

352-730

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

Richard Carver, PhD  
DuPont Crop Protection  
Stine-Haskell Research Center  
P.O. Box 30  
Newark, DE 19714

FEB 06 2014

Dear Dr. Carver:

Subject: Amendment to update crop group 12-12, stone fruit, and to change the PHI for papaya and passionfruit  
EPA Registration No. 352-730  
Decision Numbers: 477972, 477971, 477970  
Submission Date: February 22, 2013

The label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy of the label is enclosed for your records. Please submit two copies of your final printed labeling before you release the product for shipment. If you have any questions regarding these labels, please contact Dr. Jennifer Urbanski at 703-347-0156 or [urbanski.jennifer@epa.gov](mailto:urbanski.jennifer@epa.gov).

Sincerely yours,

A handwritten signature in black ink that reads "Venus Eagle".

Venus Eagle  
Product Manager (01)  
Insecticide-Rodenticide Branch  
Registration Division (7505P)

Enclosure- Stamped Label



# DuPont™ Altacor®

**INSECT CONTROL  
WITH THE ACTIVE INGREDIENT RYNAXYPYR®**

GROUP	28	INSECTICIDE
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ALTACOR® is a water dispersible granule.

<i>Active Ingredient</i>	<i>By Weight</i>
Chlorantraniliprole	
3-Bromo-N-[4-chloro-2-methyl-6-[(methylamino)carbonyl]phenyl]-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxamide	35.0%
<i>Other Ingredients</i>	65.0%
TOTAL	100.0%

EPA Reg. No. 352-730  
Nonrefillable Container

Net: \_\_\_\_\_  
OR

Refillable Container  
Net: \_\_\_\_\_

E. I. du Pont de Nemours and Company  
1007 Market Street  
Wilmington, DE 19898  
Phone: 1-800-441-7515 (Toll Free)

ACCEPTED  
FEB 06 2014  
Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended, for the  
pesticide registered under:

EPA Est. No. \_\_\_\_\_

EPA. Reg. No: 352-730

Not for sale, sale into, distribution and/or use in Nassau, Suffolk, Kings, and Queens counties of New York State.

### PRECAUTIONARY STATEMENTS KEEP OUT OF REACH OF CHILDREN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

#### FIRST AID

For questions regarding emergency medical treatment, you may contact 1-800-441-3637 for information.

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

When used as directed this product does not present a hazard to humans or domestic animals.

#### PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:  
Long-sleeved shirt and long pants.  
Shoes plus socks.

After the product has been diluted in accordance with label directions for use, shirt, pants, socks, and shoes are sufficient Personal Protective Equipment. 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.

#### USER SAFETY RECOMMENDATIONS

**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.

## ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic invertebrates, oysters, and shrimp. Do not apply directly to water. Drift and runoff may be hazardous to aquatic organisms in water adjacent to use sites.

### Surface Water Advisory-

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of chlorantraniliprole from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours..

### Ground Water Advisory-

This chemical has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

### RESTRICTIONS

- This product is only for commercial use.
- Not for residential use.
- Not for use on ornamental plants or plants being grown for ornamental purposes.
- May be used on crops on this label grown for seed production.
- Do not use in greenhouses.
- Do not apply DuPont™ ALTACOR® through any irrigation system unless specified in the crop section of this label or in supplemental labeling.

#### New York State Only:

The following restrictions are required to permit use of ALTACOR® Insect Control in the State of New York:

- This product may not be applied within 100 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).
- Aerial application of this product is prohibited.
- Not for sale, sale into, distribution and/or use in Nassau, Suffolk, Kings, and Queens counties of New York State.

## AGRICULTURAL USE REQUIREMENTS

ALTACOR® insect control must be used only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on the label about personal protective equipment, restricted-entry interval, and notification to workers (as applicable).

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

ALTACOR® insect control must be used only in accordance with directions on this label or in separate DuPont supplemental labeling, as a result of new EPA approvals.

ALTACOR® insect control is a water dispersible granule that can be applied as a foliar spray, using ground or aerial application to control listed insects. ALTACOR® is mixed with water for application.

ALTACOR® is a member of the anthranilic diamide class of insecticides with a novel mode of action acting on insect ryanodine receptors. Although ALTACOR® has contact activity, it is most effective through ingestion of treated plant material. After exposure to ALTACOR®, affected insects will rapidly stop feeding, become paralyzed, and typically die within 1 - 3 days. Time applications to the most susceptible insect pest stage, typically at egg hatch and/or newly hatched larvae, before populations reach damaging levels. For best results, applications must be made at or before egg deposition.

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## **INTEGRATED PEST MANAGEMENT**

DuPont supports the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an IPM program, which can include biological, cultural, and genetic practices, aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, rotation of insecticides with different modes-of-action, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop or site systems in your area.

## **SCOUTING**

Monitor insect populations to determine whether or not there is a need for application of DuPont™ ALTACOR® based on locally determined economic thresholds. More than one treatment of ALTACOR® may be required to control a population of pests.

## **RESISTANCE MANAGEMENT**

For resistance management, ALTACOR® is a Group 28 Insecticide. Repeated and exclusive use of ALTACOR® (chlorantraniliprole, belonging to the anthranilic diamide class of chemistry), or other Group 28 Insecticide may lead to the buildup of resistant strains of insects in some crops.

Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, this product may be used as part of resistance management strategies established for the use area. These strategies may include incorporation of cultural and biological control practices, alternation of mode-of-action classes of insecticides on succeeding generations and targeting the most susceptible life stage. Consult your local or state agricultural authorities for details.

Unless directed otherwise in the specific crop/pest sections of this label, the best practices are to follow these instructions to delay the development of insecticide resistance:

- Apply ALTACOR® or other Group 28 insecticides using a “treatment window” approach to avoid exposure of successive insect pest generations to the same mode of action.
- A “treatment window” is defined as the period of residual activity provided by single or sequential applications of products with the same mode of action. This “treatment window” should not exceed approximately the length of one generation of the target pest.
- Within the “Group 28 treatment window”, make no more than 3 applications of ALTACOR® or other Group 28 insecticides within a single generation of the target pest on a crop.
- Following a “Group 28 treatment window”, rotate to a treatment window of effective products with a different mode of action. This “Non-Group 28 Window” should approximate the duration of one generation of the target pest.
- Target the most susceptible insect life stages, whenever possible.

If resistance to ALTACOR® develops in your area, ALTACOR® or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternate method of control for your area. For additional information on insect resistance monitoring, visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.irc-online.org>.

## **APPLICATION**

Apply at the specified rates when insect populations reach locally determined economic thresholds. Consult the cooperative extension service, professional consultants or other qualified authorities to determine appropriate threshold levels for treatment in your area.

Apply follow-up treatments of ALTACOR®, as specified, to keep pest populations within threshold limits. Refer to the Resistance Management section of this label for further guidance on follow-up treatments. See individual crop sections of this label for specific minimum spray interval.

Use sufficient water to obtain thorough, uniform coverage. Because ALTACOR® is most effective through ingestion of treated plant material, thorough spray coverage is essential for optimum control of targeted pest insects. Using increased water volumes will typically result in better spray coverage, especially under adverse conditions such as dry, hot weather or dense plant foliage. Apply ALTACOR® using ground or aerial application equipment. For ground application use the following directions unless otherwise specified in separate crop sections of this label: use a minimum of 30 gallons per acre (gpa) of water. ALTACOR® may be applied by overhead chemigation on certain crops; for overhead chemigation applications see, “APPLICATION BY CHEMIGATION” section of this label for guidance. For aerial application use the following directions unless otherwise specified in this label or in supplemental labeling: use a minimum of 10 gallons per acre (gpa) of water. For potato and cotton: for aerial application use a minimum of 5 gallons per acre (gpa) of water; for ground application use a minimum of 10 gallons per acre of water.

In some situations where coverage is difficult to achieve such as closed canopy, dense foliage, plants with waxy leaf surfaces, or less than optimum application equipment, an adjuvant may improve performance. Use only adjuvant products that are

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labeled for agricultural use and follow the directions on the manufacturer's label. Always conduct a premix test for compatibility. Use a proven adjuvant that does not affect foliage and/or fruit finish. Refer to specific crop sections of this label for additional adjuvant guidance.

Use of adjuvants is restricted on cotton and prickly pear cactus - see those specific crop instructions in the following crop tables.

### **CROP ROTATION**

Crops on this label and the following crops or crop groups may be planted immediately following harvest: Artichoke, globe; Asparagus; Brassica (Cole) Leafy Vegetables (Crop Group 5); Cereal Grains (Crop Group 15); Corn (field, pop, seed, and sweet); Cucurbit Vegetables (Crop Group 9); Forage, Fodder, and Straw of Cereal Grains (Crop Group 16); Fruiting Vegetables (Crop Group 8); Grass Forage, Fodder and Hay (Crop Group 17); Herbs subgroup (Crop Group subgroup 19A); Hops; Leafy Vegetables (non-brassica, Crop Group 4); Legume Vegetables (Crop Group 6); Foliage of Legume Vegetables (Crop Group 7); Spearmint, Peppermint, Nongrass Animal Feeds (Forage, Fodder, Straw, and Hay Crop Group 18); Okra; Bulb Vegetables (Crop Group 3-07); Peanuts; Oilseeds (Crop Group 20); Rice; Root and Tuber Vegetables (Crop Group 1); Spice subgroup (Crop Group subgroup 19B); Strawberries; Sugarcane; Tobacco: and Tops of Root and Tuber Vegetables (Crop Group 2).

All other crops cannot be planted until 12 months after the last application of DuPont™ ALTACOR®.

### **APPLICATION BY CHEMIGATION – CRANBERRY**

#### **Instructions for the Use of ALTACOR® in Overhead Sprinkler Chemigation Systems.**

Types of Chemigation Systems: ALTACOR® may be applied only through overhead sprinkler irrigation systems. Overhead irrigation systems include the following; center pivot, end tow, hand move, lateral move, side roll, solid set and wheel line. The irrigation system used must provide uniform water distribution.

#### **Directions for Chemigation:**

##### **Preparation**

A pesticide tank is recommended for the application of ALTACOR® in chemigation systems. Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. With the mix tank ¼ to 1/2 full with water and the agitator running, measure the required amount of ALTACOR® and add it to the tank. Then add additional water to bring your total pesticide mixture up to the desired volume for your application.

Note: Always add the ALTACOR® to water, never put ALTACOR® into a dry tank or other mixing equipment without first adding water.

See "Tank Mixing Sequence" section of the container label for tank mixing sequence. Continue to agitate the mixture throughout the application process. Use mechanical or hydraulic agitation, do not use air agitation.

##### **Injection Into Chemigation Systems**

Inject the proper amount of ALTACOR® into the irrigation water flow using a positive displacement injection pump.

Injection should occur at a point in the main irrigation water flow to ensure thorough mixing with the irrigation water. For continuously moving systems, inject the solution containing ALTACOR® into the irrigation water line continually and uniformly throughout the irrigation cycle. Apply in no more than 0.2 inches of water per acre. For overhead sprinkler systems that are stationary, add the solution containing ALTACOR® to the irrigation water line and apply no more than 0.2 inches of water per acre.

##### **Uniform Water Distribution**

The irrigation system used for application of ALTACOR® must provide for uniform distribution of ALTACOR® treated water. Non-uniform distribution can result in crop injury, lack of effectiveness or illegal pesticide residues in or on the crop being treated. Ensure the irrigation system is calibrated to uniformly distribute the chemigation application to the crop. Contact the equipment manufacturer, the local University Extension agent or other experts if you have questions about achieving uniform distribution of the application.

##### **Equipment Calibration**

Calibrate the irrigation system and injector before applying ALTACOR®. Calibrate the injection pump while the system is running using the expected irrigation rate. If you have questions about calibration, you should contact your state extension service specialists, equipment manufacturer or other experts.

##### **Monitoring of Chemigation Applications**

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of a responsible person, shall shut the system down and make necessary adjustments should the need arise. Wear the personal protective equipment as defined in the PPE section of the label for applicators and other handlers when making adjustments or repairs on the chemigation system when ALTACOR® is in the irrigation water.

### Required System Safety Devices

Do not connect any irrigation system used for pesticide applications to a public water system unless the pesticide label prescribed safety devices are in place. Public water system means a system for the provision to the public of piped water for human consumption, if such a system has at least 15 service connections or regularly serves an average of at least 25 individuals at least 60 days out of the year.

1. The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump)

### SPRAY PREPARATION

Spray equipment must be clean and free of previous pesticide deposits before applying DuPont™ ALTACOR®. Fill spray tank 1/4 to 1/2 full of water. Add ALTACOR® 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. Do not store spray mix solutions overnight in spray tank. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

**Compatibility** - Since formulations may be changed and new ones introduced, premix a small quantity of a desired tank mix and observe for possible adverse changes (settling out, flocculation, etc.). Avoid mixtures of several materials and very concentrated spray mixtures.

This product can be mixed with pesticide products labeled for use on crops on this label in accordance with the most restrictive of label limitations and precautions. Do not exceed labeled dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing.

**Tank Mixing Sequence** - Add different formulation types in the sequence indicated below\*. Allow time for complete mixing and dispersion after addition of each product.

1. Water soluble bag.
2. ALTACOR® and other water dispersible granules.
3. Wettable powders.
4. Water based suspension concentrates
5. Water-soluble concentrates.
6. Oil based suspension concentrates.
7. Emulsifiable concentrates.
8. Adjuvants, surfactants, and oils
9. Soluble fertilizers.
10. Drift retardants.

\* Unless otherwise specified by manufacturer directions for use or by local experience.

### SPRAY TANK CLEANOUT

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.

Crops	Insects	DuPont™ ALTACOR® Rate Per Acre		Last Application Days to Harvest	REI (Hours)
		Lb A.I.	Ounces Product		
Banana/Plantain	Leafrollers	0.066 - 0.099	3.0 - 4.5	1	4
<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year.                      The minimum interval between treatments is 10 days.                      Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.                      Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.</p>					
Bushberry subgroup (Berry and small fruit crop group). Including:	Cherry fruitworm Cranberry fruitworm Omnivorous leafroller Raspberry crown borer	0.066 - 0.099	3.0 - 4.5	1	
<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year.                      The minimum interval between treatments is 7 days. Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.                      Spray Volume: Thorough coverage is essential to achieve best results.                      Select a spray volume appropriate for the size of trees or plants and density of foliage.</p>					
Large shrub/tree subgroup (Berry and small fruit crop group). Including:	Omnivorous leafroller Raspberry crown borer	0.066 - 0.099	3.0 - 4.5	1	4
	<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year.                      The minimum interval between treatments is 7 days. Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.                      Spray Volume: Thorough coverage is essential to achieve best results.                      Select a spray volume appropriate for the size of trees or plants and density of foliage.</p>				
Low growing berry subgroup except cranberry and strawberry (Berry and small fruit crop group). Including:	Cherry fruitworm Cranberry fruitworm Omnivorous leafroller Raspberry crown borer	0.066 - 0.099	3.0 - 4.5	1	4
	<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year.                      The minimum interval between treatments is 7 days. Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.                      Spray Volume: Thorough coverage is essential to achieve best results.                      Select a spray volume appropriate for the size of trees or plants and density of foliage.</p>				
Cranberry	Blackheaded fireworm* Cherry fruitworm Cranberry fruitworm Green spanworm Omnivorous leafroller Raspberry crown borer Sparganothis fruitworm	0.066 - 0.099	3.0 - 4.5	1	4
<p>Make no more than 3 applications per season.                      Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year.                      The minimum interval between treatments is 7 days.                      Do not apply less than 20 gal water per acre by ground application. Do not apply less than 5 gal water per acre by aerial application.                      Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.                      * Blackheaded fireworm - use high application rate for moderate to heavy infestations.                      ALTACOR® may be applied to cranberry by overhead chemigation. For specific guidance see label section titled APPLICATION BY CHEMIGATION - CRANBERRY</p>					

Crops	Insects	DuPont™ ALTACOR® Rate Per Acre		Last Application Days to Harvest	REI (Hours)
		Lb A.I.	Ounces Product		
Caneberry subgroup (Berry and small fruit crop group). Including: Blackberry; loganberry; red and black raspberry cultivars and/or hybrids of these	Omnivorous leafroller Raspberry crown borer*	0.066 - 0.099	3.0 - 4.5	3	4
	<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 14 days.                      Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.                      Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.                      *Raspberry crown borer - For control of Raspberry Crown Borer, apply ALTACOR® as a directed foliar application, using a spray volume of 50 to 100 gallons/acre, directed to base of canes. Apply in early fall right after egg hatch or in early spring when larvae first become active and start to feed on the crown of the plant. Time the application when rainfall ( minimum of 1/2 inch) is forecast or when overhead irrigation (minimum of 1/2 inch water per acre) can be used to move ALTACOR® into the plant root zone in order to control raspberry crown borer.</p>				
Small fruit vine climbing subgroup except fuzzy kiwifruit and grape. (Berry and small fruit crop group). Including: Amur river grape; gooseberry; kiwifruit, hardy; maypop; schisandra berry; cultivars, varieties, and/or hybrids of these	Omnivorous leafroller Raspberry crown borer	0.066 - 0.099	3.0 - 4.5	1	
	<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 7 days.                      Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.                      Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.</p>				
Cacao	Cacao pod borer	0.066 - 0.099	3.0 - 4.5	1	
	<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 7 days.                      Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.                      Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.</p>				
Citrus, Including: Calamondin; citrus citron; citrus hybrids (includes chironja, tangelo, tangor); grapefruit; kumquat; lemon; lime; mandarin (tangerine); orange, sour; orange, sweet; pummelo; Satsuma mandarin	Citrus leafminer Citrus peelminer Omnivorous leafroller	0.066 - 0.099	3.0 - 4.5	1	
	<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 7 days.                      Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.                      Do not apply less than 30 gal water per acre.                      For best results apply 100 -150 gal water per acre.                      Where higher spray volumes are used, apply a higher ALTACOR® rate in the specified rate range.</p>				
Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; Japanese summer Mediterranean mandarin; Mount white lime; New Guinea wild lime; Russell River lime; Sweet lime; Tachibana orange; Tahiti lime; Trifoliate orange; Uniq fruit; cultivars, varieties, and/or hybrids of these	Citrus leafminer Citrus peelminer Omnivorous leafroller	0.066 - 0.099	3.0 - 4.5	1	
	<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 7 days.                      Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.                      Do not apply less than 30 gal water per acre.                      For best results apply 100 -150 gal water per acre.                      Where higher spray volumes are used, apply a higher ALTACOR® rate in the specified rate range.</p>				
Coffee	Coffee leafminer	0.066 - 0.099	3.0 - 4.5	7	
	<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 14 days.                      Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.                      Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.</p>				



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Crops	Insects	DuPont™ ALTACOR® Rate Per Acre		Last Application Days to Harvest	REI (Hours)
		Lb A.I.	Ounces Product		
Figs	Navel orangeworm	0.066 - 0.099	3.0 - 4.5	1	4
	<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 7 days.            Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.            Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.</p>				
Grape	Grape berry moth Grape leafroller	0.044 - 0.099	2.0 - 4.5	14	
	Climbing cutworm European grapevine moth Japanese beetle (adult)* Omnivorous leafroller Western grapeleaf skeletonizer	0.066 - 0.099	3.0 - 4.5		
	<p>* Japanese beetle (adult) - use the high application rate for moderate to heavy infestations. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year.            Make no more than 4 applications per season. The minimum interval between treatments is 7 days.            Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.            Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.            Where higher spray volumes are used, apply a higher ALTACOR® rate in the specified rate range.</p>				
Olives	American plum borer European grapevine moth	0.066 - 0.099	3.0 - 4.5	1	
	<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 7 days.            Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.            Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.</p>				
Persimmons	Leafrollers	0.066 - 0.099	3.0 - 4.5	1	
	<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 7 days.            Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.            Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.</p>				
Pome Fruits, Including: Apple; Crabapple; Loquat; Mayhaw; Pear; Pear, oriental; Quince	<b>East of the Rocky Mountains</b> Green fruitworm Spotted tentiform leafminer	0.055 - 0.088	2.5 - 4.0	5	
	Apple maggot* Codling moth** Eastern apple sawfly European corn borer Obliquebanded leafroller*** Oriental fruit moth Plum curculio* Redbanded leafroller Tufted apple bud moth Variegated leafroller White apple leafhopper*	0.055 - 0.099	2.5 - 4.5		
	<b>West of the Rocky Mountains</b> Green fruitworm Spotted tentiform leafminer	0.055 - 0.088	2.5 - 4.0		
	Apple maggot* Codling moth** Eastern apple sawfly European corn borer Obliquebanded leafroller*** Oriental fruit moth Pandemis leafroller Plum curculio* Redbanded leafroller Tufted apple bud moth Variegated leafroller White apple leafhopper*	0.066 - 0.099	3.0 - 4.5		
	<p>Make no more than 4 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 10 days.  <b>Spray Volume:</b> Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees and density of foliage.            Do not apply dilute applications of more than 200 gal water per acre. For best results apply 100 - 150 gal water per acre.            Do not apply less than 30 gal water per acre by ground.</p>				
<p>cont'd next page</p>					

Crops	Insects	DuPont™ ALTACOR® Rate Per Acre		Last Application Days to Harvest	REI (Hours)
		Lb A.I.	Ounces Product		
Pome Fruits cont'd	<p>Effect on beneficial insects - Beneficial insects such as predators or parasitoids are an important component in pome fruit IPM. ALTACOR® has demonstrated low to no impact on the predator <i>Deraeocoris brevis</i> and key parasitoids, <i>Aphelinus mali</i>, <i>Aphytis</i> spp., and <i>Encarsia</i> spp. This low impact is very important in preservation of biological control of pear psylla, San Jose scale and wooly apple aphid when ALTACOR® is applied early season for control of first generation codling moth.</p> <p>* Suppression only.</p> <p>** <b>Codling Moth Larvae</b> <b>Application Timing:</b> For each generation, make first application prior to egg hatch. Each application provides 10 to 17 days of protection depending on intensity of codling moth pressure and rate of fruit growth. Use pheromone trap catches, and local degree day based spray timing advisories to determine the development of each generation.</p> <p><b>Apples - West of the Rocky Mountains:</b> Use the 3.0 oz/acre rate for low pressure infestations and make repeat applications on a 14 day schedule. For high pressure infestations or for orchards with a history of significant codling moth damage, apply ALTACOR® at 4.0 to 4.5 ounces per acre. Make repeat applications on a 10 to 17 day schedule. For best results in high pressure orchards, use a comprehensive management program involving ovicide treatments followed by properly timed larvacide applications at high labeled rates and shortened retreatment intervals.</p> <p>When using ALTACOR® in an integrated program with other codling moth insecticides, make sure the retreatment schedule is consistent with the period of effectiveness for each product used.</p> <p><b>Pears - West of the rocky Mountains:</b> Apply ALTACOR® on a 14 to 17 day schedule. For low pressure infestations use the 3.0 oz rate.</p> <p>For high pressure infestations or for orchards with a history of significant codling moth damage, apply ALTACOR® at 4.0 to 4.5 oz/acre.</p> <p>***<b>Obliquebanded Leafroller</b> For overwintering larvae, apply in the spring (pink to petal fall stage) at first sign of active feeding. For summer generation apply just prior to or at the beginning of egg hatch. Leafroller feeding stops after ingestion of treated foliage, however, during periods of cold weather when leafrollers are inactive, it may take several days to achieve complete control.</p>				4
Azarole; Medlar; Tejocote;  cultivars, varieties, and/or hybrids of these	<b>East of the Rocky Mountains</b> Green fruitworm Spotted tentiform leafminer	0.055 - 0.088	2.5 - 4.0	5	
	Apple maggot* Eastern apple sawfly European corn borer Obliquebanded leafroller** Oriental fruit moth Plum curculio* Redbanded leafroller Tufted apple bud moth Variegated leafroller White apple leafhopper*	0.055 - 0.099	2.5 - 4.5		
	<b>West of the Rocky Mountains</b> Green fruitworm Spotted tentiform leafminer	0.055 - 0.088	2.5 - 4.0		
	Apple maggot* Eastern apple sawfly European corn borer Obliquebanded leafroller** Oriental fruit moth Pandemis leafroller Plum curculio* Redbanded leafroller Tufted apple bud moth Variegated leafroller White apple leafhopper*	0.066 - 0.099	3.0 - 4.5		
	<p>Make no more than 4 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 10 days.</p> <p><b>Spray Volume:</b> Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees and density of foliage.</p> <p>Do not apply dilute applications of more than 200 gal water per acre. For best results apply 100 – 150 gal water per acre.</p> <p>Do not apply less than 30 gal water per acre by ground.</p> <p>Effect on beneficial insects - Beneficial insects such as predators or parasitoids are an important component in pome fruit IPM. ALTACOR® has demonstrated low to no impact on the predator <i>Deraeocoris brevis</i> and key parasitoids, <i>Aphelinus mali</i>, <i>Aphytis</i> spp., and <i>Encarsia</i> spp. This low impact is very important in preservation of biological control of pear psylla, San Jose scale and wooly apple aphid when ALTACOR® is applied early season for control of first generation codling moth.</p> <p>* Suppression only.</p> <p>**<b>Obliquebanded Leafroller</b> For overwintering larvae, apply in the spring (pink to petal fall stage) at first sign of active feeding. For summer generation apply just prior to or at the beginning of egg hatch. Leafroller feeding stops after ingestion of treated foliage, however, during periods of cold weather when leafrollers are inactive, it may take several days to achieve complete control.</p>				

Crops	Insects	DuPont™ ALTACOR® Rate Per Acre		Last Application Days to Harvest	REI (Hours)
		Lb A.I.	Ounces Product		
Pomegranates	Navel orangeworm Omnivorous leafroller	0.066 - 0.099	3.0 - 4.5	1	4
	Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 7 days. Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage. Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.				
Prickly Pear Cactus	Prickly pear moth	0.066 - 0.099	3.0 - 4.5	1	
	Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per crop.				
Stone Fruits, Including: Apricot; Cherry, sweet; Cherry, tart; Nectarine; Peach; Plum; Plum, Chickasaw; Plum, Damson; Plum, Japanese; Plumcot; Prune (fresh) Apricot, Japanese; Capulin; Cherry, black; Cherry Nanking; Jujube, Chinese; Plum, American; Plum, beach; Plum, Canada; Plum, cherry; Plum, Klamath; Sloe	Cherry fruit fly* Codling moth Katydid (nymphs) Obliquebanded leafroller Omnivorous leaf roller Oriental fruit moth Peach twig borer** Tufted apple bud moth	0.066 - 0.099	3.0 - 4.5	10	
	Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 7 days. A lower application rate of 2.0-3.0 oz product per acre can be used in short interval (7-10 days) spray program. Do not apply dilute applications of more than 200 gal water per acre. For best results apply 100-150 gal water per acre. Do not apply less than 30 gal water per acre by ground. * Suppression only. ** <b>Peach twig borer</b> - ALTACOR® may be used throughout the growing season, however for dormant through delayed dormant applications: Use higher rates for dormant application and lower rates for delayed dormant. Applications may be made with an EPA registered dormant oil; for specific directions on use of oil consult manufacturer's label. For best performance, apply using ground equipment. For "May spray" applications to the summer generation: Make applications at peak moth flight (timed at or before peak egg lay). Higher rates in the labeled rate range may be needed for high infestations levels and large, dense foliage trees.				
Tea (HI & SC only)	Leafrollers	0.066 - 0.099	3.0 - 4.5	3	
	Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. The minimum interval between treatments is 14 days. Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage. Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.				
Tree Nuts, Including: Almond; Beech nut; Brazil nut; Butternut; Cashew; Chestnut; Chinquapin; Filbert (hazelnut); Hickory nut; Macadamia (bush) nut; Pecan; Pistachio; Walnut, black and English (Persian)	Hickory shuckworm Pecan nut casebearer	0.044 - 0.099	2.0 - 4.5	10	
	Codling moth Navel orange worm Oblique banded leafroller Oriental fruit moth Peach twig borer	0.066 - 0.099	3.0 - 4.5		
Make no more than 4 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year. Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage. Do not apply less than 30 gal water per acre. For best results apply 100 -150 gal water per acre. Where higher spray volumes are used, apply a higher ALTACOR® rate in the specified rate range. The minimum interval between treatments is 7 days. <b>Codling moth</b> - (Walnut) Make initial application at or before peak egg lay for targeted generation. Depending on level of infestation reapply 14-21 days later as needed. Use higher rates and ground application equipment to achieve thorough coverage <b>Navel orange worm</b> (Hullsplit application timing) - Make an application at 1-5% hull-split timing; make a second application approximately 10 - 14 days later. Depending on level of pest infestation, use of higher rates in the labeled rate range and multiple applications may be needed. <b>Peach twig borer</b> - ALTACOR® may be used throughout the growing season, however for dormant applications: ALTACOR® may be tank mixed with an EPA registered dormant oil; for specific recommendations on use of oil, consult manufacturers specific oil labels for precautions and restrictions regarding the use of oils in tree nut crops. For best performance apply with ground equipment to achieve thorough uniform coverage of all scaffolds and limbs. The high rate is recommended for applications made at early to mid-dormant timing. <b>Peach twig borer</b> - For spring application to overwintering generation: Make application at late dormant (just prior to bud break) to early bloom. For "May spray" applications to the summer generation: Make applications at peak moth flight (timed at or before peak egg lay). Higher rates in the labeled rate range may be needed for high infestations levels and large, dense foliage trees.					

Crops	Insects	DuPont™ ALTACOR® Rate Per Acre		Last Application Days to Harvest	REI (Hours)
		Lb A.I.	Ounces Product		
Tropical fruits: acerola; atemoya; avocado; biriba; black sapote; canistel; cherimoya; custard apple; ilama; feijoa; guava; jaboticaba; longan; lychee; mamey sapote; mango; papaya; passionfruit; pineapple; pulasan; rambutan; sapodilla; soursoy; Spanish lime; star apple; starfruit; sugar apple; wax jambu; White sapote (Casimiroa), and other cultivars and/or hybrids of these.	Leafrollers Leafminers	0.066 - 0.099	3.0 - 4.5	1*	4
	<p>Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year.</p> <p>Spray Volume: Thorough coverage is essential to achieve best results. Select a spray volume appropriate for the size of trees or plants and density of foliage.</p> <p>The minimum interval between treatments is 10 days. Do not apply dilute applications of more than 200 gal water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 gal water per acre.</p> <p>*Except acerola, jaboticaba and lychee. Last application days to harvest for acerola, jaboticaba and lychee is 10 days.</p>				
Cotton	Beet armyworm Cotton bollworm** Fall armyworm Saltmarsh caterpillar Southern armyworm Tobacco budworm**	0.044 - 0.088	2.0 - 4.0	21	
	Cabbage looper Soybean looper*	0.066 - 0.099	3.0 - 4.5		
<p>Do not use an adjuvant with applications of ALTACOR®.</p> <p>Make no more than 4 applications per acre per year.</p> <p>Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year.</p> <p>The minimum interval between treatments is 5 days.</p> <p>* Suppression only.</p> <p>** For Heliothine control (cotton bollworm and/or tobacco budworm) make the first application at rates of 0.066 - 0.088 lb. ai per acre ( 3.0 - 4.0 oz product). Subsequent applications can be at rates of 0.044 - 0.088 lb ai per acre (2.0 - 4.0 oz product) depending on pest pressure.</p>					
Potato	Beet and Yellowstriped Armyworms Cabbage looper Colorado potato beetle European corn borer Potato tuberworm	0.044 - 0.066	2.0 - 3.0	14	
	<p>Do not apply more than 9 oz ALTACOR® or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year.</p> <p>The minimum interval between treatments is 5 days.</p> <p>Make no more than 4 applications per acre per crop season.</p> <p>Colorado potato beetle resistance management: Do not apply ALTACOR® more than twice to a generation of Colorado potato beetle or within any 30 day period. Application(s) to the next generation of Colorado potato beetle must be with an effective product with a different mode of action. Do not apply ALTACOR® more than once to Colorado potato beetle via overhead chemigation.</p> <p>Potato tuberworm: ALTACOR® may be applied at rates of 2.0 - 3.0 oz per acre to control potato tuberworm. Begin application when field scouting indicates the presence of tuberworm adults and/or larvae. Potato tuberworm often have overlapping generations so repeat applications of ALTACOR® may be needed based on field scouting. Avoid treating successive generations with the same mode of action. It is important to protect the crop just prior to harvest when foliage starts to senesce. Use the high rate of ALTACOR® where potato tuberworm pressure is high. Failure to adequately control potato tuberworm larvae prior to crop senescence or vine kill increases the risk of tuber damage. Foliar sprays alone, by air or ground, may not provide adequate control of larvae in the mid to lower crop canopy. For best results, apply via overhead chemigation or integrate chemigation applications into the foliar spray program. For best results with foliar sprays, add Methylated Seed Oil (MSO) adjuvant at 1 gallon per 100 gallons of spray volume (1% v/v). For chemigation applications, apply in 0.1 to 0.2 acre inches of water and add MSO at 12 to 16 fl oz/acre. ALTACOR® may be applied to potatoes via overhead sprinkler chemigation systems.</p> <p><b>Instructions for the Use of ALTACOR® in Overhead Sprinkler Chemigation Systems.</b></p> <p>Types of Chemigation Systems: ALTACOR® may be applied only through overhead sprinkler irrigation systems. Overhead irrigation systems include the following; center pivot, end tow, hand move, lateral move, side roll, solid set and wheel line. The irrigation system used must provide uniform water distribution.</p>				

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Crops	Insects	DuPont™ ALTACOR® Rate Per Acre		Last Application Days to Harvest	REI (Hours)	
		Lb A.I.	Ounces Product			
Potato Cont'd	<p>Directions for Chemigation:  <b>Preparation</b>            A pesticide tank is recommended for the application of ALTACOR® in chemigation systems. Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. With the mix tank 1/4 to 1/2 full with water and the agitator running, measure the required amount of ALTACOR® and add it to the tank. Then add additional water to bring your total pesticide mixture up to the desired volume for your application. Note: Always add the ALTACOR® to water, never put ALTACOR® into a dry tank or other mixing equipment without first adding water. See "Tank Mixing Sequence" section of the container label for tank mixing sequence. Continue to agitate the mixture throughout the application process. Use mechanical or hydraulic agitation, do not use air agitation.</p> <p><b>Injection Into Chemigation Systems</b>            Inject the proper amount of ALTACOR® into the irrigation water flow using a positive displacement injection pump. Injection should occur at a point in the main irrigation water flow to ensure thorough mixing with the irrigation water. For continuously moving systems, inject the solution containing ALTACOR® into the irrigation water line continually and uniformly throughout the irrigation cycle. Apply in no more than 0.2 inches of water per acre. For overhead sprinkler systems that are stationary, add the solution containing ALTACOR® to the irrigation water line and apply no more than 0.2 inches of water per acre.</p> <p><b>Uniform Water Distribution</b>            The irrigation system used for application of ALTACOR® must provide for uniform distribution of ALTACOR® treated water. Non-uniform distribution can result in crop injury, lack of effectiveness or illegal pesticide residues in or on the crop being treated. Ensure the irrigation system is calibrated to uniformly distribute the chemigation application to the crop. Contact the equipment manufacturer, the local University Extension agent or other experts if you have questions about achieving uniform distribution of the application.</p> <p><b>Equipment Calibration</b>            Calibrate the irrigation system and injector before applying ALTACOR®. Calibrate the injection pump while the system is running using the expected irrigation rate. If you have questions about calibration, you should contact your state extension service specialists, equipment manufacturer or other experts.</p> <p><b>Monitoring of Chemigation Applications</b>            A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of a responsible person, shall shut the system down and make necessary adjustments should the need arise. Wear the personal protective equipment as defined in the PPE section of the label for applicators and other handlers when making adjustments or repairs on the chemigation system when ALTACOR® is in the irrigation water.</p> <p><b>Required System Safety Devices</b>            Do not connect any irrigation system used for pesticide applications to a public water system unless the pesticide label-prescribed safety devices are in place. Public water system means a system for the provision to the public of piped water for human consumption, if such a system has at least 15 service connections or regularly serves an average of at least 25 individuals at least 60 days out of the year.</p> <ol style="list-style-type: none"> <li>1. The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.</li> <li>2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.</li> <li>3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.</li> <li>4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.</li> <li>5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.</li> <li>6. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.</li> <li>7. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.</li> </ol> <p><b>Operation</b>            Start the water pump and sprinkler, and let the system achieve the desired pressure and speed before starting the injector. Start the injector and calibrate the injection system according to the directions above. This procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system.</p> <ul style="list-style-type: none"> <li>• End guns must be turned off during the application, if they irrigate nontarget areas or if they do not provide uniform application and coverage.</li> <li>• It is recommended that nozzles in the immediate area of wells, control panels, chemical supply tanks and system safety devices be plugged to prevent contamination of these areas.</li> <li>• Do not apply when wind speed favors drift beyond the area intended for treatment.</li> <li>• Do not apply when system connections or fittings leak or when nozzles do not provide uniform distribution.</li> <li>• Do not allow irrigation water to collect or run-off during chemigation.</li> </ul> <p><b>Cleaning the System</b>            Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. Consult your owner's manual or your local equipment dealer for cleanout procedures for your injection system.</p>					4

## **SPRAY DRIFT MANAGEMENT**

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

**AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.**

### **IMPORTANCE OF DROPLET SIZE**

The most effective way to reduce drift potential is to apply large droplets (>150 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage.

**APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS!**

See **Wind, Temperature and Humidity**, and **Surface Temperature Inversions** sections of this label.

#### ***Controlling Droplet Size - General Techniques***

**Volume** -Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

**Pressure** -Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. **WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**

**Nozzle Type** -Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

#### ***Controlling Droplet Size - Aircraft***

**Number of Nozzles** -Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.

**Nozzle Orientation** -Orienting nozzles so that the spray is emitted backwards, parallel to the air stream will produce larger droplets than other orientations.

**Nozzle Type** -Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.

**Do not apply as a ULV application.**

### **BOOM LENGTH AND HEIGHT**

**Boom Length (aircraft)** -The boom length must not exceed 3/4 of the wing length; using shorter booms decreases drift potential. For helicopters use a boom length and position that prevents droplets from entering the rotor vortices.

**Boom Height (aircraft)** -Application more than 10 ft above the canopy increases the potential for spray drift.

**Boom Height (ground)** - Setting the boom at the lowest height, which provides uniform coverage, reduces the exposure of droplets to evaporation and wind. The boom should remain level with the crop and have minimal bounce.

### **WIND**

Drift potential increases at wind speeds of less than 3 mph (due to variable direction and inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. **DO NOT APPLY DURING GUSTY OR WINDLESS CONDITIONS.**

**Note:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

### **SURFACE TEMPERATURE INVERSIONS**

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which causes small-suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates a surface inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

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### TREE AND VINE SPRAYERS

Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream.

In addition to the general drift management principles already described, the following specific practices will further reduce the potential for drift:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy.
- Block off upward pointed nozzles when there is no overhanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage.
- Movement of spray that goes beyond the edge of the cultivated area may be minimized by practices such as spraying the outside row only from outside the planting.

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.

### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Do not subject to temperatures below 32 degrees F. Store product in original container only in a location inaccessible to children and pets. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Not for use or storage in or around the home.

**PESTICIDE DISPOSAL:** Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility

**CONTAINER HANDLING: Refer to the Net Contents section of this product's labeling for the applicable "Refillable Container" or "Nonrefillable Container" designation.**

**For Small (Capacity Equal to or Less Than 50 Pounds) Nonrefillable Plastic Containers:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**For Large (Capacity Greater Than 50 Pounds) Nonrefillable Plastic Containers:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners:** Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

**Refillable Fiber Drums With Liners:** Refillable container (fiber drum only). *Refilling Fiber Drum:* Refill this fiber drum with DuPont™ ALTACOR® Insect Control containing Chlorantraniliprole only. Do not reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment.

*Disposing of Fiber Drum and/or Liner:* Do not reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

**For All Refillable Containers:** Refillable container. Refill this container with chlorantraniliprole only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact DuPont at 1-800-441-3637, day or night.

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