

SILENCER 120 EC
Emulsifiable Concentrate Insecticide

AGRICULTURAL

For the Control of Listed Insects on Oilseeds, Cereals, Pasture, Tree Fruit, Strawberries, Tobacco, Potatoes, Tomatoes, Cole Crops, Leaf and Head Lettuce, Greenhouse Lettuce, Bulb Vegetables (Crop Group 3), Chokecherry, Legume Vegetables (Crop Group 6), Corn, Ferns of Asparagus, Timothy Grown for Hay or Seed, Sweet Potato, Carrots and Outdoor Ornamentals

GUARANTEE:

Lambda-cyhalothrin 120 g/L

READ THE LABEL AND ATTACHED PAMPHLET BEFORE USING

KEEP OUT OF THE REACH OF CHILDREN



DANGER

POISON

EYE IRRITANT

POTENTIAL SKIN SENSITIZER

REGISTRATION NO. 29052 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 1 – 1000 L

Adama Agricultural Solutions Canada Ltd.
302 - 179 McDermot Avenue
Winnipeg, MB
R3B 0S1
855-264-6262

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. The user assumes the risk to persons or property that arises from any such use of this product.

FIRST AID

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 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 ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

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

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

TOXICOLOGICAL INFORMATION

This product contains petroleum distillates. Vomiting may cause aspiration pneumonia. 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.

PRECAUTIONS

1. **KEEP OUT OF THE REACH OF CHILDREN AND ANIMALS.** Keep unused product in original container tightly closed, locked up and away from food.
2. Fatal or poisonous if swallowed. Harmful if inhaled. Avoid inhaling/breathing vapour or spray. SILENCER 120 EC is severely irritating to the eyes and skin. Do not get in eyes or on skin. Potential skin sensitizer. If hands are contaminated, wash with soap and water before touching other areas of skin. When applying this product workers must wear long pants, long-sleeved shirts, and chemical resistant boots. In addition, during mixing, loading, clean-up and repair activities, workers must also wear chemical resistant gloves, safety goggles and a face shield. Avoid touching face with contaminated gloves or clothing. Wash gloves before removal. Wash protective equipment with soap and water after each use. Applicators using airblast equipment must also wear either a respirator with a NIOSH/MSHA/BHSE approved organic vapour removing cartridge with a prefilter approved for pesticides OR a NIOSH/MSHA/BHSE approved canister approved for pesticides.

3. Do not re-enter treated areas until 24 hours after treatment. Workers shall be given oral warning of the re-entry interval.
4. SILENCER 120 EC Emulsifiable Concentrate Insecticide may be applied aerially only to those crops for which this use is specified on this label.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at www.croplife.ca.

ENVIRONMENTAL HAZARDS

This product contains an active ingredient and aromatic petroleum distillates that are TOXIC to aquatic organisms. Observe buffer zones specified under DIRECTIONS FOR USE. This product is toxic to bees when exposed to direct treatment, drift, or residues on flowering crops or weeds. DO NOT apply this product to flowering crops or weeds if bees are visiting the treatment area. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site. Spray deposits should be dry before bees commence foraging in treated crop. To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

STORAGE

Store in a cool, well ventilated area away from foodstuffs and out of the reach of children and animals. Store above 0°C. Storage below 0°C will not impair the effectiveness of SILENCER 120 EC Emulsifiable Concentrate Insecticide, however, following such storage, agitate well before use.

SPILL CLEANUP

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 Makhteshim Agan of North America Inc. at 1-800-535-5053 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 OF UNUSED, UNWANTED PRODUCT

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.

CONTAINER DISPOSAL

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
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PRODUCT INFORMATION

SILENCER 120 EC Emulsifiable Concentrate Insecticide 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 SILENCER 120 EC Emulsifiable Concentrate Insecticide when applied against the early development stages of the pest as determined by regular monitoring.

DIRECTIONS FOR USE

Control of some insect species with pyrethroid insecticides decreases as temperature rises. For best results, apply SILENCER 120 EC Emulsifiable Concentrate Insecticide during the early morning before temperatures rise, and during the evening, past the heat of the day. Use sufficient water for thorough coverage, 100 to 200 L/ha by ground sprayer.

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

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

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

Optimum application timing for the control of specific pest species is best determined by monitoring pest development and populations. In general, SILENCER 120 EC Emulsifiable Concentrate Insecticide 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 SILENCER 120 EC Emulsifiable Concentrate Insecticide 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 SILENCER 120 EC Emulsifiable Concentrate Insecticide. 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.

AERIAL APPLICATION

Generic Aerial Application Label Instructions – Directions for Use

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.

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.

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, cleanup 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.

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. Suggested conditions for good aerial application are moderate temperatures (less than 25°C), moderate relative humidity (greater than 40%), and light winds (3 to 9 km/h).

Use only medium or coarse nozzles rated as delivering droplets of volume median diameter of 215 microns or greater. Examples: 6506 flat fan, CP 0.125 deflector nozzle with a low shear deflector angle (30 degrees), D12-56 disc-core.

Apply in a spray volume of 10 to 40 litres per hectare. Use water volumes at the higher end of this range to ensure good coverage for optimum insect control and to minimize drift. Do not apply more than 83 mL SILENCER 120 EC Emulsifiable Concentrate Insecticide per hectare per treatment occasion by air.

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 16 km/h at flying height at the site of application. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. To reduce drift caused by

turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing or rotorspan.

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 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.

Clean and decontaminate protective clothing and application equipment regularly.

BUFFER ZONES

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment. The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of Application	Crop		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	All field crops and outdoor ornamentals		15	15	15	15
Airblast	All orchard fruit crops and outdoor ornamentals		80	80	80	80
Aerial	Potatoes, oilseed crops, cereal crops, alfalfa, unimproved pasture, summerfallow	Fixed or rotary wing	100	20	100	100
		Field and Sweet corn	Fixed wing	225	20	800
	Rotary wing		250	15	800	500
	Legume vegetables	Fixed wing	600	25	800	800
		Rotary wing	300	20	800	525

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

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

CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
				monitoring for significant populations.	
STRAWBERRIES	Bud (Clipper) Weevil, Meadow Spittle Bug and Tarnished Plant Bug Black Vine Weevil adults (Suppression only)	104	Ground	<i>Bud Weevil</i> : when buds are visible in crown and again when first buds show white. <i>Spittle Bug</i> : when first noticed. <i>Plant Bug</i> : 7 to 10 days after first bloom and repeat 7 to 10 days later.	Do not apply within 7 days of harvest. Do not use more than 3 applications per year. Allow a 7 day interval between treatments. DO NOT APPLY BY AIR. Black Vine Weevil adults For the suppression of black vine weevil adults, apply in sufficient water to ensure thorough coverage. The recommended application volume is 300-400 L/ha. Applications to be made as soon as weevils appear, and just after the final harvest of strawberries.
VEGETABLE CROPS					
COLE CROPS (Broccoli, Brussels Sprouts, Cabbage, Cauliflower)	Crucifer Flea Beetle, Diamondback Moth Larvae, Imported Cabbageworm	42	Ground	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.	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. Allow a 7 day interval between treatments. DO NOT APPLY BY AIR.
	Cabbage Looper	83			
CORN (including field, pop and sweet types, and crops grown for seed production)	Fall Armyworm, Cutworms European Corn Borer, Corn Earworm	83	Ground	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. <i>Cutworms</i> (up to the 5-leaf stage): Applications should be made under moist	Do not apply within 1 day of harvest for sweet corn. Do not apply within 14 days if the crop is being harvested for silage. Do not use more than 3 applications per year. <i>Aerial Application</i> : Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.

CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
		83	Aerial	conditions in the evening or night when cutworm activity is highest. Do not disturb the soil surface for 5 days after treatment.	

Tank Mix with Bumper 418 EC Fungicide

SILENCER 120 EC Emulsifiable Concentrate Insecticide can be tank mixed with Bumper 418 EC Fungicide for insect and foliar disease control. Apply SILENCER 120 EC Emulsifiable Concentrate Insecticide at a rate of 83 mL/ha in tank mix with Bumper 418 EC Fungicide at a rate of 150-300 mL/ha. Refer to both the SILENCER 120 EC Emulsifiable Concentrate Insecticide and Bumper 418 EC Fungicide labels for insects and diseases controlled, specific application instructions and precautions. Insects and crops must be at the correct stage as specified on the SILENCER 120 EC Emulsifiable Concentrate Insecticide as well as Bumper 418 EC Fungicide labels.

This tank mix can be applied by air and ground. Use 40 L of water per hectare when applying by air.

This tank mix is not registered for use on popcorn.

Do not harvest treated corn within 14 days of this tank-mix application.

Do not make more than 3 applications on seed corn and 2 applications on field and sweet corn per year.

Compatibility should always be confirmed by premixing small proportional quantities of water, SILENCER 120 EC Emulsifiable Concentrate Insecticide, and the tank-mix partner in advance.

CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES		
POTATOES	Potato Flea Beetle, Potato Leafhopper, Tarnished Plant Bug, Tuber Flea Beetle	83	Ground	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.	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.		
		83	Aerial				
	Colorado Potato Beetle: susceptibility to pyrethroid insecticides should be confirmed using an appropriate assay.	83 to 125	Ground			Use 125 mL rate when Colorado Potato Beetle larvae are beyond the second instar stage of development or when populations are high.	
		83	Aerial				
	European corn borer	83	Ground			Spray at egg hatch	Allow a 7 day interval between treatments. Use a minimum of 100 L water for ground application. Use sufficient water for thorough coverage. <i>Aerial Application:</i> Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by

CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
		83	Aerial	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.	air.
TOMATOES	Potato Flea Beetle, Potato Leafhopper, Tarnished Plant Bug Cutworms	83	Ground	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.	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. Allow a 7 day interval between treatments. The maximum rate per season must not exceed 250 mL of product per hectare. DO NOT APPLY BY AIR.
	Colorado Potato Beetle: susceptibility to pyrethroid insecticides should be confirmed using an appropriate assay.	83-125		<i>Cutworms</i> (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. <i>Colorado Potato Beetle</i> : Use 125 mL per hectare rate when Colorado Potato Beetle larvae are beyond the second instar stage of development, or when populations are high.	
TOBACCO					
TOBACCO Seedlings, Greenhouse	Cutworm (Darksided and White)	2 mL/30 L water	Ground		Mix 2 mL of SILENCER 120 EC Emulsifiable Concentrate Insecticide in 30 L of water and apply to 200 m ² of plant bed. DO NOT APPLY BY AIR.
FIELD TOBACCO	Darksided cutworm and white cutworm	2 mL/30 L water	Ground	Cutworm activity is greatest during the late evening and	By methods given below, apply the recommended rate of SILENCER 120 EC

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				night. Application of SILENCER 120 EC Emulsifiable Concentrate Insecticide should be timed as close as possible to insect feeding activity.	Emulsifiable Concentrate Insecticide in 225 to 450 L of water per hectare using spray pressure of 175 to 350 kPa. DO NOT APPLY BY AIR.
COVER CROP TREATMENT		42	Ground	When crop is 10 to 15 cm high, 4-5 days before ploughdown.	Apply 42 mL of SILENCER 120 EC Emulsifiable Concentrate Insecticide 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 APPLY BY AIR.
SOIL TREATMENT		83	Ground	Apply once to the soil 5 days before transplanting.	Do not incorporate. Do not disturb the soil surface for at least 5 days following treatment since mixing of SILENCER 120 EC Emulsifiable Concentrate Insecticide 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.
POST PLANTING TREATMENT		83	Ground	At transplanting	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 with another insecticide registered for this use 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.
OILSEED CROPS					
CANOLA AND	Crucifer Flea Beetle,	83	Ground	<i>For Cabbage</i>	To prevent migration of

CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES	
MUSTARD	Lygus Bug Cabbage Seedpod Weevil (adults)	83	Aerial	<i>Seedpod Weevil (adults)</i> : 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. SILENCER 120EC Emulsifiable Concentrate Insecticide will not control larvae developing within the pod, and must be applied prior to egg laying.	overwintering flea beetle adults throughout the field, ground-spray a 15 m strip around the field at the first sign of flea beetle feeding. Do not apply within 7 days of harvest. Do not use more than 3 applications per year. Allow a 7 day interval between treatments. For cabbage seedpod weevil: make only 1 application per season by either ground or aerial application equipment. <i>Aerial Application</i> : Do not make more than 1 application of 83 mL/ha of the allowed seasonal total by air.	
	Imported Cabbageworm	83	Ground	Apply when the insects are at a vulnerable stage (early larval instars). Consult provincial guidelines and local extension experts for treatment threshold and advice.	Do not apply within 7 days of harvest. Do not use more than 3 applications per year. Allow a 7 day interval between treatments. <i>Aerial Application</i> : Do not make more than 1 application of 83 mL/ha of the allowed seasonal total by air.	
	Diamondback Moth Larvae Cabbage Looper Bertha Armyworm	83	Aerial			
	Grasshoppers		63-83	Ground	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.	
			83	Aerial		
	SUNFLOWERS	Sunflower beetle	42-63	Ground	Apply when insects	Do not apply within 7 days of

CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
		83	Aerial	appear. Use the higher rate to control adults.	harvest. Do not use more than 3 applications per year. Allow a 7 day interval between treatments. <i>Aerial Application:</i> Do not make more than 1 application of 83 mL/ha of the allowed seasonal total by air.
FLAX	Grasshoppers	63-83	Ground	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.	Do not apply within 7 days of harvest. Do not use more than 3 applications per year. Allow a 7 day interval between treatments. <i>Aerial Application:</i> Do not make more than 1 application of 83 mL/ha of the allowed seasonal total by air.
		83	Aerial		
CEREAL CROPS					
WHEAT, BARLEY, OATS	Grasshoppers	63-83	Ground	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.	In wheat, do not apply within 28 days of harvest or 14 days of livestock foraging. In barley and oats do not apply within 28 days of harvest or 14 days of livestock foraging. Do not use more than 3 applications per year. Allow a 7 day interval between treatments. <i>Aerial Application:</i> Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air.
		83	Aerial		
<p>Tank Mix with MANA LADDER 240 EC or HORIZON® 240 EC Herbicide</p> <p>SILENCER 120 EC Emulsifiable Concentrate Insecticide can be tank mixed with HORIZON 240 EC Herbicide for one pass grasshopper and weed control in spring and durum wheat, if monitoring of grasshopper populations indicates application is necessary and timing is correct. Consult the MANA LADDER 240 EC or HORIZON 240 EC Herbicide labels for rates and weeds controlled. DO NOT APPLY BY AIR.</p>					

CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
Tank mix with Bison™ 400L or ACHIEVE Liquid Herbicide					
SILENCER 120 EC Emulsifiable Concentrate Insecticide can be tank mixed with Bison™ 400L or ACHIEVE Liquid Herbicide for one pass grasshopper and wild oat control in spring wheat and spring barley, if monitoring of grasshopper populations indicates application is necessary and timing is correct. A reduction in control of green foxtail and yellow foxtail may be observed when SILENCER 120 EC Emulsifiable Concentrate Insecticide is tank mixed with Bison™ 400L or ACHIEVE Liquid Herbicide. Consult Bison™ 400L or ACHIEVE Liquid Herbicide labels for use instructions and rates. For ground application only. DO NOT APPLY BY AIR.					
OTHER USES					
ALFALFA, UNIMPROVED PASTURE	Grasshoppers	63-83	Ground	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.	Do not apply within 3 days of livestock foraging. Do not use more than 3 applications per year. 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. <i>Aerial Application:</i> Do not make more than 1 application of 83 mL/ha of the allowed seasonal total by air.
		83	Aerial		
ALFALFA	Alfalfa Weevil, Lygus Bug, Tarnished Plant Bug, Pea Aphid, Potato Leafhopper	83	Ground	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.	

ALFALFA Rate Conversion Chart

Rate (mL/ha)	Hectares treated with 1 L products
42	23.8
63	15.9
83	12.0
104	9.6
125	8.0

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

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

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

DIRECTIONS FOR USE

CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
Bulb Vegetables (Crop Group 3: Garlic; Elephant Garlic; Leek; Dry Bulb, Green and Welch Onion; Shallots)	Onion Thrips	188	Ground only	<p>Foliar application by ground boom sprayer when the insect or damage appears. Thorough coverage and penetration of spray droplets into the leaf whorls, where most thrips are feeding and hiding, are essential for good control. Consult provincial guidelines and local extension experts for treatment threshold for different crops.</p> <p>For hand harvest and thinning green onions, DO NOT re-enter treated areas for 10 days after treatment. For all other activities, DO NOT re-enter treated areas until 24 hours after treatment. For all other crops, DO NOT re-enter treated areas until 24 hours after treatment. Workers should be given oral warning of the re-entry interval.</p>	<p>Use 500 L/ha of water for thorough coverage. Do not apply within 14 days of harvest. Do not use more than 3 applications per year. Allow a 7 day interval between treatments.</p> <p>DO NOT APPLY BY AIR.</p> <p>FOR USE ON LEEKS IN ONTARIO ONLY.</p>

CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
Head Lettuce	Cabbage Looper, Tarnished Plant Bug, Dark-sided and White Cutworms	83	Ground only	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.	Use 500 L/ha of water for thorough coverage. Do not apply within 3 days of harvest. Do not use more than 3 applications per year. Allow a 7 day interval between treatments.
Leaf Lettuce	Tarnished Plant Bug				DO NOT APPLY BY AIR.
Choke Cherry shelterbelts	Prairie Tent Caterpillar, Ugly Nest Caterpillar, Fruit tree Leafroller	58	Ground only	<p><i>Prairie Tent Caterpillar:</i> Apply prior to flowering when tents are visible, generally mid to late May.</p> <p><i>Ugly Nest Caterpillar:</i> Apply after flowering when tents are first visible, generally early to mid June.</p> <p><i>Fruit tree Leafroller:</i> Apply after flowering when damage is first noted, generally early to mid June.</p>	<p>Apply as a foliar spray so leaves are wet but not dripping.</p> <p>Do not use more than 1 application per year.</p> <p>Use 1000 L/ha of water for thorough coverage.</p> <p>DO NOT APPLY BY AIR.</p>
BRASSICA LEAFY VEGETABLES					
Broccoli, Brussels Sprouts, Cabbage, Cauliflower	Swede Midge (<i>Contarinia nasturtii</i>)	83	Ground only	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.	<p>Do not apply within 1 day of harvesting cabbage and 3 days of harvesting broccoli, Brussels sprouts or cauliflower.</p> <p>Do not use more than 3 applications per crop per year (249 mL product/year).</p> <p>Allow at least a 7 day interval between treatments.</p> <p>Use sufficient water for thorough coverage, 100 to 200 L/ha by ground sprayer.</p>

CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
					DO NOT APPLY BY AIR.
CROP SUBGROUP 5A (Head and Stem Brassica Subgroup): Broccoli, Chinese broccoli (gai lon), Brussels sprouts, cabbage, Chinese cabbage (napa), Chinese cabbage mustard (gai choy), cauliflower, cavolo broccolo and kohlrabi)	Onion Thrips	188	Ground application only	Apply when the insect first appears	Apply by foliar broadcast spray. DO NOT apply within 1 day for mechanical harvesting cabbage and 3 days for mechanical harvesting all other crops in Crop Group 5A. DO NOT apply within 6 days for hand harvesting all crops in Crop Group 5A. DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 days for scouting and 6 days for hand pruning, topping, irrigation, thinning and tying. An REI of 24 hours is required for all other activities. DO NOT apply more than 3 applications per growing season. Allow a 7 day interval between treatments. DO NOT apply by air. Apply in sufficient water to ensure thorough coverage. A water volume of 500 L/ha is recommended

LEGUME VEGETABLES

CROPS	PEST	RATE mL/HA	APPLICATION METHOD	APPLICATION TIMING	NOTES
Soybean	Soybean aphids ¹ Pea Aphid ¹ Bean aphid ¹	83-233	Ground or aerial application	The need and timing of application should be based on the presence of vulnerable pest developmental stages and significant populations as	Unless otherwise indicated, repeat sprays at 4 to 7 day intervals depending on the presence of
	Western bean cutworm ^{3,5}	83-187			

	Grasshoppers Cutworms ³ Lygus bugs	83		determine by local monitoring. ¹ For aphids, 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. ² 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. ³ Cutworm activity is greatest during the late evening and night. Application should be timed as close as possible to insect feeding activity. ⁴ For Corn borer control, apply before the larva bores into the plant stalk or pods. ⁵ For western bean cutworm control repeat sprays at 4-7 day intervals. Consult local agricultural personnel and provincial guidelines on the use of this product.	significant populations as determined by local monitoring. DO NOT apply within 14 days of harvesting for edible podded peas, succulent shelled beans (including succulent fava beans), and succulent shelled peas. PHI 21 days for soybean, dry peas and dry beans (including lentils, lupins, chickpeas and dry fava beans). PHI 7 days for edible podded beans. DO NOT use more than 3 applications per season. Aerial application: Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air. DO NOT graze or harvest treated forage, straw or hay for livestock feed. Water Volume: For ground application: 100 to 200 L/ha For aerial application: apply in minimum spray volume of 20 L/ha
	Bean Leaf beetle ²	83-233	Ground application only		
		83	Aerial		
BEANS, succulent and dry edible*	Soybean aphids ¹ Pea Aphid ¹ Bean aphid ¹	83-233			
	Western bean cutworm ^{3,5}				
	Cutworms ³ Corn Borer ⁴ Potato Leaf Hopper Lygus bugs	83	Ground or aerial application		
	Bean Leaf beetle ²	83	Aerial		
		83-233	Ground Application only		

***Beans, succulent and dry edible:** Beans (*Phaseolus* spp.) (includes, runner bean, snap beans, wax beans, lima bean (green), field bean, kidney bean, navy bean, Pinto bean, tepary bean); bean (*Vigna* 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 (*Lupinus* spp.) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin), lablab bean, guar.

Tank Mix with Headline EC Fungicide (Pyraclostrobin 250 g/L) on Dry Field Peas: Silencer 120 EC may be tank mixed with Headline EC Fungicide to control insects and diseases listed on the label of each product.

Read carefully and follow all use directions and use precautions on both the Silencer 120 EC and Headline EC Fungicide labels. Failure to follow the rates of use and timing of application as

recommended for each product will result in unsatisfactory control of target pest.

CROPS	PEST	RATE mL/HA	APPLICATION METHOD	APPLICATION TIMING	NOTES	
PEAS, succulent: Pea (<i>Pisum</i> spp.) (includes dwarf pea, edible-pod pea, snow pea, sugar snap pea, English pea, garden pea, green pea), pigeon pea	Soybean aphids ¹ Pea Aphid ¹ Bean aphid ¹	83-233	Ground or aerial application	The need and timing of application should be based on the presence of vulnerable pest developmental stages and significant populations as determine by local monitoring. ¹ For aphids, 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. ² For bean leaf beetle, use the higher rate to target higher pest populations or when conditions are conducive to bean pod mottle virus. ³ Cutworm activity is greatest during the late evening and night. Application should be timed as close as possible to insect feeding activity. ⁴ 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. ⁵ For western bean cutworm control repeat sprays at 4- 7day intervals. Consult local agricultural personnel and provincial guidelines on the use of this product.	Unless otherwise indicated, 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 harvesting for edible podded peas, succulent shelled beans (including succulent fava beans), and succulent shelled peas. PHI 21 days for soybean, dry peas and dry beans (including lentils, lupins, chickpeas and dry fava beans). PHI 7 days for edible podded beans. DO NOT use more than 3 applications per season. Aerial Application: Do not make more than 2 applications of 83 mL/ha of the allowed seasonal total by air. DO NOT graze or harvest treated forage, straw or hay for livestock feed. Water Volume: For ground application: 100 to 200 L/ha For aerial application: apply in minimum spray volume of 20 L/ha	
	Western bean cutworm ^{3,5}	83-187				Ground application only
	Cutworms ³ Potato Leaf Hopper	83				
	Bean Leaf beetle ²	83-233	Aerial			
		83				
	Peas Field	Soybean aphid ¹ Pea Aphid ¹ Bean aphid ¹	83-233			Ground or aerial application
	Western bean cutworm ^{3,5}	83-187				
	Pea leaf weevil (<i>Sitona lineate</i>) ⁴	83				
PEAS, dry: Pea (<i>Pisum</i> spp.) (includes field pea), pigeon pea	Soybean aphids ¹ Pea Aphid ¹ Bean aphid ¹	83-233	Ground or aerial application			
	Western bean cutworm ^{3,5}	83-187				
	Grasshoppers Cutworms ³	83				
	Bean Leaf beetle ²	83-233	Ground application only			
		83		Aerial		

CROPS	PEST	RATE mL/HA	APPLICATION METHOD	APPLICATION TIMING	NOTES
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Favabeans (broad beans)	Soybean aphids ¹ Pea Aphid ¹ Bean aphid ¹	83-233	Ground or aerial application	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. ¹ For aphids, 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. ² For bean leaf beetle, use the higher rate to target higher pest populations or when conditions are conducive to bean pod mottle virus. ³ Cutworm activity is greatest during the late evening and night. Application of Silencer 120 EC Insecticide should be timed as close as possible to insect feeding activity. ⁴ For western bean cutworm control repeat sprays at 4-7 day intervals.	Unless otherwise indicated, 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 harvesting for edible podded peas, succulent shelled beans (including succulent fava (beans), and succulent shelled peas. PHI 21 days for soybean, dry peas and dry beans (including lentils, lupins, chickpeas and dry fava beans). PHI 7 days for edible podded beans DO NOT use more than 3 applications per season. DO NOT graze or harvest treated forage, straw or hay for livestock feed. 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 minimum spray volume of 20 L/ha
	Western bean cutworm ^{3,4}	83-187			
	Lygus bugs Potato Leafhopper	83			
	Bean Leaf beetle ²	83-233	Ground application only		
		83	Aerial		
Chickpeas	Soybean aphids ¹ Pea Aphid ¹ Bean aphid ¹	83-233	Ground or aerial application	Consult local agricultural personnel and provincial guidelines on the use of this product.	
	Western bean cutworm ^{3,4}	83-187			
	Grasshoppers Potato Leaf hoppers Cutworms ³	83			
	Bean Leaf beetle ²	83-233	Ground application only		
		83	Aerial		
Lentils	Soybean aphids ¹ Pea Aphid ¹ Bean aphid ¹	83-233	Ground or aerial application		
	Western bean cutworm ^{3,4}	83-187			
	Grasshoppers Lygus Bugs Potato Leaf Hopper cutworms ³	83	Ground or aerial application		

LETTUCE (Greenhouse only)					
CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
Lettuce (greenhouse)	Cabbage loopers	83 mL /ha in sufficient water volume to ensure adequate coverage	Ground application only.	Apply when insects or damage first appear. For best results, apply against early developmental stages of the pest.	DO NOT apply within 3 days of harvest. DO NOT use more than 2 applications per year. DO NOT apply by air.
FERNS OF ASPARAGUS					
CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
Ferns of Asparagus	European Asparagus Aphids	83 ml of product per hectare in 100 to 200 L of water per hectare	Ground application only.	Apply post-harvest to fern only. Reapply after 7-10 days if monitoring indicates further applications are required.	DO NOT apply more than 3 applications per season. 180 day Preharvest interval. DO NOT apply by air.
FIELD AND SWEET CORN					
CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
Corn, Field and Sweet	Armyworm (Pseudaletia unipuncta)	83	Ground application. Aerial application.	Spray no later than when first feeding damage is seen on foliage.	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. Ground Application: Apply in 100 - 200 L of water per hectare. Aerial Application: Apply in 10 - 40 L of water per hectare.
		83			

Corn, Field, Sweet, Pop and Seed.	European corn borer (<i>Ostrinia nubilalis</i>) and Corn earworm (<i>Helicoverpa zea</i>)	187	Ground application. Aerial application.	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.	Sweet Corn: DO NOT apply within 1 day of harvest. Corn for Silage: DO NOT apply within 14 days of harvest. Field corn, popcorn and corn grown for seed: DO NOT apply within 21 days of harvest.
		187			

TIMOTHY (grown for hay or seed)					
CROP	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
Timothy (grown for hay or seed)	Grasshoppers	63 – 83 ml product/ha in 100 – 200 L/ha water	Ground application only.	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.	DO NOT apply more than 3 applications per season. Allow 7 days between applications. DO NOT apply within 14 days of harvest. DO NOT apply by air. Crops treated with MATADOR 120EC Insecticide may be fed to non-lactating dairy animals and other livestock following a 14 day interval from application to harvest or foraging.

SWEET POTATO					
CROP	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES

Sweet Potato	Potato Flea Beetle Tuber Flea Beetle Potato Leafhopper	83 mL of product/ha Apply in a minimum of 100 L of water/ha	Ground only.	Timing of application should be based on the presence of vulnerable pest development stages and significant population as determined by local monitoring.	DO NOT apply more than 3 applications per year. Allow 7 days between applications. DO NOT apply within 7 days of harvest. DO NOT apply by air.
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CEREAL CROPS					
CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
Wheat, Barley and Oats	Armyworm (Pseudaletia unipuncta)	83	Ground application.	Spray no later than when first feeding damage is seen on foliage.	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 year. DO NOT apply more than 2 applications of 83 mL/ha of the allowed seasonal total by air. Ground Application: Apply in 100 - 200 L of water per hectare. Aerial Application: Apply in 10 - 40 L of water per hectare. DO NOT apply within 28 days of harvest. DO NOT apply
		83	Aerial application.		

					within 14 days of livestock foraging.
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POTATOES					
CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
Potatoes	Armyworm (<i>Pseudaletia unipuncta</i>)	83 83	Ground application. Aerial application.	Spray no later than when first feeding damage is seen on foliage.	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 year for ground. DO NOT apply more than 2 applications of 83 mL/ha of the allowed seasonal total by air. Ground Application: Apply in 100 - 200 L of water per hectare. Aerial Application: Apply in 10 - 40 L of water per hectare. DO NOT apply within 7 days of harvest.

CARROT					
CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
Carrots	Carrot Rust Fly (<i>Psila rosae</i>) Carrot weevil <i>Listronis oregonensis</i>	83	Ground application.	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	Allow 7 days between applications DO NOT apply within 7 days of harvest DO NOT apply more than 3 applications

				vulnerable pest developmental stages and significant populations as determined by local monitoring	per year Do not apply by air
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Canola					
CROPS	PEST	RATE (mL/ha)	APPLICATION METHOD	APPLICATION TIMING	NOTES
Canola	Swede midge (Contarinia nasturtii)	83	Ground or aerial application	Timing of applications should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.	Allow a 7 day interval between treatments. DO NOT apply within 7 days of harvest. 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. Water Volume: Ground Application: Apply in 100 - 200 L of water per hectare. Aerial Application: Apply in 10 - 40 L of water per hectare.

CROPS	PEST	RATE (mL/100 L)	APPLICATION METHOD	APPLICATION TIMING	NOTES
OUTDOOR ORNAMENTALS	Black Vine Weevil adults	30	Ground	Apply when adult Black Vine Weevils and feeding injury are first detected. Allow a 7 day interval between treatments.	DO NOT APPLY BY AIR. Do apply more than three applications per year. Apply in sufficient water to ensure thorough coverage, to a maximum volume of 750 L/ha.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 6 days for the postapplication activity of cutting flowers.

Do not use in residential areas. Residential areas are defined as any use site where by-standers including children could be exposed during or after application. This includes homes, schools, public buildings, or any other areas where the general public, including children, could be exposed.

Resistance-Management Recommendations

For resistance management, please note that SILENCER 120 EC Emulsifiable Concentrate Insecticide contains a Group 3 insecticide. Any insect population may contain individuals naturally resistant to SILENCER 120 EC Emulsifiable Concentrate Insecticide and other Group 3 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance:

- Where possible, rotate the use of SILENCER 120 EC Emulsifiable Concentrate Insecticide or other Group 3 insecticides with different groups that control the same pests in a field.
- 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 Adama Agricultural Solutions Canada Ltd. company representatives at 855-264-6262.

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