to fence rows and to a 15 m strip into nearby cover crops. <b>DO NOT</b> APPLY BY AIR.
<b>CROPS</b>	<b>POST PLANTING TREATMENT</b>
<b>PEST</b>	Cutworm (Darksided and White)
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	At transplanting. Cutworm activity is greatest during the late evening and night. Application of MATADOR 120EC should be timed as close as possible to insect feeding activity.
<b>NOTES</b>	Spray in a 25 cm band over the row using 150 to 300 L of water per hectare. Under conditions of severe insect pressure, application should be made to fence rows and to a 15 m wide strip into nearby cover crops. A follow-up treatment may be necessary if there are late developing cutworms. <b>DO NOT</b> use more than 1 application per year. <b>DO NOT</b> apply within 60 days of harvest. <b>DO NOT</b> APPLY BY AIR.

## 11.6 Oilseed Crops

OILSEED CROPS	
<b>CROPS</b>	<b>CANOLA AND MUSTARD (OILSEED TYPE)</b>
<b>PEST</b>	Grasshopper
<b>RATE (mL/ha)</b>	63 - 83 for ground application 83 for aerial application
<b>PEST</b>	Crucifer Flea Beetle Lygus Bug Cabbage Seedpod Weevil (adults) Imported Cabbageworm Diamondback Moth Larvae Cabbage Looper Bertha Armyworm Cutworms <i>(Refer to User Requested Minor Use Label Expansion (URMULE) section for label directions regarding Swede midge (Contarinia nasturtii) control.)</i>
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	<p>Apply when the insects are at a vulnerable stage. Consult provincial/territorial guidelines and local extension experts for treatment threshold and advice.</p> <p><b>Cabbage Seedpod Weevil (adults):</b> Apply at the bud to early flowering stage of crop development. Timing of applications should also be based on the presence of significant populations of adults, as determined by local monitoring. Application prior to adult migration into the field will not be effective. MATADOR 120EC will not control larvae developing within the pod, and must be applied prior to egg laying.</p> <p><b>Flea beetle:</b> To prevent migration of overwintering flea beetle adults throughout the field, ground spray a 15 m strip around the field at the first sign of flea beetle feeding.</p> <p><b>Grasshopper:</b> Apply the low rate when grasshoppers are up to the 3rd nymphal stage (up to 1 cm in length) or when insect numbers are low. Apply the high rate when grasshoppers are larger, up to but not including winged adults (up to 2.5 cm in length) or when insect numbers are high. If insect pressure is high apply as spray to a 15 m strip around the field. Avoid environmentally sensitive areas and unregistered crops.</p> <p><b>Cutworms:</b> Applications should be made in the evening or night when cutworm activity is highest. Application at the time of cutworm emergence will ensure contact of MATADOR 120EC to the pest. Apply in sufficient water to ensure thorough coverage.</p>

<b>NOTES</b>	<p>Allow a 7 day interval between treatments (by ground application). For cabbage seedpod weevil: make only 1 application per season by either ground or aerial application equipment. <b>DO NOT</b> apply within 7 days of harvest. <b>DO NOT</b> use more than 3 applications per year. Seed (including meal) can be fed to livestock. <b>DO NOT</b> cut treated field for hay/forage. <b>DO NOT</b> graze treated fields. For grasses/non-grasses grown for seed production only, <b>DO NOT</b> feed seed screenings and aftermath to livestock. <b>Aerial Application: DO NOT</b> make more than 1 application of 83 mL/ha of the allowed seasonal total by air. <b>Water Volume:</b> <u>Ground Application:</u> Apply in 100 - 200 L of water per hectare. <u>Aerial Application:</u> Apply in 40 L of water per hectare.</p>
<b>OILSEED CROPS</b>	
<b>CROPS</b>	<b>FLAX</b>
<b>PEST</b>	Grasshoppers
<b>RATE (mL/ha)</b>	63 - 83 for ground application 83 for aerial application
<b>PEST</b>	Cutworms
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application (see rates above)
<b>APPLICATION TIMING</b>	<p>Apply when the insects are at a vulnerable stage. Consult provincial /territorial guidelines and local extension experts for treatment threshold and advice. <b>Grasshoppers:</b> Apply the low rate when grasshoppers are up to the 3<sup>rd</sup> nymphal stage (up to 1 cm in length) or when insect numbers are low. Apply the high rate when grasshoppers are larger, up to but not including winged adults (up to 2.5 cm in length) or when insect numbers are high. If insect pressure is high apply a spray to a 15 m strip around the field. Avoid environmentally sensitive areas and unregistered crops. <b>Cutworms:</b> Applications should be made in the evening or night when cutworm activity is highest. Application at the time of cutworm emergence will ensure contact of MATADOR 120EC to the pest. Apply in sufficient water to ensure thorough coverage.</p>
<b>NOTES</b>	<p>Allow a 7 day interval between treatments. <b>DO NOT</b> apply within 7 days of harvest. <b>DO NOT</b> use more than 3 applications per year.</p> <p>Seed (including meal) can be fed to livestock. <b>DO NOT</b> cut treated fields for hay/forage. <b>DO NOT</b> graze treated fields. For grasses/non-grasses grown for seed production only, <b>DO NOT</b> feed seed screenings and aftermath to livestock. <b>Aerial Application: DO NOT</b> make more than 1 application of 83 mL/ha of the allowed seasonal total by air. <b>Water Volume:</b> <u>Ground Application:</u> Apply in 100 - 200 L of water per hectare. <u>Aerial Application:</u> Apply in 40 L of water per hectare.</p>

## 11.7 Cereal Crops

CEREAL CROPS	
<b>CROPS</b>	<b>WHEAT, BARLEY, OATS</b>
<b>PEST</b>	Grasshoppers
<b>RATE (mL/ha)</b>	63 - 83 for ground application 83 for aerial application
<b>APPLICATION METHOD</b>	Ground or aerial application (see rates above)
<b>APPLICATION TIMING</b>	Apply the low rate when grasshoppers are up to the 3 <sup>rd</sup> nymphal stage (up to 1 cm in length) or when insect numbers are low. Apply the high rate when grasshoppers are larger, up to but not including winged adults (up to 2.5 cm in length) or when insect numbers are high. If insect pressure is high apply a spray to a 15 m strip around the field. Avoid environmentally sensitive areas and unregistered crops.
<b>NOTES</b>	Allow a 7 day interval between treatments. <b>DO NOT</b> apply within 28 days of harvest.  <b>DO NOT</b> use more than 3 applications per year. <b>Aerial Application: DO NOT</b> make more than 2 applications of 83 mL/ha of the allowed seasonal total by air. Grain can be fed to livestock. <b>DO NOT</b> cut treated fields for hay/forage. <b>DO NOT</b> graze treated fields. For grasses/non-grasses grown for seed production only, <b>DO NOT</b> feed seed screenings and aftermath to livestock.
<b>CROPS</b>	<b>CORN</b> (including field, pop and sweet types, and crops grown for seed production)
<b>PEST</b>	Cutworms, Fall Armyworm
<b>RATE (mL/ha)</b>	83
<b>PEST</b>	Armyworm <i>Pseudaletia unipuncta</i>
<b>RATE (mL/ha)</b>	83 - 208
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	Spray no later than when the first feeding is seen on foliage. Repeat sprays at 4 to 7 day intervals depending on the presence of significant populations as determined by local monitoring. Where there are two generations, late plantings of sweet corn will require sprays from the late whorl stage until close to harvest. This treatment will not prevent internal cob damage if the insect has penetrated the ear. <b>Cutworms:</b> (up to the 5-leaf stage). Applications should be made under moist conditions in the evening or night when cutworm activity is highest. Do not disturb the soil surface for 5 days after treatment.

<b>NOTES</b>	<p>Allow a 4 to 7 day interval between treatments.</p> <p><b>DO NOT</b> apply within 1 day of harvest for sweet corn.</p> <p><b>DO NOT</b> apply within 21 days of harvest for field corn, popcorn and corn grown for seed.</p> <p><b>DO NOT</b> use more than 3 applications per year.</p> <p>Field corn grain can be fed to livestock.</p> <p><b>DO NOT</b> cut treated fields for silage/forage. <b>DO NOT</b> graze treated fields. For grasses/non-grasses grown for seed production only, <b>DO NOT</b> feed seed screenings and aftermath to livestock. <b>DO NOT</b> feed any part of treated popcorn, sweet corn and seed corn to livestock.</p> <p><b>Aerial Application: DO NOT</b> make more than 2 applications of the allowed seasonal total by air.</p>
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## 11.8 Other Uses

<b>OTHER USES</b>	
<b>CROPS</b>	<b>ALFALFA/GRASS MIXTURES, SUMMERFALLOW (for seed production only)</b>
<b>PEST</b>	Grasshoppers
<b>RATE (mL/ha)</b>	63 - 83 for ground application 83 for aerial application
<b>APPLICATION METHOD</b>	Ground or aerial application (see rates above)
<b>APPLICATION TIMING</b>	Apply the low rate when grasshoppers are up to the 3 <sup>rd</sup> nymphal stage (up to 1 cm in length) or when insect numbers are low. Apply the high rate when grasshoppers are larger, up to but not including winged adults (up to 2.5 cm in length) or when insect numbers are high. If insect pressure is high apply a spray to a 15 m strip around the field. Avoid environmentally sensitive areas and unregistered crops.
<b>NOTES</b>	<p>Allow a 7 day interval between treatments.</p> <p>Alfalfa seed from treated crops is not to be used for production of 'alfalfa sprouts' for human consumption.</p> <p><b>DO NOT</b> cut treated fields for hay/forage. <b>DO NOT</b> graze treated fields. For grasses/non-grasses grown for seed production only, <b>DO NOT</b> feed seed screenings and aftermath to livestock.</p> <p><b>DO NOT</b> use more than 3 applications per year.</p> <p><b>Aerial Application: DO NOT</b> make more than 1 application of 83 mL/ha of the allowed seasonal total by air.</p>
<b>CROPS</b>	<b>ALFALFA (for seed production only)</b>
<b>PEST</b>	Alfalfa Weevil, Lygus Bug, Tarnished Plant Bug, Pea Aphid, Potato Leafhopper
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.

<b>NOTES</b>	<p>Allow a 7 day interval between treatments.</p> <p>Alfalfa seed from treated crops is not to be used for production of 'alfalfa sprouts' for human consumption.</p> <p><b>DO NOT</b> cut treated field for hay/forage. <b>DO NOT</b> graze treated fields. For grasses/non-grasses grown for seed production only, <b>DO NOT</b> feed seed screenings and aftermath to livestock.</p> <p><b>DO NOT</b> use more than 3 applications per year.</p> <p><b>Aerial Application: DO NOT</b> make more than 1 application of 83 mL/ha of the allowed seasonal total by air.</p>
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#### ALFALFA Rate Conversion Chart:

Rate (mL/ha)	Hectares Treated with 1 L Product
63	15.9
83	12.0

## 12.0 MINOR USES

**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 Syngenta Canada Inc. under the User Requested Minor Use Label Expansion program. For these uses, Syngenta Canada Inc. 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

<b>12.1 CHOKE CHERRIES</b>	
<b>CHOKE CHERRIES</b>	
<b>CROPS</b>	<b>Choke Cherry shelterbelts</b>
<b>PEST</b>	Prairie Tent Caterpillar, Ugly Nest Caterpillar, Fruit Tree Leafroller
<b>RATE (mL/ha)</b>	58
<b>APPLICATION METHOD</b>	Ground application only
<b>APPLICATION TIMING</b>	<p><b>Prairie Tent Caterpillar:</b> Apply prior to flowering when tents are visible, generally mid to late May.</p> <p><b>Ugly Nest Caterpillar:</b> Apply after flowering when tents are first visible, generally early to mid June.</p> <p><b>Fruit Tree Leafroller:</b> Apply after flowering when damage is first noted, generally early to mid June.</p>
<b>NOTES</b>	<p>Apply as a foliar spray so leaves are wet but not dripping.</p> <p><b>DO NOT</b> use more than 1 application per year.</p> <p><b>DO NOT APPLY BY AIR.</b></p> <p>Water Volume: Use 1000 L/ha of water for thorough coverage.</p>

## 12.2 Brassica Leafy Vegetables

<b>BRASSICA LEAFY VEGETABLES</b>	
<b>CROPS</b>	<b>MATADOR 120 EC may be applied to the following Brassica crops only:</b> <b>Broccoli, Chinese broccoli (gai lan), Brussels sprouts, cabbage, Chinese cabbage (napa), cauliflower and kohlrabi</b>
<b>PEST</b>	Swede midge ( <i>Contarinia nasturtii</i> ), Cabbage looper
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground application only
<b>APPLICATION TIMING</b>	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
<b>NOTES</b>	<p>Allow at least 7 day interval between treatments.</p> <p><b>DO NOT</b> apply within 1 day of harvesting cabbage, Chinese cabbage (napa), and 3 days of harvesting broccoli, Brussels sprouts, cauliflower, Chinese broccoli, or kohlrabi.</p> <p><b>DO NOT</b> use more than 3 applications per crop per year (249 mL product/year).</p> <p><b>DO NOT APPLY BY AIR.</b></p> <p><b>Water Volume:</b> Use sufficient water for thorough coverage. A water volume of 100 to 200 L/ha by ground is recommended.</p>
<b>CROPS</b>	<b>MATADOR 120 EC may be applied to the following Brassica crops only:</b> <b>Broccoli, Chinese broccoli (gai lan), Brussels sprouts, cabbage, Chinese cabbage (napa), cauliflower and kohlrabi</b>
<b>PEST</b>	Onion thrips
<b>RATE (mL/ha)</b>	188
<b>APPLICATION METHOD</b>	Ground application only
<b>APPLICATION TIMING</b>	Apply when the insect first appears.
<b>NOTES</b>	<p>Apply by foliar broadcast spray.</p> <p><b>DO NOT</b> apply within 1 day of harvesting cabbage and 3 days of harvesting all other crops in Crop Group 5A.</p> <p><b>DO NOT</b> apply more than 3 applications per growing season.</p> <p>Allow a 7 day interval between treatments.</p> <p><b>DO NOT</b> apply by air.</p> <p><b>Water Volume:</b> Apply in sufficient water to ensure thorough coverage. A water volume of 500 L/ha is recommended</p>

<b>CROPS</b>	<b>MATADOR 120 EC may be applied to the following Brassica crops only: Broccoli, Chinese broccoli (gai lan), Brussels sprouts, cabbage, Chinese cabbage (napa), cauliflower and kohlrabi</b>
<b>PEST</b>	Crucifer Flea Beetle, Diamondback Moth Larvae, Imported Cabbageworm
<b>RATE (mL/ha)</b>	42
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
<b>NOTES</b>	DO NOT use more than 3 applications per year. Allow a 7 day interval between treatments. DO NOT apply within 1 day of harvesting cabbage, Chinese cabbage (napa), and 3 days of harvesting broccoli, Brussels sprouts, cauliflower, Chinese broccoli, or kohlrabi. DO NOT APPLY BY AIR. Water Volume: Use sufficient water for thorough coverage. A water volume of 100 to 200 L/ha by ground is recommended.

**12.3 Celery****CELERY**

<b>CROPS</b>	<b>Celery</b>
<b>PEST</b>	Tarnished plant bug
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	Timing of application should be based on the presence of vulnerable pest development stages and significant populations as based on local monitoring.
<b>NOTES</b>	Allow at least 7 day interval between treatments. <b>DO NOT</b> apply within 3 days of harvest of celery. <b>DO NOT</b> use more than 3 applications per season. Maximal seasonal application is 30 g ai/ha. <b>DO NOT APPLY BY AIR.</b> <b>Water Volume:</b> Use sufficient water for thorough coverage, applied by ground sprayer. A water volume of 500 L/ha is recommended.

## 12.4 Legume Vegetables

<b>LEGUME VEGETABLES</b>	
<b>CROPS</b>	<b>Crop Group 6 - Legume Vegetables including Soybean</b>
<b>PEST</b>	Soybean aphid, Pea aphid, Bean aphid
<b>RATE (mL/ha)</b>	83 - 233
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	<p>The need and timing of application should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.</p> <p>Use the higher rate when conditions favour rapidly increasing aphid populations. Repeat sprays at 7 day intervals depending on the presence of significant populations as determined by local monitoring. Provincial /territorial soybean aphid management guidelines suggest applying insecticide during the flowering growth stage of soybean development. Consult local agricultural personnel and provincial/territorial guidelines on the use of this product.</p>
<b>NOTES</b>	<p>Allow at least a 7 day interval between treatments.</p> <p><b>DO NOT</b> apply within 7 days of harvest for succulent shelled and edible-podded peas and beans.</p> <p><b>DO NOT</b> apply within 14 days of harvest of dry peas and beans (including lupins, lentils, chickpeas and fava beans).</p> <p><b>DO NOT</b> apply within 21 days of harvest for soybean.</p> <p><b>DO NOT</b> use more than 3 applications per season.</p> <p><b>Aerial application:</b> Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.</p> <p>Soybean seed (including meal) and Crop Subgroup 6C seed can be fed to livestock.</p> <p><b>DO NOT</b> feed any other treated crops within Crop Group 6 to livestock.</p> <p><b>DO NOT</b> cut treated fields for hay/forage.</p> <p><b>DO NOT</b> graze treated fields.</p> <p><b>Water Volume:</b>  <u>For ground application:</u> 100 to 200 L/ha.  <u>For aerial application:</u> apply in spray volume of 40 L/ha.</p>

<b>LEGUME VEGETABLES</b>	
<b>CROPS</b>	<b>Crop Group 6: Legume Vegetables including Soybean</b>
<b>PEST</b>	Western bean cutworm
<b>RATE (mL/ha)</b>	83 - 187
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	<p>The need and timing of application should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.</p> <p>Consult local agricultural personnel and provincial/territorial guidelines on the use of this product.</p> <p>Cutworm activity is greatest during the late evening and night. Application should be timed as close as possible to insect feeding activity.</p>
<b>NOTES</b>	<p>Repeat sprays at 4-7 day intervals.</p> <p><b>DO NOT</b> apply within 7 days of harvest for succulent shelled and edible-podded peas and beans.</p> <p><b>DO NOT</b> apply within 14 days of harvest of dry peas and beans (including lupins, lentils, chickpeas and fava beans).</p> <p><b>DO NOT</b> apply within 21 days of harvest for soybean.</p> <p><b>DO NOT</b> use more than 3 applications per season.</p> <p><b>Aerial application:</b> Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.</p> <p>Soybean seed (including meal) and Crop Subgroup 6C seed can be fed to livestock.</p> <p><b>DO NOT</b> feed any other treated crops within Crop Group 6 to livestock.</p> <p><b>DO NOT</b> cut treated fields for hay/forage.</p> <p><b>DO NOT</b> graze treated fields.</p> <p><b>Water Volume:</b></p> <p>For ground application: 100 to 200 L/ha.</p> <p>For aerial application: apply in spray volume of 40 L/ha.</p>

<b>LEGUME VEGETABLES</b>	
<b>CROPS</b>	<b>Soybeans, Succulent and Dry Edible Beans*, Succulent and Dry Peas**, Chickpeas, Lentils</b>
<b>PEST</b>	Cutworms
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	<p>The need and timing of application should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.</p> <p>Cutworm activity is greatest during the late evening and night. Application should be timed as close as possible to insect feeding activity.</p> <p>Consult local agricultural personnel and provincial/territorial guidelines on the use of this product.</p>
<b>NOTES</b>	<p>Repeat sprays at 4 to 7 day intervals depending on the presence of significant populations as determined by local monitoring.</p> <p><b>DO NOT</b> apply within 7 days of harvest for succulent shelled and edible-podded peas and beans.</p> <p><b>DO NOT</b> apply within 14 days of harvest of dry peas and beans (including lentils and chickpeas).</p> <p><b>DO NOT</b> apply within 21 days of harvest for soybean.</p> <p><b>DO NOT</b> use more than 3 applications per season.</p> <p><b>Aerial application:</b> Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.</p> <p>Soybean seed (including meal) and Crop Subgroup 6C seed can be fed to livestock.</p> <p><b>DO NOT</b> feed any other treated crops within Crop Group 6 to livestock.</p> <p><b>DO NOT</b> cut treated fields for hay/forage.</p> <p><b>DO NOT</b> graze treated fields.</p> <p><b>Water Volume:</b></p> <p><u>For ground application:</u> 100 to 200 L/ha.</p> <p><u>For aerial application:</u> apply in spray volume of 40 L/ha.</p>

<b>LEGUME VEGETABLES</b>	
<b>CROPS</b>	<b>Soybeans, Succulent and Dry Edible Beans*, Fava Beans, Lentils</b>
<b>PEST</b>	Lygus bugs
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	The need and timing of application should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring. Consult local agricultural personnel and provincial/territorial guidelines on the use of this product.
<b>NOTES</b>	Repeat sprays at 4 to 7 day intervals depending on the presence of significant populations as determined by local monitoring. <b>DO NOT</b> apply within 7 days of harvest for succulent shelled and edible-podded beans. <b>DO NOT</b> apply within 14 days of harvest of dry beans (including fava beans and lentils). <b>DO NOT</b> apply within 21 days of harvest for soybean. <b>DO NOT</b> use more than 3 applications per season. <b>Aerial application:</b> Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air. Soybean seed (including meal) and Crop Subgroup 6C seed can be fed to livestock. <b>DO NOT</b> feed any other treated crops within Crop Group 6 to livestock. <b>DO NOT</b> cut treated fields for hay/forage. <b>DO NOT</b> graze treated fields. <b>Water Volume:</b> <u>For ground application:</u> 100 to 200 L/ha. <u>For aerial application:</u> apply in spray volume of 40 L/ha.
<b>CROPS</b>	<b>Soybeans, Dry Peas**, Chickpeas and Lentils</b>
<b>PEST</b>	Grasshoppers
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	The need and timing of application should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring. Consult local agricultural personnel and provincial/territorial guidelines on the use of this product.

<b>NOTES</b>	<p>Repeat sprays at 4 to 7 day intervals depending on the presence of significant populations as determined by local monitoring.</p> <p><b>DO NOT</b> apply within 14 days of harvest of dry peas, chickpeas and lentils.</p> <p><b>DO NOT</b> apply within 21 days of harvest for soybean.</p> <p><b>DO NOT</b> use more than 3 applications per season.</p> <p><b>Aerial application:</b> Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.</p> <p>Soybean seed (including meal) and Crop Group 6C seed can be fed to livestock.</p> <p><b>DO NOT</b> feed any other treated crops within Crop Subgroup 6 to livestock.</p> <p><b>DO NOT</b> cut treated fields for hay/forage.</p> <p><b>DO NOT</b> graze treated fields.</p> <p><b>Water Volume:</b></p> <p><u>For ground application:</u> 100 to 200 L/ha.</p> <p><u>For aerial application:</u> apply in spray volume of 40 L/ha.</p>
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## LEGUME VEGETABLES

<b>CROPS</b>	<b>Soybean, Succulent and Dry Edible Beans*, Succulent and Dry Peas**, Fava Beans (broad beans) and Chickpeas</b>
<b>PEST</b>	Bean Leaf Beetle
<b>RATE (mL/ha)</b>	83 - 233 for ground application 83 for aerial application
<b>APPLICATION METHOD</b>	Ground or aerial application (see rates above)
<b>APPLICATION TIMING</b>	<p>For bean leaf beetle, use the higher rate to target higher pest populations or when conditions are conducive to bean pod mottle virus. Repeat sprays at 4 to 7 day intervals depending on the presence of significant populations as determined by local monitoring.</p> <p>The need and timing of application should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.</p> <p>Consult local agricultural personnel and provincial/territorial guidelines on the use of this product.</p>

<b>NOTES</b>	<p><b>DO NOT</b> apply within 7 days of harvest for succulent shelled and edible-podded peas and beans.</p> <p><b>DO NOT</b> apply within 14 days of harvest of dry peas and beans (including fava beans and chickpeas).</p> <p><b>DO NOT</b> apply within 21 days of harvest for soybean.</p> <p><b>DO NOT</b> use more than 3 applications per season.</p> <p><b>Aerial application:</b> Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.</p> <p>Soybean seed (including meal) and Crop Subgroup 6C seed can be fed to livestock.</p> <p><b>DO NOT</b> feed any other treated crops within Crop Group 6 to livestock.</p> <p><b>DO NOT</b> cut treated fields for hay/forage.</p> <p><b>DO NOT</b> graze treated fields.</p> <p><b>Water Volume:</b>  <u>For ground application:</u> 100 to 200 L/ha.  <u>For aerial application:</u> apply in spray volume of 40 L/ha.</p>
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LEGUME VEGETABLES	
<b>CROPS</b>	<b>Succulent and Dry Edible Beans*, Succulent Peas**, Fava Beans (broad beans), Chickpeas and Lentils</b>
<b>PEST</b>	Potato Leafhopper
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	<p>The need and timing of application should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.</p> <p>Consult local agricultural personnel and provincial/territorial guidelines on the use of this product.</p>
<b>NOTES</b>	<p>Repeat sprays at 4 to 7 day intervals depending on the presence of significant populations as determined by local monitoring.</p> <p><b>DO NOT</b> apply within 7 days of harvest for succulent shelled and edible-podded peas and beans.</p> <p><b>DO NOT</b> apply within 14 days of harvest of dry beans (including lentils, chickpeas and fava beans).</p> <p><b>DO NOT</b> apply within 21 days of harvest for soybean.</p> <p><b>DO NOT</b> use more than 3 applications per season.</p> <p><b>Aerial application:</b> Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.</p> <p>Soybean seed (including meal) and Crop Group 6C seed can be fed to livestock.</p> <p><b>DO NOT</b> feed any other treated crops within Crop Subgroup 6 to livestock.</p> <p><b>DO NOT</b> cut treated fields for hay/forage.</p> <p><b>DO NOT</b> graze treated fields.</p> <p><b>Water Volume:</b>  <u>For ground application:</u> 100 to 200 L/ha.  <u>For aerial application:</u> apply in spray volume of 40 L/ha.</p>

<b>LEGUME VEGETABLES</b>	
<b>CROPS</b>	<b>Succulent and Dry Edible Beans*</b>
<b>PEST</b>	Corn Borer
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	<p>Apply before the larva bores into the plant stalk or pods.</p> <p>The need and timing of application should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.</p> <p>Consult local agricultural personnel and provincial/territorial guidelines on the use of this product.</p>
<b>NOTES</b>	<p>Repeat sprays at 4 to 7 day intervals depending on the presence of significant populations as determined by local monitoring.</p> <p><b>DO NOT</b> apply within 7 days of harvest for succulent shelled and edible-podded beans.</p> <p><b>DO NOT</b> apply within 14 days of harvest of dry beans.</p> <p><b>DO NOT</b> use more than 3 applications per season.</p> <p><b>Aerial application:</b> Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.</p> <p>Crop Group 6C seed can be fed to livestock.</p> <p><b>DO NOT</b> feed any other treated crops within Crop Group 6 to livestock.</p> <p><b>DO NOT</b> cut treated fields for hay/forage.</p> <p><b>DO NOT</b> graze treated fields.</p> <p><b>Water Volume:</b></p> <p><u>For ground application:</u> 100 to 200 L/ha.</p> <p><u>For aerial application:</u> apply in spray volume of 40 L/ha.</p>

<b>LEGUME VEGETABLES</b>	
<b>CROPS</b>	<b>Field Peas</b>
<b>PEST</b>	Pea leaf weevil ( <i>Sitona lineata</i> )
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	<p>Make the first application after emergence but prior to the 5 to 6 node stage. Apply while the adults are still present on the plants, before egg laying begins.</p> <p>The need and timing of application should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.</p> <p>Consult local agricultural personnel and provincial/territorial guidelines on the use of this product.</p>
<b>NOTES</b>	<p>Repeat sprays at 4 to 7 day intervals depending on the presence of significant populations as determined by local monitoring.</p> <p><b>DO NOT</b> apply within 14 days of harvest for dry peas.</p> <p><b>DO NOT</b> use more than 3 applications per season.</p> <p><b>Aerial application:</b> Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.</p> <p>Crop Subgroup 6C seed can be fed to livestock.</p> <p><b>DO NOT</b> feed any other treated crops within Crop Group 6 to livestock.</p> <p><b>DO NOT</b> cut treated fields for hay/forage.</p> <p><b>DO NOT</b> graze treated fields.</p> <p><b>Water Volume:</b>  <u>For ground application:</u> 100 to 200 L/ha.  <u>For aerial application:</u> apply in spray volume of 40 L/ha.</p>
<p>* <b>Beans, succulent and dry edible:</b> Beans (<i>Phaseolus</i> spp.) (includes, runner bean, snap beans, wax beans, lima bean (green), field bean, kidney bean, navy bean, Pinto bean, tepary bean); bean (<i>Vigna</i> spp.) (includes asparagus bean, Chinese longbean, moth bean, yardlong bean, adzuki bean, mung bean, rice bean, urd bean, blackeyed pea, catjang, cowpea, southern pea, crowder pea); jackbean; sword bean; bean (<i>Lupinus</i> spp.) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin), lablab bean, guar.</p> <p>** <b>Peas, succulent:</b> Pea (<i>Pisum</i> spp.) (includes dwarf pea, edible-pod pea, snow pea, sugar snap pea, English pea, garden pea, green pea), pigeon pea. <b>Peas, dry:</b> Peas (<i>Pisum</i> spp.) (includes field pea), pigeon pea.</p>	

## 12.5 Ferns of Asparagus

<b>FERNS OF ASPARAGUS</b>	
<b>CROPS</b>	<b>Ferns of Asparagus</b>
<b>PEST</b>	European Asparagus Aphids
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground application only
<b>APPLICATION TIMING</b>	Apply post-harvest to fern only. Reapply after 7-10 days if monitoring indicates further applications are required.
<b>NOTES</b>	Allow a 7 to 10 day interval between treatments. <b>DO NOT</b> apply within 180 days of harvest. <b>DO NOT</b> apply more than 3 applications per season. <b>DO NOT</b> apply by air. Water Volume: Apply in 100 to 200 L of water per hectare.

## 12.6 Cereal Crops – Crop Group 15

### CEREAL CROPS - CROP GROUP 15 – Corn, Barley, Buckwheat, Pearl Millet, Proso Millet, Oats, Rice, Rye Sorghum, Teosinte, Triticale, Wheat, and Wild Rice

<b>CROPS</b>	Crop Group 15 - Corn (field, sweet, pop, and seed), Barley, Buckwheat, Pearl Millet, Proso Millet, Oats, Rice, Rye Sorghum, Teosinte, Triticale, Wheat, and Wild Rice
<b>PEST</b>	Armyworm
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	Spray no later than when the first feeding damage is seen on foliage.
<b>NOTES</b>	<p>Repeat sprays at 4-7 day intervals.</p> <p>DO NOT apply more than 3 applications per hectare in total per season.</p> <p>DO NOT make more than 2 applications by air per season.</p> <p>DO NOT apply within 28 days of harvest for barley, buckwheat, millet (pearl and proso), oats, rice, rye, sorghum (milo), teosinte, triticale, wheat and wild rice grain.</p> <p>DO NOT apply within 1 day of harvest for sweet corn.</p> <p>DO NOT apply within 21 days of harvest for field corn, popcorn and corn grown for seed.</p> <p>Grain can be fed to livestock. <b>DO NOT</b> cut treated fields for silage/hay/forage. <b>DO NOT</b> graze treated fields. For grasses/non-grasses grown for seed production only, <b>DO NOT</b> feed seed screenings and aftermath to livestock. <b>DO NOT</b> feed any other part of treated crops to livestock.</p> <p><b>Water Volume:</b>  Ground Application: Apply in 100 - 200 L of water per hectare.  Aerial Application: Apply in 40 L of water per hectare.</p>
<b>CROPS</b>	<b>Corn (Field, Sweet, Seed, and Pop)</b>
<b>PEST</b>	Armyworm ( <i>Pseudaletia unipuncta</i> )
<b>RATE (mL/ha)</b>	83 - 208
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	Spray no later than when first feeding damage is seen on foliage.

**NOTES**

Repeat sprays at 4-7 day intervals depending on the presence of significant populations as determined by local monitoring.

**DO NOT** apply more than 3 applications per hectare in total per season.

**DO NOT** apply more than 2 applications of the allowed seasonal total by air.

**DO NOT** apply within 1 day of harvest for sweet corn.

**DO NOT** apply within 21 days of harvest for field corn, popcorn and corn grown for seed.

Field corn grain can be fed to livestock.

**DO NOT** cut treated fields for silage/forage. **DO NOT** graze treated fields.

For grasses/non-grasses grown for seed production only, **DO NOT** feed seed screenings and aftermath to livestock. **DO NOT** feed any part of treated popcorn, sweet corn and seed corn to livestock.

**Water Volume:**

Aerial Application: Apply in 40 L of water per hectare.

Ground Application: Apply in 100 - 200 L of water per hectare.

<b>CROPS</b>	<b>Corn (Field, Sweet, Seed and Pop)</b>
<b>PEST</b>	European corn borer ( <i>Ostrinia nubilalis</i> ), Corn earworm ( <i>Helicoverpa zea</i> )
<b>RATE (mL/ha)</b>	83 - 187
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	Spray no later than when first feeding damage is seen on foliage. Where there are two generations, late plantings of sweet corn will require sprays from the late whorl stage until close to harvest. This treatment will not prevent internal cob damage if the insect has penetrated the ear.
<b>NOTES</b>	Repeat sprays at 4-7 day intervals depending on the presence of significant populations as determined by local monitoring. <b>DO NOT</b> apply more than 3 applications per hectare in total per season. <b>DO NOT</b> make more than 2 applications by air per season. <b>DO NOT</b> apply within 1 day of harvest for sweet corn. <b>DO NOT</b> apply within 21 days of harvest for field corn, popcorn and corn grown for seed. Field corn grain can be fed to livestock. <b>DO NOT</b> cut treated fields for silage/forage. <b>DO NOT</b> graze treated fields. For grasses/non-grasses grown for seed production only, <b>DO NOT</b> feed seed screenings and aftermath to livestock. <b>DO NOT</b> feed any part of treated popcorn, sweet corn and seed corn to livestock.  <b>Water Volume:</b> <u>Ground Application:</u> Apply in 100 - 200 L of water per hectare. <u>Aerial Application:</u> Apply in 40 L of water per hectare.
<b>CROPS</b>	<b>Corn (Field, Sweet, Seed and Pop)</b>
<b>PEST</b>	Western bean cutworm
<b>RATE (mL/ha)</b>	83 -187
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	Applications should be based on the presence of vulnerable pest development stages and significant populations as determined by local monitoring

**NOTES**

Repeat sprays at 4-7 day intervals depending on the presence of significant populations as determined by local monitoring.

**DO NOT** apply more than 3 applications per hectare in total per season.

**DO NOT** make more than 2 applications by air per season.

**DO NOT** apply within 1 day of harvest for sweet corn.

**DO NOT** apply within 21 days of harvest for field corn, popcorn and corn grown for seed.

Field corn grain can be fed to livestock.

**DO NOT** cut treated fields for silage/forage. **DO NOT** graze treated fields.

For grasses/non-grasses grown for seed production only, **DO NOT** feed seed screenings and aftermath to livestock. **DO NOT** feed any part of treated popcorn, sweet corn and seed corn to livestock.

**Water Volume:**

Ground Application: Apply in 100 - 200 L of water per hectare.

Aerial Application: Apply in 40 L of water per hectare.

### 12.7 Timothy (for seed production only)

<b>TIMOTHY (for seed production only)</b>	
<b>CROPS</b>	Timothy (for seed production only)
<b>PEST</b>	Grasshoppers
<b>RATE (mL/ha)</b>	63 – 83
<b>APPLICATION METHOD</b>	Ground application only
<b>APPLICATION TIMING</b>	Apply the low rate when grasshoppers are up to the 3 <sup>rd</sup> nymphal stage (up to 1 cm in length) or when insect numbers are low. Apply the high rate when grasshoppers are larger, up to but not including winged adults (up to 2.5 cm in length) or when insect numbers are high. If insect pressure is high apply a spray to a 15 m strip around the field. Avoid environmentally sensitive areas and unregistered crops.
<b>NOTES</b>	Allow 7 days between applications. <b>DO NOT</b> apply more than 3 applications per season. <b>DO NOT</b> apply within 14 days of harvest. <b>DO NOT</b> apply by air. Apply in 100 to 200 L of water per hectare. <b>DO NOT</b> cut treated fields for hay/forage. <b>DO NOT</b> graze treated fields. For grasses/non-grasses grown for seed production only, <b>DO NOT</b> feed seed screenings and aftermath to livestock.

### 12.8 Sweet Potato

<b>SWEET POTATO</b>	
<b>CROPS</b>	Sweet Potato
<b>PEST</b>	Potato Flea Beetle, Tuber Flea Beetle, Potato Leafhopper
<b>RATE (mL/ha)</b>	83 mL/ha Apply in a minimum of 100 L of water/ha
<b>APPLICATION METHOD</b>	Ground application only
<b>APPLICATION TIMING</b>	Timing of application should be based on the presence of vulnerable pest development stages and significant population as determined by local monitoring.
<b>NOTES</b>	Allow 7 days between applications. <b>DO NOT</b> apply more than 3 applications per year. <b>DO NOT</b> apply within 7 days of harvest. <b>DO NOT</b> apply by air.

## 12.9 Potatoes

POTATOES	
<b>CROPS</b>	Potatoes
<b>PEST</b>	Armyworm ( <i>Pseudaletia unipuncta</i> )
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	Spray no later than when first feeding damage is seen on foliage.
<b>NOTES</b>	<p>Repeat sprays at 4-7 day intervals depending on the presence of significant populations as determined by local monitoring.</p> <p><b>DO NOT</b> apply within 7 days of harvest.</p> <p><b>DO NOT</b> apply more than 3 applications per year for ground.</p> <p><b>DO NOT</b> apply more than 2 applications of the allowed seasonal total by air.</p> <p><b>DO NOT</b> feed treated crops to livestock.</p> <p><b>Water Volume:</b>  <u>Ground Application:</u> Apply in 100 - 200 L of water per hectare.  <u>Aerial Application:</u> Apply in 40 L of water per hectare.</p>

**12.10 Carrots**

<b>CARROTS</b>	
<b>CROPS</b>	Carrot
<b>PEST</b>	Carrot rust fly ( <i>Psila rosae</i> ), Carrot weevil ( <i>Listronotus oregonensis</i> )
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	First application should be applied at the 2-3 leaf stage when insects or damage appear. Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
<b>NOTES</b>	Allow 7 days between applications. <b>DO NOT</b> apply within 14 days of harvest. DO NOT feed treated crops to livestock. <b>DO NOT</b> apply more than 3 applications per year. <b>DO NOT</b> apply by air.

**12.11 Poplar and Willow**

<b>POPLAR and WILLOW</b>	
<b>CROPS</b>	Poplar ( <i>Populus</i> spp.) and willow ( <i>Salix</i> ) plantings, including Short-Rotation-Intensive-Culture (SRIC), their hybrids and their planting stock
<b>PEST</b>	Grasshoppers
<b>RATE (mL/ha)</b>	63 - 83 for ground application 83 for aerial application
<b>APPLICATION METHOD</b>	Ground or aerial application (see rates above)
<b>APPLICATION TIMING</b>	Apply immediately before planting of the new crop, and/or following planting of the crop (depending on the developmental stage of the grasshoppers). Apply in the second growing season where a significant risk exists and/or where a significant re-plant is required. Apply the low rate when grasshoppers are up to the 3rd nymphal stage (up to 1 cm in length) or when insect numbers are low. Apply the high rate when grasshoppers are larger, up to but not including winged adults (up to 2.5 cm in length) or when insect numbers are high. If insect pressure is high apply a spray to a 15 m strip around the field. Avoid environmentally sensitive areas and unregistered crops.
<b>NOTES</b>	Allow 7 days between applications. <b>DO NOT</b> apply more than 3 applications per hectare in total per season. <b>DO NOT</b> apply more than 2 applications of the seasonal total by air. <b>Water Volume:</b> Ground Application: Use a minimum of 100 L of water/ha. Use sufficient water for thorough coverage. Aerial Application: Apply in 40 L of water per hectare.

<b>POPLAR and WILLOW</b>	
<b>CROPS</b>	<b>Poplar (<i>Populus</i> spp.) and willow (<i>Salix</i>) plantings, including Short-Rotation-Intensive-Culture (SRIC), their hybrids and their planting stock</b>
<b>PEST</b>	Potato leaf hopper, tarnished plant bug
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	Apply when insects or damage appear. Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
<b>NOTES</b>	Allow 7 days between applications. <b>DO NOT</b> apply more than 3 applications per hectare in total per season. <b>DO NOT</b> apply more than 2 applications of the seasonal total by air. <b>Water Volume:</b> <u>Ground Application:</u> Use a minimum of 100 L of water/ha. Use sufficient water for thorough coverage. <u>Aerial Application:</u> Apply in 40 L of water per hectare.
<b>CROPS</b>	<b>Poplar (<i>Populus</i> spp.) and willow (<i>Salix</i>) plantings, including Short-Rotation-Intensive-Culture (SRIC), their hybrids and their planting stock</b>
<b>PEST</b>	Prairie tent caterpillar, ugly nest caterpillar
<b>RATE (mL/ha)</b>	58
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	Prairie tent caterpillar: Apply when tents are visible, generally mid to late May. Ugly nest caterpillar: Apply when tents are first visible, generally early to mid June.
<b>NOTES</b>	<b>DO NOT</b> apply more than 1 application per hectare in total per season. <b>DO NOT APPLY BY AIR</b> <b>Water Volume:</b> <u>Ground Application:</u> Use a minimum of 100 L of water/ha. Use sufficient water for thorough coverage.

**12.12 Strawberries**

<b>STRAWBERRIES</b>	
<b>CROPS</b>	<b>Strawberries</b>
<b>PEST</b>	Suppression of black vine weevil adults ( <i>Otiorhynchus sulcatus</i> )
<b>RATE (mL/ha)</b>	104
<b>APPLICATION METHOD</b>	Foliar spray by ground application only
<b>APPLICATION TIMING</b>	Applications are to be made as soon as weevils appear, but not until after the final harvest of strawberries.
<b>NOTES</b>	Allow 7 days between applications. <b>DO NOT</b> apply within 7 days of harvest. <b>DO NOT</b> apply more than 3 applications per year. <b>DO NOT</b> apply by air. <b>Water Volume:</b> Apply in sufficient water to ensure thorough coverage. The recommended application volume is 250-500 L/ha.

**12.13 Saskatoon Berries**

<b>SASKATOON BERRIES</b>	
<b>CROPS</b>	<b>Saskatoon berries</b>
<b>PEST</b>	Saskatoon bud moth
<b>RATE (mL/ha)</b>	104
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	Application should be based on the presence of vulnerable pest stages as determined by monitoring. If warranted, make the first application at bud break (early green tip). A second application can be made after petal drop if insect pressure indicates the need.
<b>NOTES</b>	Allow 10 to 15 days between applications. <b>DO NOT</b> apply within 21 days of harvest. <b>DO NOT</b> apply more than 2 applications per year. <b>DO NOT APPLY BY AIR</b> <b>Water Volume:</b> Apply in a minimum of 200 L of water/ha.

**12.14 Cucurbit Vegetables**

<b>CUCURBIT VEGETABLES</b>	
<b>CROPS</b>	<b>CROP GROUP 9: chayote (fruit), Chinese waxgourd, citron melon, cucumber, gherkin, edible gourd, momordica spp., muskmelon, pumpkin, summer squash, winter squash, watermelon</b>
<b>PEST</b>	Striped cucumber beetle ( <i>Acalymma vittatum</i> ) Squash bug ( <i>Anasa tristis</i> )
<b>RATE (mL/ha)</b>	187-233 Use higher application rate when pest populations are high.
<b>APPLICATION METHOD</b>	Ground application
<b>APPLICATION TIMING</b>	Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Reapply after a minimum of 7 days if monitoring indicates it is necessary.

<b>NOTES</b>	<p>Allow 7 days between applications.</p> <p><b>DO NOT</b> apply within 1 day of harvest.</p> <p><b>DO NOT</b> apply more than 3 applications per growing season.</p> <p><b>DO NOT</b> APPLY BY AIR</p> <p><b>Water Volume:</b> Use sufficient water for thorough coverage. 100 to 200 L/ha is recommended.</p>
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## 12.15 Canola

CANOLA	
<b>CROPS</b>	Canola
<b>PEST</b>	Swede midge ( <i>Contarinia nasturtii</i> )
<b>RATE (mL/ha)</b>	83
<b>APPLICATION METHOD</b>	Ground or aerial application
<b>APPLICATION TIMING</b>	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
<b>NOTES</b>	<p>Allow a 7 day interval between treatments.</p> <p><b>DO NOT</b> apply within 7 days of harvest.</p> <p><b>DO NOT</b> use more than 3 applications per year.</p> <p>Seed (including meal) can be fed to livestock.</p> <p><b>DO NOT</b> cut treated field for hay/forage. <b>DO NOT</b> graze treated fields. For grasses/non-grasses grown for seed production only, <b>DO NOT</b> feed seed screenings and aftermath to livestock.</p> <p><b>Aerial Application: DO NOT</b> make more than 1 application of 83 mL/ha of the allowed seasonal total by air.</p> <p><b>Water Volume:</b></p> <p><u>Ground Application:</u> Apply in 100 - 200 L of water per hectare.</p> <p><u>Aerial Application:</u> Apply in 40 L of water per hectare.</p>

## 12.16 Conifer Seed Orchards

CONIFER SEED ORCHARDS	
<b>CROPS</b>	Douglas fir, hemlocks, larches, pines, spruces, true firs.
<b>PEST</b>	Western conifer-seed bug ( <i>Leptoglossus occidentalis</i> )
<b>RATE (mL/ha)</b>	40 mL/ 100 L water. Spray to the point of run-off, ranging from 800-1200 L/ha depending on tree size
<b>APPLICATION METHOD</b>	Air blast application
<b>APPLICATION TIMING</b>	The first application should be made when overwintered adults appear in the seed orchard. Timing of reapplications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
<b>NOTES</b>	<p>Allow a minimum of 10 day between applications.</p> <p><b>DO NOT</b> apply more than 710 mL product (85.29 g a.i.) per hectare per year. <b>DO NOT</b> make more than 2 applications per year.</p>

<b>ADDITIONAL USE DIRECTIONS</b>	DO NOT APPLY BY AIR
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### 12.17 Tree Nuts – Crop Group 14-11

<b>TREE NUTS - CROP GROUP 14-11 – Tree Nuts (Excluding Ginkgo, Monkey puzzle nut and Pine nuts) - Beechnut, Bur Oak, Butternut, Chestnut, Chinquapin, Hazelnut (Filbert), Heartnut, Hickory nut, Japanese horse-chestnut, Black walnut, English walnut, Yellowhorn</b>	
<b>CROPS</b>	Tree Nuts (Excluding Ginkgo, Monkey puzzle nut and Pine nuts) - Beechnut, Bur Oak, Butternut, Chestnut, Chinquapin, Hazelnut (Filbert), Heartnut, Hickory nut, Japanese horse-chestnut, Black walnut, English walnut, Yellowhorn
<b>PEST</b>	Oblique-banded leaf roller
<b>RATE (mL/ha)</b>	83
<b>PEST</b>	Aphids
<b>RATE (mL/ha)</b>	104
<b>APPLICATION METHOD</b>	Apply by ground application equipment with sufficient water to obtain full coverage of the foliage or target area.
<b>APPLICATION TIMING</b>	Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.
<b>NOTES</b>	<p><b>DO NOT</b> apply within 14 days of harvest.</p> <p><b>DO NOT</b> apply more than 390 mL/ha of MATADOR 120EC per year.</p> <p><b>DO NOT</b> apply more than 4 applications per year for the obliquebanded leafroller.</p> <p><b>DO NOT</b> apply more than 3 applications per year for aphids.</p> <p><b>DO NOT APPLY BY AIR</b></p>

### 12.18 Walnut, Butternut, Heartnut

<b>CROPS</b>	<b>Walnut, butternut, heartnut</b>
<b>PEST</b>	Codling moth
<b>RATE (mL/ha)</b>	83
<b>PEST</b>	Butternut curculio and walnut husk fly
<b>RATE (mL/ha)</b>	104
<b>APPLICATION METHOD</b>	Apply by ground application equipment with sufficient water to obtain full coverage of the foliage or target area.
<b>APPLICATION TIMING</b>	Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.
<b>NOTES</b>	<p><b>DO NOT</b> apply within 14 days of harvest.</p> <p><b>DO NOT</b> apply more than 390 mL/ha of MATADOR 120EC per year.</p> <p><b>DO NOT</b> apply more than 4 applications per year for the codling moth.</p> <p><b>DO NOT</b> apply more than 3 applications per year for butternut curculio and walnut husk fly.</p> <p><b>DO NOT APPLY BY AIR</b></p>

### **13.0 Resistance-Management Recommendations**

For resistance management, please note that MATADOR 120EC contains a Group 3 insecticide. Any insect population may contain individuals naturally resistant to MATADOR 120EC and other Group 3 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is 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 MATADOR 120EC or other Group 3 insecticides with different groups that control the same pests.

Use tank-mixtures with insecticides from a different group 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.

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 Syngenta Canada Inc. company representatives at 1-877-SYNGENTA (1-877-964-3682) or at [www.syngenta.ca](http://www.syngenta.ca).

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