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



POISON

EYE IRRITANT AND SKIN 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

1.0 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.

2.0 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.

3.0 TOXICOLOGICAL INFORMATION

This product contains more than 80 percent petroleum distillate. Vomiting may cause aspiration pneumonia. If swallowed, perform gastric lavage, taking care to prevent aspiration of gastric contents; treat symptomatically. This product has potential for skin and eye irritation; treat symptomatically. In case of exposure to skin of face or other sensitive areas, some individuals may feel a tingling or numbness. This is a transitory effect and does not cause harm to skin.

Skin exposure may cause transient sensations (tingling, burning, itching, numbness).

4.0 **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. MATADOR[®] 120EC is corrosive to eyes and skin. Skin sensitizer. Do not get in eyes or on skin. If hands are contaminated, wash with soap and water before touching other areas of skin.

RESTRICTED ENTRY INTERVAL (REI): DO NOT enter or allow worker entry into treated areas

Crop(s)	Postapplication Activity	REI
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
Corp (acad)	Hand detasseling	3 days
Corn (seed)	All other activities	12 hours
All other crops	All activities	12 hours

during the intervals specified in the following table:

Workers shall be given oral warning of the re-entry interval. See Directions for use for additional REI's for specific crops.

MATADOR 120EC may be applied using aerial application equipment only to those crops for which this use is specified on this label.

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.

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.

5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and chemical-resistant boots during mixing, loading, application, clean-up and repair, unless otherwise specified below. Gloves are not required during application within a closed cab or cockpit. In addition, during mixing, loading, clean-up and repair activities, workers must also wear safety goggles and a face shield, and a respirator with a NIOSH approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH approved canister for pesticides. Avoid touching face with contaminated gloves or clothing. Wash gloves before removal. Wash protective equipment with soap and water after each use.

For applications using an open-cab groundboom equipment, when handling more than 59.58 L per person per day, also wear a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides or a NIOSH-approved canister approved for pesticides OR 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. Respirator and gloves are not required to be worn during application within a closed cab. These restrictions are in place to minimize exposure to individual applicators. Application may need to be performed over multiple days or using multiple applicators.

For applications using open cab airblast equipment also wear chemical-resistant headgear. Chemical-resistant headgear includes Sou'Wester hat, chemical-resistant rain hat or large brimmed waterproof hat and hood with sufficient neck protection.

When handling more than 0.92 L per person per day using mechanically-pressurized handheld equipment, also wear a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH-approved canister for pesticides during application.

For treatment of poplar and willow using mechanically-pressurized handheld equipment, also wear coveralls during mixing, loading, application, clean up and repair.

For application using handheld airblast/mistblower equipment, wear chemical-resistant coveralls with a chemical-resistant hood over long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear and a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH-approved canister approved for pesticides. DO NOT handle more than 42.5 mL per person per day. This restriction is required to minimize exposure to the worker. Applications may be required over multiple days or using multiple applicators.

For all applications using handheld equipment, wear eye, head and respiratory protection when applying above waist height, including overhead.

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.

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.

Wear freshly laundered clothes daily.

6.0 ENVIRONMENTAL PRECAUTIONS

Toxic to aquatic organisms. Observe 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.healthcanada.gc.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

This product contains active ingredients and aromatic petroleum distillates, which are toxic to aquatic organisms.

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 in a cool, well ventilated area away from food or feed and 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.

8.0 DISPOSAL

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

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 requirements.

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

MATADOR[®] is a trademark of a Syngenta Group Company.

2023-1907 2023-09-26

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Pamphlet

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For applications using an open-cab groundboom equipment, when handling more than 59.58 L per person per day, also wear a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides or a NIOSH-approved canister approved for pesticides OR 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. Respirator and gloves are not required to be worn during application within a closed cab. These restrictions are in place to minimize exposure to individual applicators. Application may need to be performed over multiple days or using multiple applicators.

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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.

Wear freshly laundered clothes daily.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

6.0 ENVIRONMENTAL PRECAUTIONS

Toxic to aquatic organisms. Observe 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.healthcanada.gc.ca/pollinators).

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Avoid application when heavy rain is forecast.

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7.0 STORAGE

Store in a cool, well ventilated area away from food or feed and 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.

8.0 DISPOSAL

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

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:

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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.

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

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 effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters..

Optimum application timing for the control 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 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

<u>Field sprayer application</u>: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greaterh 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.

10.2.2 Mixing Instructions

- 1. Ensure that the sprayer interior is clean, then fill the spray tank with ½ 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.
- 2. Add any WG or DF formulation mix partners and agitate to ensure complete mixing.
- 3. Add any SC formulation mix partners and agitate to ensure complete mixing.
- 4. Add MATADOR 120EC Insecticide (EC) and agitate to ensure complete mixing.
- 5. Add any additional EC formulation mix partners and agitate to ensure complete mixing.
- 6. Fill the tank to $\frac{3}{4}$ the required amount of water.

- 7. Add any solution (SN or SL) formulation mix partners and agitate to ensure complete mixing.
- 8. Finish filling the sprayer with water, maintaining good agitation.
- 9. After any break in spraying operations, agitate thoroughly before spraying again.
- 10. Spray the pesticide suspension the same day as mixing.
- 11. Do not mix, load or clean spray equipment where there is a potential to contaminate wells or aquatic systems.

10.2.3 Spraying Instructions

- 1. <u>Water Volume:</u> 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.
- 2. <u>Spray Nozzles:</u> 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.
- 3. <u>Pressure:</u> As recommended by the nozzle manufacturer to achieve ASABE medium sized droplets.
- 4. 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:
 - 1. 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.
 - 2. Remove all nozzles and screens and wash separately.
 - 3. Dispose of all rinsate in accordance with provincial regulations.

10.3 Airblast Application

<u>Airblast application</u>: **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.

10.4 Aerial Application

10.4.1 General Information

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

<u>Aerial application:</u> 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 classification. DO NOT apply under weather conditions of less than 50% relative humidity and temperatures great 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.

10.4.2 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.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in fine particles (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

10.4.3 Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, clean-up and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

10.4.4 Product Specific Precautions

Read and understand the entire label before using this product.

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 nozzles rated to deliver medium-coarse droplets of volume median diameter of 340 microns or greater.

Apply in a spray volume of 40 litres per hectare.

10.4.5 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.

- 1. 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.
- 2. Thoroughly batch mix any WG or DF formulation mix partners and agitate to ensure complete mixing. Pump into the hopper
- 3. Induct or thoroughly batch mix any SC formulations.
- 4. 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.
- 5. 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.
- 6. Pump batch mixed SC, EC, and/or SN/SL products into the hopper.
- 7. Finish filling the hopper with water.
- 8. If it was not possible to engage hopper agitation in Step 1, do so as soon as possible once airborne.
- 9. Spray the pesticide suspension the same day as mixing.
- 10. Do not mix, load or clean equipment where there is a potential to contaminate wells or aquatic systems.

10.4.6 Spraying Instructions

1. <u>Water Volume:</u> Apply in a spray volume of 40 L/ha. Appropriate water volumes aid good coverage.

- 2. <u>Spray Nozzles:</u> Use only ASABE medium or coarse nozzles rated as delivering droplets of volume median diameter of 340 microns or greater.
- 3. <u>Pressure:</u> As recommended by the nozzle manufacturer to achieve ASABE coarse or medium sized droplets.
- 4. Ensure hopper agitation is engaged whenever possible during flight.

10.4.7 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:
 - 1. 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.
 - 2. Remove all nozzles and screens and wash separately.
 - 3. Dispose of all rinsate in accordance with provincial regulations.

10.5 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	Сгор	Spray Buf	fer Zones (m Protec	etres) Requi tion of:	red for the
		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 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	10	5	3	1
	Corn (including field, pop and sweet types, and crops grown for seed production), Crop Group 9 – Cucurbit Vegetables: Chayote	25	10	5	3

(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)				
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	•		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,	Early growth stage	85	75	70	60
	larches, pines and true firs)	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	Short-Rotation-	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
	Apples, cherries, nectarines, peaches, plums, strawberries,	Early growth stage	70	60	55	45
	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	Late growth stage	60	50	45	35

Method of application			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, flax, canola, mustard (oilseed type),	Fixed wing	375	150	175	55
	grass mixtures, summer- fallow	Rotary wing	375	125	175	35
	Buckwheat, pearl millet, proso millet, rice, rye	Fixed wing	800	300	175	55
	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, Dwarf pea, edible-pod pea, snow pea, sugar snap pea, English pea, garden pea, green pea, pigeon pea. Peas (Pisum spp.) (includes field peas)	Rotary wing	550	300	175	35
	Corn (including field, pop and sweet types, and	Fixed wing	800	800	800	225
product Poplar	crops grown for seed production)	Rotary wing	800	575	475	225
	Poplar (<i>Populus</i> spp.) and willow (<i>Salix</i> spp.)	Fixed wing	775	300	175	55
	plantings, including short-rotation-intensive- culture (sric), their hybrids and their planting stock	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 (ASAE) 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 Pest Management Regulatory Agency web site. 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 CROP USE DIRECTIONS

When applied as directed, MATADOR 120EC Insecticide will control the listed pests, unless otherwise indicated as suppression.

DO NOT cut treated fields for hay/forage. DO NOT graze treated fields. DO NOT feed crops to livestock. For grasses/non-grasses grown for seed production only, DO NOT feed seed screenings and aftermath to livestock.

FRUIT CROPS	
CROPS	APPLES
PEST	Apple Aphid, Apple Brown Bug, Apple Leaf Midge, Codling Moth, Fruit Tree Leafroller, Oblique Banded Leafroller, Pale Apple Leafroller, Spotted Tentiform Leafminer, White Apple Leafhopper, Winter Moth
RATE (mL/ha)	83
APPLICATION METHOD	Ground application
APPLICATION TIMING	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
NOTES	Allow a 7 day interval between treatments.
	DO NOT apply within 7 days of harvest.
	DO NOT use more than 3 applications per year.
	DO NOT APPLY BY AIR.
	DO NOT feed treated crops to livestock.
CROPS	APPLES
PEST	Plum Curculio, Tarnished Plant Bug, Woolly Apple Aphid
RATE (mL/ha)	104
APPLICATION METHOD	Ground application
APPLICATION TIMING	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
NOTES	Allow a 7 day interval between treatments.
	DO NOT apply within 7 days of harvest.
	DO NOT use more than 3 applications per year.
	DO NOT APPLY BY AIR.
	DO NOT feed treated crops to livestock.

11.1 Fruit Crops

CROPS	CHERRIES
PEST	Plum Curculio, Cherry Maggot
RATE (mL/ha)	104
APPLICATION METHOD	Ground application
APPLICATION TIMING	Plum Curculio: Shuck stage, when the fruit is the size of a pea, and 10 to
	12 days later if oviposition scars are detected.
	Cherry Maggot: When the fruit is turning from green to pink. A second
	application may be required 10 days later.
NOTES	Allow a 7 day interval between treatments.
	DO NOT apply within 7 days of harvest.
	DO NOT use more than 3 applications per year.
	DO NOT APPLY BY AIR.
CROPS	PEACHES AND NECTARINES
PEST	Green Peach Aphid, Oriental Fruit Moth, Tarnished Plant Bug
RATE (mL/ha)	104
APPLICATION METHOD	Ground application
APPLICATION TIMING	Timing of applications should be based on the presence of vulnerable pest
	developmental stages and significant populations as determined by local
	monitoring.
NOTES	Allow a 7 day interval between treatments.
	DO NOT such within 7 days of homes of
	DO NOT apply within 7 days of harvest.
	DO NOT use more than 2 applications per year
	DO NOT use more than 3 applications per year.
	DO NOT APPLY BY AIR.
CROPS	PEARS
PEST	Pear Psylla (Nymphs and Adults), Codling Moth
RATE (mL/ha)	83
APPLICATION METHOD	Ground application
APPLICATION TIMING	Timing of applications should be based on the presence of vulnerable pest
	developmental stages and significant populations as determined by local
	monitoring.
NOTES	DO NOT apply within 7 days of harvest.
	DO NOT use more than 1 application per year.
	DO NOT APPLY BY AIR.

CROPS	PLUMS
PEST	Plum Curculio, Mealy Plum Aphid
RATE (mL/ha)	104
APPLICATION METHOD	Ground application
APPLICATION TIMING	Plum Curculio: Shuck stage, when the fruit is the size of a pea, and 10 to
	12 days later if oviposition scars are detected.
	Mealy Plum aphid: Control should be based on local monitoring for
	significant populations.
NOTES	Allow a 7 day interval between treatments.
	DO NOT apply within 7 days of harvest.
	DO NOT use more than 2 emplications nervices
	DO NOT use more than 3 applications per year.
	DO NOT APPLY BY AIR.
CROPS	STRAWBERRIES
PEST	Bud (Clipper) Weevil, Meadow Spittle Bug and Tarnished Plant Bug
RATE (mL/ha)	104
APPLICATION METHOD	Ground application
APPLICATION TIMING	Bud Weevil: When buds are visible in crown and again when first buds
	show white.
	Spittle Bug: When first noticed.
	Plant Bug: 7 to 10 days after first bloom and repeat 7 to 10 days later.
NOTES	Allow a 7 day interval between treatments.
	DO NOT apply within 7 days of harvest.
	DO NOT use more than 3 applications per year.
	DO NOT APPLY BY AIR.
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11.2 Vegetable Crops

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

CROPS	COLE CROPS (Broccoli, Brussels Sprouts, Cabbage, Cauliflower)
PEST	Cabbage Looper
RATE (mL/ha)	83
APPLICATION METHOD	Ground application
APPLICATION TIMING	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
NOTES	Allow a 7 day interval between treatments.
	 DO NOT apply within 1 day of harvesting cabbage and 3 days of harvesting broccoli, Brussels sprouts or cauliflower. DO NOT use more than 3 applications per year. DO NOT APPLY BY AIR.
CROPS	POTATOES
PEST	Potato Flea Beetle, Potato Leafhopper, Tarnished Plant Bug, and Tuber Flea Beetle
RATE (mL/ha)	83
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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.
NOTES	Allow a 7 day interval between treatments.
	The maximum rate per season must not exceed 250 mL of product per hectare.
	DO NOT apply within 7 days of harvest.
	DO NOT use more than 3 applications per year if using the 83 mL per hectare rate.
	DO NOT feed treated crops to livestock.
	Aerial Application: DO NOT make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.
	Water Volume: Use a minimum of 100 L water for ground application. Use sufficient water for thorough coverage.

CROPS	POTATOES
PEST	European Corn Borer
RATE (mL/ha)	83
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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 guidelines and local extension experts for monitoring protocols and thresholds for treatment.
NOTES	The maximum rate per season must not exceed 250 mL of product per hectare.
	Allow a 4 to 7 day interval between treatments. DO NOT apply within 7 days of harvest.
	DO NOT use more than 3 applications per year if using the 83 mL per hectare rate.
	DO NOT feed treated crops to livestock.
	Aerial Application: DO NOT make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.
	Water Volume: Use a minimum of 100 L water for ground application. Use sufficient water for thorough coverage.

CROPS	POTATOES
PEST	Colorado Potato Beetle: susceptibility to pyrethroid insecticides should be
	confirmed using an appropriate assay.
RATE (mL/ha)	83 - 125 for ground application
	83 for aerial application
APPLICATION METHOD	Ground or aerial application (see rates above)
APPLICATION TIMING	Use 125 mL per hectare rate when Colorado Potato Beetle larvae are
	beyond the second instar stage of development or when populations are high.
NOTES	The maximum rate per season must not exceed 250 mL of product per hectare.
	Allow a 7 day interval between treatments.
	DO NOT apply within 7 days of harvest.
	DO NOT use more than 3 applications per year if using the 83 mL per hectare rate.
	DO NOT use more than 2 applications per year if using the 125 mL per hectare rate.
	DO NOT feed treated crops to livestock.
	Aerial Application: DO NOT make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.
	Water Volume: Use a minimum of 100 L water for ground application. Use sufficient water for thorough coverage.
CROPS	TOMATOES
PEST	Potato Flea Beetle, Potato Leafhopper, Tarnished Plant Bug, Cutworms
RATE (mL/ha)	83
APPLICATION METHOD	Ground application
APPLICATION TIMING	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.
	Cutworms: 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.
NOTES	Allow a 7 day interval between treatments.
	The maximum rate per season must not exceed 250 mL of product per hectare.
	DO NOT apply within 7 days of harvest.
	DO NOT use more than 3 applications per year if using the 83 mL per hectare rate.
	DO NOT use more than 2 applications per year if using the 125 mL per hectare rate.
	DO NOT APPLY BY AIR.

CROPS	TOMATOES
PEST	Colorado Potato Beetle: susceptibility to pyrethroid insecticides should be
	confirmed using an appropriate assay.
RATE (mL/ha)	83 - 125
APPLICATION METHOD	Ground application
APPLICATION TIMING	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.
	Colorado Potato Beetle: Use 125 mL per hectare rate when Colorado Potato Beetle larvae are beyond the second instar stage of development, or when populations are high.
NOTES	Allow a 7 day interval between treatments.
	The maximum rate per season must not exceed 250 mL of product per hectare.
	DO NOT apply within 7 days of harvest.
	DO NOT use more than 3 applications per year if using the 83 mL per hectare rate.
	DO NOT use more than 2 applications per year if using the 125 mL per hectare rate.
	DO NOT APPLY BY AIR.

11.3 Tobacco

11.4 Cover Crop Treatment

CROPS	WHEAT or RYE, used as TOBACCO COVER CROP TREATMENT
PEST	Cutworm (Darksided and White)
RATE (mL/ha)	42
APPLICATION METHOD	Ground application
APPLICATION TIMING	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.
NOTES	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.
	DO NOT cut treated field for hay/forage. DO NOT graze treated fields.
	DO NOT APPLY BY AIR.

11.5 Soil Treatment

CROPS	SOIL TREATMENT
PEST	Cutworm (Darksided and White)
RATE (mL/ha)	83
APPLICATION METHOD	Ground application
APPLICATION TIMING	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.
NOTES	 DO NOT incorporate. DO NOT 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. DO NOT APPLY BY AIR.

CROPS	POST PLANTING TREATMENT
PEST	Cutworm (Darksided and White)
RATE (mL/ha)	83
APPLICATION METHOD	Ground application
APPLICATION TIMING	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.
NOTES	 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. DO NOT use more than 1 application per year. DO NOT apply within 60 days of harvest.
	DO NOT APPLY BY AIR.

11.6 Oilseed Crops

OILSEED CROPS	
CROPS	CANOLA AND MUSTARD (OILSEED TYPE)
PEST	Grasshopper
RATE (mL/ha)	63 - 83 for ground application
	83 for aerial application
PEST	Crucifer Flea Beetle, Lygus Bug, Cabbage Seedpod Weevil (adults), Imported Cabbageworm, Diamondback Moth Larvae, Cabbage Looper, Bertha Armyworm, Cutworms (Refer to User Requested Minor Use Label Expansion (URMULE) section for label directions regarding Swede midge (Contarinia nasturtii) control.)
RATE (mL/ha)	83
APPLICATION METHOD	Ground or aerial application

APPLICATION TIMING	Apply when the insects are at a vulnerable stage.
	Consult provincial guidelines and local extension experts for treatment threshold and advice.
	Cabbage Seedpod Weevil (adults): 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.
	Flea beetle: 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.
	Grasshopper: 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.
	Cutworms: 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.
NOTES	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.
	DO NOT apply within 7 days of harvest.
	DO NOT use more than 3 applications per year.
	DO NOT cut treated field for hay/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock. For grasses/non-grasses grown for seed production only, DO NOT feed seed screenings and aftermath to livestock.
	Aerial Application: DO NOT make more than 1 application of 83 mL/ha of the allowed seasonal total by air.
	Water Volume: <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.

CROPS	FLAX
PEST	Grasshoppers
RATE (mL/ha)	63 - 83 for ground application
	83 for aerial application
PEST	Cutworms
RATE (mL/ha)	83
APPLICATION METHOD	Ground or aerial application (see rates above)
APPLICATION TIMING	Apply when the insects are at a vulnerable stage.
	Consult provincial guidelines and local extension experts for treatment threshold and advice.
	Grasshoppers: Apply the low rate when grasshoppers are up to the 3 rd 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.
	Cutworms: 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.
NOTES	Allow a 7 day interval between treatments.
	DO NOT apply within 7 days of harvest.
	DO NOT use more than 3 applications per year.
	DO NOT cut treated field for hay/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock. For grasses/non-grasses grown for seed production only. DO NOT feed seed screenings and aftermath to livestock.
	Aerial Application: DO NOT make more than 1 application of 83 mL/ha of the allowed seasonal total by air.
	Water Volume: <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.

11.7 Cereal Crops

CEREAL CROPS	
CROPS	WHEAT, BARLEY, OATS
PEST	Grasshoppers
RATE (mL/ha)	63 - 83 for ground application 83 for aerial application
APPLICATION METHOD	Ground or aerial application (see rates above)
APPLICATION TIMING	Apply the low rate when grasshoppers are up to the 3 rd 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.
NOTES	Allow a 7 day interval between treatments.
	DO NOT apply within 28 days of harvest.
	DO NOT cut treated field for hay/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock. For grasses/non-grasses grown for seed production only. DO NOT feed seed screenings and aftermath to livestock.
	DO NOT use more than 3 applications per year.
	Aerial Application: DO NOT make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.

0000	CODN (including field, new and such thanks and such that the
CROPS	CORN (including field, pop and sweet types, and crops grown for seed
	production)
PEST	Cutworms, Fall Armyworm
RATE (mL/ha)	83
PEST	Armyworm Pseudaletia unipuncta
RATE (mL/ha)	83 - 208
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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. Cutworms: (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.
NOTES	 Allow a 4 to 7 day interval between treatments. DO NOT apply within 1 day of harvest for sweet corn. DO NOT use more than 3 applications per year. DO NOT cut treated field for silage/forage. DO NOTgraze treated fields. DO NOT feed treated crops to livestock. For grasses/non-grasses grown for seed production only. DO NOT feed seed screenings and aftermath to livestock. Aerial Application: DO NOT make more than 2 applications by air.

11.8 Other Uses

OTHER USES	
CROPS	ALFALFA/GRASS MIXTURES, SUMMERFALLOW
PEST	Grasshoppers
RATE (mL/ha)	63 - 83 for ground application
	83 for aerial application
APPLICATION METHOD	Ground or aerial application (see rates above)
APPLICATION TIMING	Apply the low rate when grasshoppers are up to the 3 rd 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.

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

CROPS	ALFALFA
PEST	Alfalfa Weevil, Lygus Bug, Tarnished Plant Bug, Pea Aphid, Potato
	Leafhopper
RATE (mL/ha)	83
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	Timing of applications should be based on the presence of vulnerable pest
	developmental stages and significant populations as determined by local monitoring.
NOTES	Allow a 7 day interval between treatments.
	Alfalfa seed from treated crops is not to be used for production of 'alfalfa sprouts' for human consumption.
	DO NOT cut treated field for silage/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock. For grasses/non-grasses grown for seed production only, DO NOT feed seed screenings and aftermath to livestock.
	DO NOT use more than 3 applications per year.
	Aerial Application: DO NOT make more than 1 application of 83 mL/ha of the allowed seasonal total by air.

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.

12.1 Choke Cherries

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

12.2 Brassica Leafy Vegetables

CROPS	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
PEST	Swede midge (Contarinia nasturtii), Cabbage looper
RATE (mL/ha)	83
APPLICATION METHOD	Ground application only
APPLICATION TIMING	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.
NOTES	 Allow at least 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 use more than 3 applications per crop per year (249 mL product/year). 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.

CROPS	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
PEST	Onion thrips
RATE (mL/ha)	188
APPLICATION METHOD	Ground application only
APPLICATION TIMING	Apply when the insect first appears.
NOTES	Apply by foliar broadcast spray.
	DO NOT apply within 1 day of harvesting cabbage and 3 days of
	harvesting all other crops in Crop Group 5A.
	DO NOT apply more than 3 applications per growing season.
	Allow a 7 day interval between treatments.
	DO NOT apply by air.
	Water Volume:
	Apply in sufficient water to ensure thorough coverage. A water volume of 500
	L/ha is recommended
CROPS	MATADOR 120 EC may be applied to the following Brassica crops
	only:
	Broccoli, Chinese broccoli (gai lan), Brussels sprouts, cabbage,
DECT	Chinese cabbage (napa), cauliflower and kohlrabi
PEST	Crucifer Flea Beetle, Diamondback Moth Larvae, Imported Cabbageworm 42
RATE (mL/ha)	
APPLICATION METHOD APPLICATION TIMING	Ground application Timing of applications should be based on the presence of vulnerable pest
APPLICATION TIMING	developmental stages and significant populations as determined by local
	monitoring.
NOTES	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	
CROPS	Celery
PEST	Tarnished plant bug
RATE (mL/ha)	83
APPLICATION METHOD	Ground application
APPLICATION TIMING	Timing of application should be based on the presence of vulnerable pest development stages and significant populations as based on local monitoring.
NOTES	Allow at least 7 day interval between treatments. DO NOT apply within 3 days of harvest of celery.
	DO NOT use more than 3 applications per season. Maximal seasonal application is 30 g ai/ha.
	DO NOT APPLY BY AIR.
	Water Volume: Use sufficient water for thorough coverage, applied by ground sprayer. A water volume of 500 L/ha is recommended.

12.4 Legume Vegetables

LEGUME VEGETABLES	
CROPS	Crop Group 6 - Legume Vegetables including Soybean
PEST	Soybean aphid, Pea aphid, Bean aphid
RATE (mL/ha)	83 - 233
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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.
	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 soybean aphid management guidelines suggest applying insecticide during the flowering growth stage of soybean development.
	Consult local agricultural personnel and provincial guidelines on the use of this product.
NOTES	Allow at least a 7 day interval between treatments.
	DO NOT apply within 7 days of harvest for succulent shelled and edible-podded peas and beans.
	DO NOT apply within 14 days of harvest of dry peas and beans (including lupins, lentils, chickpeas and fava beans).
	DO NOT apply within 21 days of harvest for soybean.
	DO NOT use more than 3 applications per season.
	DO NOT cut treated field for hay/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock.
	Aerial application: Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.
	Water Volume: <u>For ground application</u> : 100 to 200 L/ha. <u>For aerial application:</u> apply in a spray volume of 40 L/ha.

CROPS	Crop Group 6: Legume Vegetables including Soybean
PEST	Western bean cutworm
RATE (mL/ha)	83 - 187
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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 guidelines on the use of this product.
	Cutworm activity is greatest during the late evening and night. Application should be timed as close as possible to insect feeding activity.
NOTES	Repeat sprays at 4-7 day intervals.
	DO NOT apply within 7 days of harvest for succulent shelled and edible-podded peas and beans.
	DO NOT apply within 14 days of harvest of dry peas and beans (including lupins, lentils, chickpeas and fava beans).
	DO NOT apply within 21 days of harvest for soybean.
	DO NOT use more than 3 applications per season.
	DO NOT cut treated field for hay/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock.
	Aerial application: Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.
	Water Volume: <u>For ground application</u> : 100 to 200 L/ha. <u>For aerial application: apply in a spray volume of 40 L/ha.</u>

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

CROPS	Soybeans, Dry Peas**, Chickpeas and Lentils
PEST	Grasshoppers
RATE (mL/ha)	83
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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 guidelines on the use of this product.
NOTES	Repeat sprays at 4 to 7 day intervals depending on the presence of significant populations as determined by local monitoring.
	DO NOT apply within 14 days of harvest of dry peas, chickpeas and lentils.
	DO NOT apply within 21 days of harvest for soybean.
	DO NOT use more than 3 applications per season.
	DO NOT cut treated field for hay/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock.
	Aerial application: Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.
	Water Volume:
	For ground application: 100 to 200 L/ha.
	For aerial application: apply in a spray volume of 40 L/ha.

	Soybean, Succulent and Dry Edible Beans*, Succulent and Dry Peas**,
	Fava Beans (broad beans) and Chickpeas
PEST	Bean Leaf Beetle
RATE (mL/ha)	83 - 233 for ground application
	83 for aerial application
APPLICATION METHOD	Ground or aerial application (see rates above)
APPLICATION TIMING	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.
	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 guidelines on the use of this product.
NOTES	DO NOT apply within 7 days of harvest for succulent shelled and edible- podded peas and beans.
	DO NOT apply within 14 days of harvest of dry peas and beans (including fava beans and chickpeas).
	DO NOT apply within 21 days of harvest for soybean.
	DO NOT use more than 3 applications per season.
	DO NOT cut treated field for hay/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock.
	Aerial application: Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.
	Water Volume: For ground application: 100 to 200 L/ha. For aerial application: apply in a spray volume of 40 L/ha.

CROPS	Succulent and Dry Edible Beans*, Succulent Peas**, Fava Beans
	(broad beans), Chickpeas and Lentils
PEST	Potato Leafhopper
RATE (mL/ha)	83
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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 guidelines on the use of this product.
NOTES	Repeat sprays at 4 to 7 day intervals depending on the presence of significant populations as determined by local monitoring.
	DO NOT apply within 7 days of harvest for succulent shelled and edible-podded peas and beans.
	DO NOT apply within 14 days of harvest of dry beans (including lentils, chickpeas and fava beans).
	DO NOT apply within 21 days of harvest for soybean.
	DO NOT use more than 3 applications per season.
	DO NOT cut treated field for hay/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock.
	Aerial application: Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.
	Water Volume:
	For ground application: 100 to 200 L/ha.
	For aerial application: apply in a spray volume of 40 L/ha.

CROPS	Succulent and Dry Edible Beans*
PEST	Corn Borer
RATE (mL/ha)	83
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	Apply before the larva bores into the plant stalk or pods.
	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 guidelines on the use of this product.
NOTES	Repeat sprays at 4 to 7 day intervals depending on the presence of significant populations as determined by local monitoring.
	DO NOT apply within 7 days of harvest for succulent shelled and edible-podded beans.
	DO NOT apply within 14 days of harvest of dry beans.
	DO NOT use more than 3 applications per season.
	DO NOT cut treated field for hay/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock.
	Aerial application: Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.
	Water Volume: For ground application: 100 to 200 L/ha. For aerial application: apply in a spray volume of 40 L/ha.

CROPS	Field Peas
PEST	Pea leaf weevil (Sitona lineata)
RATE (mL/ha)	83
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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.
	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 guidelines on the use of this product.
NOTES	Repeat sprays at 4 to 7 day intervals depending on the presence of significant populations as determined by local monitoring.
	DO NOT apply within 14 days of harvest for dry peas.
	DO NOT use more than 3 applications per season.
	DO NOT cut treated field for hay/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock.
	Aerial application: Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.
	Water Volume:
	<u>For ground application</u> : 100 to 200 L/ha. <u>For aerial application:</u> apply in a spray volume of 40 L/ha.
* <u>Beans, succulent and dry edible:</u> 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. ** <u>Peas, succulent</u> : Pea (<i>Pisum</i> spp.) (includes dwarf pea, edible-pod pea, snow pea, sugar snap pea, English pea, garden pea, green pea), pigeon pea. <u>Peas, dry</u> : Peas (<i>Pisum</i> spp.) (includes field pea), pigeon pea.	

12.5 Ferns of Asparagus

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

	inte, Triticale, Wheat, and Wild Rice
CROPS	Crop Group 15 - Corn (field, sweet, pop, and seed), Barley, Buckwhea
	Pearl Millet, Proso Millet, Oats, Rice, Rye Sorghum, Teosinte, Triticale Wheat, and Wild Rice
PEST	Armyworm
ATE (mL/ha)	83
	Ground or aerial application
APPLICATION TIMING	Spray no later than when the first feeding damage is seen on foliage.
NOTES	Repeat sprays at 4-7 day intervals.
	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 28 days of harvest for barley, buckwheat, millet (pea and proso), oats, rice, rye, sorghum (milo), teosinte, triticale, wheat and wil rice grain.
	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.
	DO NOT cut treated field for hay/silage/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock. For grasses/non-grasses grown for seed production only, DO NOT feed seed screenings and aftermath to livestock.
	Water Volume: <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.

12.6 Cereal Crops – Crop Group 15

CROPS	Corn (Field, Sweet, Seed, and Pop)
PEST	Armyworm (<i>Pseudaletia unipuncta</i>)
RATE (mL/ha)	83 - 208
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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 per season using aerial application equipment.
	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.
	DO NOT cut treated field for silage/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock. For grasses/non-grasses grown for seed production only, DO NOT feed seed screenings and aftermath to livestock.
	Water Volume:
	<u>Aerial Application</u> : Apply in 40 L of water per hectare. <u>Ground Application</u> : Apply in 100 - 200 L of water per hectare.

CROPS	Corn (Field, Sweet, Seed and Pop)
PEST	European corn borer (Ostrinia nubilalis), Corn earworm (Helicoverpa zea)
RATE (mL/ha)	83 - 187
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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.
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 using aerial application equipment 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.
	DO NOT cut treated field for silage/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock. For grasses/non-grasses grown for seed production only, DO NOT feed seed screenings and aftermath 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.

CROPS	Corn (Field, Sweet, Seed and Pop)
PEST	Western bean cutworm
RATE (mL/ha)	83 - 187
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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.
	DO NOT cut treated field for silage/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock. For grasses/non-grasses grown for seed production only, DO NOT feed seed screenings and aftermath to livestock.
	Water Volume: <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.

12.7 Timothy (for seed production only)

TIMOTHY (for seed produ	TIMOTHY (for seed production only)	
CROPS	Timothy(for seed production only)	
PEST	Grasshoppers	
RATE (mL/ha)	63 - 83	
APPLICATION METHOD	Ground application only	
APPLICATION TIMING	Apply the low rate when grasshoppers are up to the 3 rd 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.	
NOTES	Allow 7 days between applications.DO NOT apply more than 3 applications per season.DO NOT apply within 14 days of harvest.	
	DO NOT apply by air.	
	DO NOT cut treated field for hay/forage. DO NOT graze treated fields. DO NOT feed treated crops to livestock. For grasses/non-grasses grown for seed production only, DO NOT feed seed screenings and aftermath to livestock.	
	Water Volume:	
	Apply in 100 to 200 L of water per hectare.	

12.8 Sweet Potato

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

12.9 Potatoes

POTATOES	
CROPS	Potatoes
PEST	Armyworm (<i>Pseudaletia unipuncta</i>)
RATE (mL/ha)	83
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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 within 7 days of harvest.
	DO NOT apply more than 3 applications per year for ground.
	DO NOT apply more than 2 applications of 83 mL/ha of the allowed seasonal total by air.
	DO NOT feed treated crops to livestock.
	Water Volume: <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.

12.10 Carrots

CARROTS	
CROPS	Carrot
PEST	Carrot rust fly (Psila rosae), Carrot weevil (Listronotus oregonensis)
RATE (mL/ha)	83
APPLICATION METHOD	Ground application
APPLICATION TIMING	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.
NOTES	Allow 7 days between applications. DO NOT apply within 14 days of harvest.
	DO NOT feed treated crops to livestock.
	DO NOT apply more than 3 applications per year.
	DO NOT apply by air.

12.11 Poplar and Willow

POPLAR and WILLOW	
CROPS	Poplar (<i>Populus</i> spp.) and willow (<i>Salix</i>) plantings, including Short- Rotation-Intensive-Culture (SRIC), their hybrids and their planting
	stock
PEST	Grasshoppers
RATE (mL/ha)	63 - 83 for ground application
	83 for aerial application
APPLICATION METHOD	Ground or aerial application (see rates above)
APPLICATION TIMING	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.
NOTES	Allow 7 days between applications.
	 DO NOT apply more than 3 applications per hectare in total per season. DO NOT apply more than 2 applications of the seasonal total by air. Water Volume: 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.
CROPS	Poplar (<i>Populus</i> spp.) and willow (<i>Salix</i>) plantings, including Short- Rotation-Intensive-Culture (SRIC), their hybrids and their planting stock
PEST	Potato leaf hopper, tarnished plant bug
RATE (mL/ha)	83
APPLICATION METHOD	Ground or aerial application
APPLICATION TIMING	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.
NOTES	Allow 7 days between applications. DO NOT apply more than 3 applications per hectare in total per season.
	DO NOT apply more than 2 applications of the seasonal total by air.
	Water Volume: <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.

CROPS	Poplar (<i>Populus</i> spp.) and willow (<i>Salix</i>) plantings, including Short- Rotation-Intensive-Culture (SRIC), their hybrids and their planting stock
PEST	Prairie tent caterpillar, ugly nest caterpillar
RATE (mL/ha)	58
APPLICATION METHOD	Ground application
APPLICATION TIMING	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.
NOTES	 DO NOT apply more than 1 application per hectare in total per season. DO NOT APPLY BY AIR Water Volume: Ground Application: Use a minimum of 100 L of water/ha. Use sufficient water for thorough coverage.

12.12 Strawberries

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

12.13 Saskatoon Berries

PESTSasRATE (mL/ha)104APPLICATION METHODGroAPPLICATION TIMINGApp	skatoon berries skatoon bud moth 4 ound application plication should be based on the presence of vulnerable pest stages as
RATE (mL/ha)104APPLICATION METHODGroAPPLICATION TIMINGApp	4 ound application
APPLICATION METHOD Gro APPLICATION TIMING App	ound application
APPLICATION TIMING App	
	plication should be based on the presence of vulnerable pest stages as
(ea	termined by monitoring. If warranted, make the first application at bud break arly green tip). A second application can be made after petal drop if insect essure indicates the need.
DO DO DO Wa	ow 10 to 15 days between applications. O NOT apply within 21 days of harvest. O NOT apply more than 2 applications per year. O NOT APPLY BY AIR ater Volume: ply in a minimum of 200 L of water/ha.

12.14 Cucurbit Vegetables

CUCURBIT VEGETABLES	
CROPS	CROP GROUP 9: chayote (fruit), Chinese waxgourd, citron melon,
	cucumber, gherkin, edible gourd, momordica spp., muskmelon,
	pumpkin, summer squash, winter squash, watermelon
PEST	Striped cucumber beetle (Acalymma vittatum)
	Squash bug (Anasa tristis)
RATE (mL/ha)	187-233
	Use higher application rate when pest populations are high.
APPLICATION METHOD	Ground application
APPLICATION TIMING	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.
NOTES	Allow 7 days between applications. DO NOT apply within 1 day of harvest.
	DO NOT apply more than 3 applications per growing season. DO NOT APPLY BY AIR
	Water Volume: Use sufficient water for thorough coverage. 100 to 200 L/ha is recommended.

12.15 Canola

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

12.16 Conifer Seed Orchards

CONIFER SEED ORCHAI	
CROPS	Douglas fir, hemlocks, larches, pines, spruces, true firs.
PEST	Western conifer-seed bug (Leptoglossus occidentalis)
RATE (mL/ha)	40 mL/ 100 L water. Spray to the point of run-off, ranging from 800-1200
	L/ha depending on tree size
APPLICATION METHOD	Air blast applicatoin
APPLICATION TIMING	The first application should be made when owverwintered 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.
NOTES	Allow a minimum of 10 day between applications.
	Do not apply more than 3 applications per year.
ADDITIONAL USE	DO NOT APPLY BY AIR.
DIRECTIONS	

12.17 Tree Nuts – Crop Group 14-11

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

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 1-87-SYNGENTA (1-877-964-3682) or at <u>www.syngenta.ca</u>.

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