

GROUP	28	INSECTICIDE
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ALTACOR® insecticide

WETTABLE GRANULES

FOR SALE FOR USE ON POME FRUIT GROUP, STONE FRUIT GROUP, CANEBERRIES SUBGROUP,
BUSHBERRIES SUBGROUP, CRANBERRIES, GRAPES, TREE NUTS GROUP, AND LOW GROWING
BERRIES SUBGROUP

AGRICULTURAL

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

Warning, contains the allergen milk

ACTIVE INGREDIENT: Chlorantraniliprole 35%

REGISTRATION NO. 28981 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 250g, 450g, 10kg, 25kg

FMC of Canada Limited
6755 Mississauga Road, Suite 204
Mississauga, ON L5N 7Y2
1-833-362-7722

PRECAUTIONS:

- **KEEP OUT OF REACH OF CHILDREN.**
- Wear long sleeves, long pants and chemical resistant gloves while mixing /loading, applying and during clean up and repair.
- Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables are available, use detergent and hot water. Keep and wash PPE separately from other laundry.
- Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Do not enter or allow worker entry into treated areas during the restricted entry interval of 12 hours.

DO NOT apply by air.

FIRST AID:

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

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

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

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

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

For medical emergencies call **1-800-331-3148** (24 hours).

TOXICOLOGICAL INFORMATION: Treat symptomatically.

ENVIRONMENTAL HAZARDS:

- Toxic to aquatic organisms. Observe buffer zones specified under DIRECTIONS FOR USE.
- Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.
- Chlorantraniliprole is persistent and may carryover. It is recommended that any products containing chlorantraniliprole not be used in areas treated with this product during the previous season.
- The use of this chemical may result in contamination of groundwater particularly in areas where soil is permeable (e.g. sandy soil) and/or the depth to the water table is shallow.
- 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.
- **DO NOT** apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, and wetlands), estuarine/marine habitats.
 - **DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

STORAGE:

Store product in original container only, away from other pesticides, fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed. To prevent contamination store this product away from food or feed.

DISPOSAL:

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

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

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

NOTICE TO USER:

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

<<DFU Booklet>>

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- Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables are available, use detergent and hot water. Keep and wash PPE separately from other laundry.
- Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Do not enter or allow worker entry into treated areas during the restricted entry interval of 12 hours.

DO NOT apply by air.

FIRST AID:

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- Chlorantraniliprole is persistent and may carryover. It is recommended that any products containing chlorantraniliprole not be used in areas treated with this product during the previous season.
- The use of this chemical may result in contamination of groundwater particularly in areas where soil is permeable (e.g. sandy soil) and/or the depth to the water table is shallow.
- 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.

- **DO NOT** apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, and wetlands), estuarine/marine habitats.
- **DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes."

STORAGE:

Store product in original container only, away from other pesticides, fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed. To prevent contamination store this product away from food or feed.

DISPOSAL:

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

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

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

GENERAL INFORMATION

ALTACOR® insecticide is a water dispersible granule that can be applied as a foliar spray, using ground application to control many important insect pests. ALTACOR® insecticide is mixed with water for application.

Apply at the recommended rates when insect populations reach locally determined economic thresholds. Consult your local extension specialist or certified crop advisor to determine appropriate threshold levels for treatment in your area.

Use sufficient water to obtain thorough, uniform coverage.

DIRECTIONS FOR USE

POME FRUITS – Crop Group 11

Spray Volume for Pome Fruits : Apply in a minimum finished spray volume of 450 L/ha by ground.

SITE	PEST	RATE GRAMS ALTACOR ® insecticide / HA	SPECIFIC DIRECTIONS
POME FRUITS Apple,	Codling moth Oriental fruit moth	145 to 215	Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control.

Crabapple, Loquat, Mayhaw, Pear, Pear oriental, Quince	Spotted tentiform leafminer	145 to 285	For optimum control of 1st generation codling moth, apply before first egg hatch (80 – 110 degree days Celsius after BIOFIX). Monitor populations and reapply 10 – 14 days later if required. For 2nd generation codling moth, timing of the first application is based on first egg hatch after establishing a new BIOFIX. Monitor populations and reapply 10 – 14 days later if required. BIOFIX is determined to be set when a first consistent moth catch has been attained within the orchard. For the determination of degree-days for codling moth, a lower and upper threshold of 10 and 31 degrees Celsius is used.	
	Western tentiform leafminer			
	European apple sawfly			
	Green fruitworm			
	Obliquebanded leafroller			For optimum control of oriental fruit moth, Apply at 1st egg hatch of the targeted generation. Monitor populations using pheromone traps and reapply 10 – 14 days later if required.
	Three-lined leafroller			For optimum control of European apple sawfly, apply at early petal fall, and repeat if needed after petal fall.
	Eyespotted bud moth			For optimum control of Green fruitworm, apply at the pink stage. Repeat if necessary at petal fall.
Redbanded Leafroller	For optimum control of over-wintering generations of oblique banded leafroller, monitor larval population in the spring, and apply when over-wintering larvae become active, from pink stage through petal fall. For summer generations, monitor adult moth flight, and apply at first egg hatch (170 – 240 degree days Celsius) after the first sustained moth catch. A repeat application approximately 10 days after the initial application may be needed to control the extended emergence of the small larvae.			
Tufted apple bud moth				
Variegated leafroller				
Apple maggot (Suppression)	215 to 285	For optimum suppression of apple maggot, begin applications when flies are first captured in the orchard, and repeat 10 – 14 days later. A third application may be made in 10-14 days if flies are still being captured.		
White Apple leafhopper (Suppression)				
Japanese beetle (Suppression)	285	For optimum suppression of Japanese beetle, apply when feeding is first observed and repeat in 10-14 days if required.		

	Dogwood borer	215 to 285	For optimum control of Dogwood borer, apply specified amount as a spray to wet application to the bottom 60 cm of tree trunk, at the first sign of dogwood borer feeding.
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RESTRICTIONS AND PRECAUTIONS: Pome Fruits

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 3 applications per season.
- Do not apply more than once every 10 days.
- Do not apply less than 5 days before harvest. Observe a 5-day PHI.
- Do not exceed a total of 645g ALTACOR® insecticide per ha per season.

GRAPES

Spray Volume for Grapes : Apply in a minimum finished spray volume of 450 L/ha by ground.

SITE	PEST	RATE GRAMS ALTACOR® insecticide/HA	SPECIFIC DIRECTIONS
GRAPES	Grape berry moth	145 to 285	Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control. Monitor populations and reapply 7 – 10 days later if required. For optimum control of the grape berry moth, begin applications after moth flight begins and prior to egg hatch.
	Climbing cutworm	215 to 285	For optimum control of the climbing cutworms, monitor bud development and the presence of cutworm damage.
	Japanese beetle (Suppression)	285	For optimum suppression of Japanese beetle, apply when feeding is first observed and repeat in 10-14 days if required.

RESTRICTIONS AND PRECAUTIONS: Grapes

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 3 applications per season.
- Do not apply more than once every 7 days.
- Do not apply less than 14 days before harvest. Observe a 14-day PHI.
- Do not exceed a total of 645g ALTACOR® insecticide per ha per season.

STONE FRUITS – Crop Group 12-09

Spray Volume for Stone Fruits: Apply in a minimum finished spray volume of 450 L/ha by ground.

SITE	PEST	RATE GRAMS	SPECIFIC DIRECTIONS
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		ALTACOR [®] insecticide/ HA	
STONE FRUITS Apricot, Apricot Japanese, Cherry, black, Cherry, Nanking, Cherry, sweet, Cherry, tart, Chokecherry, Nectarine, Peach, Plum, Plum, American, Plum, beach, Plum, Canada, Plum, cherry, Plum, chickasaw, Plum, damson, Plum, Japanese, Plum Klamath, Plum, prune, Plumcot, Prune, Sloe, Cultivars, varieties and hybrids of these commodities	Oriental fruit moth	215 to 285	Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control. For optimum control of oriental fruit moth, apply at 1st egg hatch of the targeted generation. Monitor populations using pheromone traps and reapply 7 – 10 days later if required.
	Peach twig borer	145 to 285	For optimal control of peach twig borer, use pheromone traps to monitor the male moth activity. Follow local recommendations for thresholds information. For spring/overwintering or first summer generation larvae: Apply within 7 days of first trap catch of adult male moths. For second summer generation larvae: To ensure good crop protection, continue monitoring for second brood moths until at least mid-August. If required, apply a second spray within 7 days of first trap catch of adult male moths.
	Cherry fruit fly (Suppression)		For optimum suppression of Cherry fruit fly, apply when flies are first detected in the orchard, and repeat in 10-14 days. For optimum control of over-wintering generations of obliquebanded leafroller, monitor larval population in the spring, and apply when over-wintering larvae become active, from pink stage through petal fall. For summer generations, monitor adult moth flight, and apply at first egg hatch (170 – 240 degree days Celsius) after the first sustained moth catch. A repeat application approximately 10 days after the initial application may be needed to control the extended emergence of the small larvae.
	Obliquebanded leafroller	285	For optimum control of Redbanded leafroller, apply in the pink to petal fall period. For optimum suppression of Japanese beetle, apply when feeding is first observed and repeat in 10-14 days if required.
	Three-lined leafroller		
	Redbanded leafroller		
	Japanese beetle (Suppression)		

RESTRICTIONS AND PRECAUTIONS: Stone Fruits

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 3 applications per season.
- Do not apply more than once every 7 days.
- Do not apply less than 1 day before harvest. Observe a 1-day PHI.
- Do not exceed a total of 645g ALTACOR® insecticide per ha per season.

TREE NUTS – Crop Group 14-11

Spray Volume for Tree Nuts Group : Apply in a minimum finished spray volume of 450 L/ha by ground.

SITE	PEST	RATE GRAMS ALTACOR® insecticide/ HA	SPECIFIC DIRECTIONS
<p>TREE NUTS GROUP Almond, Beechnut, Bur Oak, Butternut, Chestnut, Chinquapin, Filbert (hazelnut), Gingko, Heartnut, Hickory nut, Japanese horse-chestnut, Monkey puzzle nut, Pecan, Pine nut, Walnut, black and English, Yellowhorn, Cultivars, varieties, and/or hybrids of these commodities</p>	Codling moth	145 to 215	Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control.
	<p>Obliquebanded leafroller Three-lined leafroller</p>	145 to 285	<p>For optimum control of 1st generation codling moth, apply before first egg hatch (80-110 degree days Celsius after BIOFIX). Monitor populations and reapply 10 – 14 days later if required. For 2nd generation codling moth, timing of the first application is based on first egg hatch after establishing a new BIOFIX. Monitor populations and reapply 10 – 14 days later if required. BIOFIX is determined to be set when a first consistent moth catch has been attained within the orchard. For the determination of degree-days for codling moth, a lower and upper threshold of 10 and 31 degrees Celsius is used.</p> <p>For optimum control of over-wintering generations of obliquebanded leafroller, monitor larval population in the spring, and apply when over-wintering larvae become active, from pink stage through petal fall. For summer generations, monitor adult moth flight, and apply at first egg hatch (170 – 240 degree days Celsius) after the first sustained moth catch. A repeat application approximately 10 days after the initial application may be needed to control the extended emergence of the small larvae.</p> <p>For second summer generation larvae: To ensure good crop protection, continue monitoring for second brood moths until at least mid-August. If required, apply a second spray within 7 days of first trap catch of adult male moths.</p>

RESTRICTIONS AND PRECAUTIONS: Tree Nuts

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 3 applications per season.
- Do not apply more than once every 7 days.
- Do not apply less than 10 days before harvest. Observe a 10-day PHI.
- Do not exceed a total of 645g ALTACOR® insecticide per ha per season.

FOR USE ON LOW GROWING BERRY - CROP SUBGROUP 13-07G

Spray Volume for Low Growing Berry: Apply in a minimum finished spray volume of 450 L/ha.

SITE	PEST	RATE GRAMS ALTACOR® insecticide/ HA	SPECIFIC DIRECTIONS
Blueberry, lowbush, Bearberry, Bilberry, Cloudberry, Cranberry, Lingonberry, Muntries, Partridgeberry, Strawberry Cultivars, varieties and/or hybrids of these			Begin applications when treatment thresholds have been reached.
	Obliquebanded leafroller	215 to 285	Monitor populations and reapply a minimum of 7 days later if required.
	Three-lined leafroller		Thorough coverage is important to obtain optimum control.
	Climbing cutworm Japanese beetle (suppression)		For optimum suppression of Japanese beetle, apply when feeding is first observed and repeat in 10-14 days if required.

RESTRICTIONS AND PRECAUTIONS: Low Growing Berry

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 3 applications per season.
- Do not apply more than once every 7 days.
- Do not apply less than 1 day before harvest. Observe a 1-day PHI.
- Do not exceed a total of 645g ALTACOR® insecticide per ha per season.

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

The DIRECTIONS FOR USE for this product for the uses described below were developed by persons other than FMC of Canada Ltd. FMC of Canada Ltd. itself makes no representation or warranty with respect to product performance (efficacy) and crop tolerance (phytotoxicity) of this product when used on the crops listed. Accordingly, the Buyer and User assume all liability arising, and agree to hold FMC of Canada Ltd. harmless from any claims based on efficacy or phytotoxicity in connection with these uses.

FOR USE ON CANEBERRIES – CROP SUBGROUP 13-07A

Spray Volume for Caneberries: Apply in a minimum finished spray volume of 500 L/ha.

SITE	PEST	RATE GRAMS ALTACOR® insecticide/ HA	SPECIFIC DIRECTIONS
<p>CANEBERRIES SUBGROUP</p> <p>Blackberry (including Andean blackberry, arctic blackberry, bingleberry, black satin berry, boysenberry, brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyenne blackberry, common blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, evergreen blackberry, Himalayaberry, hullberry, lavacaberry, loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, mora, mures deronce, nectarberry, Northern dewberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, Southern dewberry, tayberry, youngberry, zarzamora, and cultivars, varieties and/or hybrids of these);</p> <p>Loganberry;</p> <p>Raspberry, black and red;</p> <p>Wild raspberry;</p> <p>Cultivars, varieties and/or hybrids of these</p>	<p>Raspberry cane borer</p> <p>Raspberry crown borer</p>	<p>215 to 285</p>	<p>Apply to first-instar when they are actively feeding in the cambium, before they tunnel into the root, crown or canes.</p> <p>Thorough coverage is important to obtain optimum control.</p>

RESTRICTIONS AND PRECAUTIONS: Caneberries

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 3 applications per season.
- Do not apply more than once every 14 days.
- Do not apply less than 3 days before harvest. Observe a 3-day PHI.
- Do not exceed a total of 645g ALTACOR® insecticide per ha per season.

FOR USE ON BUSHBERRIES – CROP SUBGROUP 13-07B

Spray volume for Bushberries: Apply a minimum finished spray volume of 200 L/Ha by ground

SITE	PEST	RATE GRAMS ALTACOR® insecticide/ HA	SPECIFIC DIRECTIONS
<p>BUSHBERRIES SUBGROUP</p> <p>Blueberry, highbush Blueberry, lowbush Current, black Current, red Elderberry Gooseberry Huckleberry Aronia berry Buffalo currant Chilean guava European Barberry Highbush cranberry Honeysuckle, edible Juneberry Jostaberry Lingonberry Native current Salal Sea buckthorn</p> <p>Cultivars, varieties and/or hybrids of these</p>	<p>Cranberry fruitworm</p> <p>Cherry fruitworm</p> <p>Obliquebanded leafroller</p> <p>Three-lined leafroller</p> <p>Lesser appleworm</p> <p>Redstriped fireworm</p> <p>Bleuberry spanworm</p> <p>Japanese beetle (suppression)</p>	<p>215 to 285</p>	<p>Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimal control. Monitor populations and reapply a minimum of 7 days later if required.</p> <p>A single application may not control cherry fruitworm or cranberry fruitworm. Either a second application of ALTACOR® insecticide, or a subsequent application of a different pest control product registered for this use may be required for control of Cherry fruitworm or cranberry fruitworm.</p>

RESTRICTIONS AND PRECAUTIONS: Bushberries

- For any of the pests listed use the high rate under heavy pest pressure
- Do not make more the 3 applications per season
- Do not apply more than once every 7 days
- Do not apply more than 1 day before harvest, observe a 1 day PHI
- Do not exceed more than 645g ALTACOR® insecticide per ha per season.

FOR USE ON CRANBERRIES (Ground application)

Spray Volume for Cranberries: Apply in a minimum finished spray volume of 200 L/ha by ground.

SITE	PEST	RATE GRAMS ALTACOR® insecticide/ HA	SPECIFIC DIRECTIONS
CRANBERRIES	Cranberry fruitworm Sparganothis fruitworm Blackheaded fireworm	145 to 285	Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control.

RESTRICTIONS AND PRECAUTIONS: Cranberries

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 3 applications per season.
- Do not apply more than once every 7 days.
- Do not apply less than 1 day before harvest. Observe a 1-day PHI.
- Do not exceed a total of 645g ALTACOR™ insecticide per ha per season.

FOR USE ON CRANBERRIES VIA CHEMIGATION:

Spray Volume for Cranberries via chemigation: Apply in a minimum spray volume of 3000 L/ha.

SITE	PEST	RATE GRAMS ALTACOR® insecticide/ HA	SPECIFIC DIRECTIONS
CRANBERRIES	Sparganothis fruitworm Blackheaded fireworm	285	Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control.

RESTRICTIONS AND PRECAUTIONS: Cranberries via chemigation

- Do not make more than 2 applications per season by chemigation
- Do not exceed a total of 570 grams of ALTACOR® insecticide per ha per season.
- Reapply if monitoring indicates it is necessary.
- The minimum interval between applications is 7 days.
- Do not harvest less than 1 day after application. Observe a 1-day PHI.

Directions for Chemigation:

DO NOT apply ALTACOR® insecticide by chemigation to other crops listed on this label.

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

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

Equipment Requirements:

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

Precautions:

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

MIXING INSTRUCTIONS:

Spray equipment must be clean and free of previous pesticide deposits before applying ALTACOR® insecticide. Fill spray tank 1/4 to 1/2 full of water. Add ALTACOR® insecticide directly to spray tank. Mix thoroughly to fully disperse the insecticide; once dispersed continued agitation is required. Use mechanical or hydraulic means; do not use air agitation. Spray mix should not be stored overnight in spray tank.

SPRAYER CLEANUP:

Prior to application, start with clean, well maintained application equipment. Immediately following application, thoroughly clean all spray equipment to reduce the risk of forming hardened deposits which might become difficult to remove.

Drain spray equipment. Thoroughly rinse sprayer and flush hoses, boom and nozzles with clean water. Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment. Do not clean near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

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.

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

Chemigation: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) fine classification. Applications **MUST** be conducted **WITHOUT** the use of end guns.”

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 (meters) required for the protection of			
			Freshwater habitat of depths:		Estuarine/Marine Habitats of depths:	
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m
Airblast	Pome fruit, grapes, stone fruit, bushberries	Early growth stage	10	4	1	0
		Late growth stage	5	2	1	0
Field sprayer	Cranberries, Bushberries, and Low growing berries		1	1	1	0
Chemigation	Cranberries		1	1	1	0

RESISTANCE-MANAGEMENT RECOMMENDATIONS:

For resistance management, please note that ALTACOR® insecticide contains a Group 28 insecticide. Any insect population may contain individuals naturally resistant to ALTACOR® insecticide and other Group 28 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 ALTACOR® insecticide or other Group 28 insecticides with different groups that control the same pests in a field.
- Make no more than 2 successive applications per generation to the same insect species on a crop. The following application to the target pest(s) must be with an effective product with a different mode of action.
- 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 FMC of Canada Ltd. at 1-833-362-7722

NOTICE TO USER:

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

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