

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

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

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

NOV 3 0 2011

Dear Dr. Carver:

Subject:

Labeling Amendment; Adding cranberry overhead chemigation, new non-public health

pests, and new language regarding beneficial insects in pome fruit

DuPont Altacor Insect Control EPA Registration No. 352-730 Submission Date: November 9, 2011

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the above mentioned label before releasing the product for shipment. If you have any questions regarding this label, please contact Dr. Jennifer Urbanski at (703) 347-0156 or <u>urbanski.jennifer@epa.gov</u>.

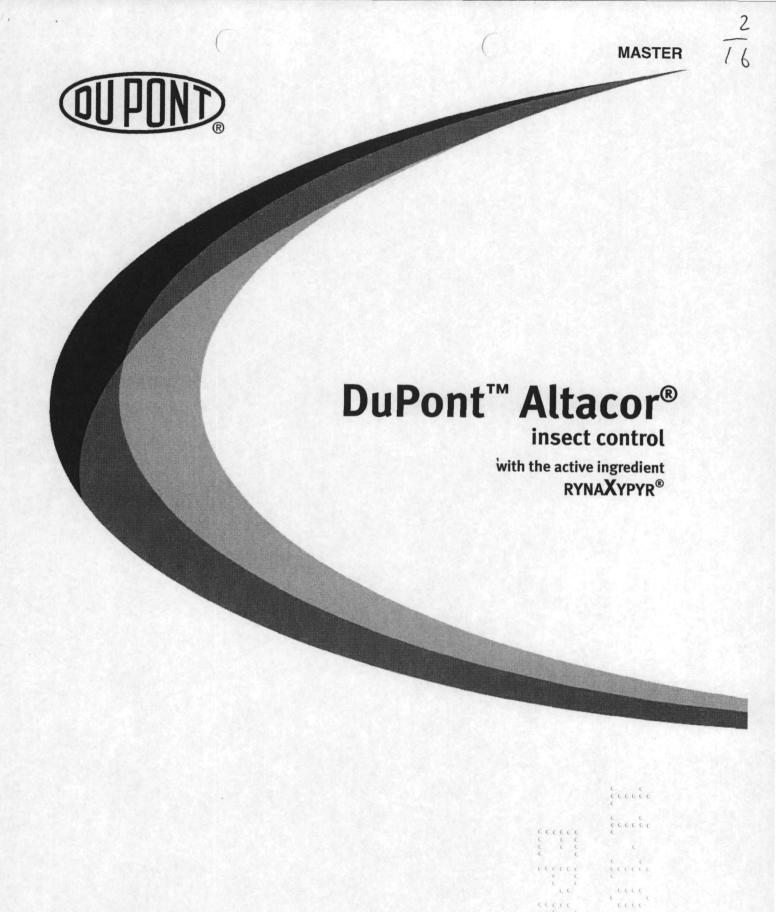
Sincerely yours,

Venus Eagle

Product Manager (01)

Insecticide-Rodenticide Branch Registration Division (7505P)

Enclosure-Stamped Label





**GROUP** 

# **DuPont™ Altacor®**

28

# insect control

with the active ingredient RYNAXYPYR®

Active Ingredient	By Weight
Chlorantraniliprole	
3-Bromo-N-[4-chloro-2-methyl-6-	
[(methylamino)carbonyl]phenyl]-1-	
(3-chloro-2-pyridinyl)-1H-pyrazole-	
5-carboxamide	35.0%
Other Ingredients	65.0%
TOTAL	100.0%
EPA Reg. No. 352-730 EPA	Est. No
Nonrefillable Container	
Net:	
OR	
Refillable Container	
Net:	
E. I. du Pont de Nemours and Compa	any
1007 Market Street	
Wilmington, DE 19898	

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

> ACCEPTED NOV 3 9 2011

Phone: 1-800-441-7515 (Toll Free)

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered-under:

EPA. Reg. No: 352-730

# PRECAUTIONARY STATEMENTS KEEP OUT OF REACH OF CHILDREN

Si usted no entiende la etiquete, 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.

INSECTICIDE

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 outfer 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

- · Use this product only in commercial and farm plantings.
- · Not for use in home plantings.
- 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<sup>TM</sup> 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 that may be made temporarily available through local distributors, as a result of new EPA approvals. DuPont will not be responsible for losses or damages

resulting from use of this product in any manner not specifically stated on this label or other labels or bulletins published by DuPont. User assumes all risks associated with such nonspecified use.

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.

#### 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 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 DuPont<sup>™</sup> 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.irac-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 CHEMIGA-TION" 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 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); 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 except soybean (Crop Group 6); Foliage of Legume Vegetables except soybean (Crop Group 7); Spearmint, Peppermint, Nongrass Animal Feeds (Forage, Fodder, Straw, and Hay Crop Group 18); Okra; Bulb onion vegetables (Crop Subgroup 3-07A); Peanuts; Protected Seed Oilseeds (crambe, hare's-ear mustard, jojoba, lesquerella, lunaria, milkweed, mustard seed, oil radish, poppy seed, rapeseed/canola, rose hip, sesame, tallowwood, tea oil plant); 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).

The following crops or crop groups may be planted 30 days following the last application of ALTACOR®: leek, green onion, Welsh onion, Cereal Grains (Crop Group 15), soybean and the following oilseed crops: borage, calendula, castor oil plant, Chinese tallowtree, cuphea, echium, euphorbia, evening primrose, flax, gold of pleasure, meadowfoam, niger seed, safflower, stokes aster, sunflower, sweet rocket and veronia.

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

- 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.
- 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 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.

		DuPont™ ALTACOR® Rate Per Acre		Last Application	REI
Crops	Insects	Lbs. A.I.	Ounces Product	Days to Harvest	(Hours)
Banana/Plantain	Leafrollers  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 lbs a.i. of chlorantraniliprole containing products per acre per crop per season.  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				
Bushberry subgroup (Berry and small fruit crop group), Including: Aronia berry;	acre. For best results apply 10 Cherry fruitworm Cranberry fruitworm Omnivorous leafroller Raspberry crown borer Make no more than 3 applicati	0.066 - 0.099	3.0 - 4.5	1 LTACOR® or 0.2 lbs a i. of	
blueberry, highbush; blueberry, lowbush; buffalo currant; Chilean guava; cranberry, highbush; currant, black; currant, red; elderberry; European barberry; gooseberry; honeysuckle, edible; huckleberry; jostaberry; Juneberry (Saskatoon berry); lingonberry; native currant; salal; sea buckthorn; cultivars, varieties, and/or hybrids of these	Sèlect a spray volume appropr	n treatments is 7 days ess than 30 gal water erage is essential to a	s. Do not apply dilute appl per acre. For best results a achieve best results.	apply 100 - 150 gal water	
Large shrub/tree subgroup (Berry and small fruit crop group), Including: Bayberry; buffaloberry; che; chokecherry; elderberry; Juneberry (Saskatoon berry); mountain pepper berries; mulberry; phalsa; pincherry; riberry; salal; serviceberry; cultivars, varieties, and/or hybrids of	Raspberry crown borer  Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0. chlorantraniliprole containing products per acre per crop per season.  The minimum interval between treatments is 7 days. Do not apply dilute applications of more water per acre. Do not apply less than 30 gal water per acre. For best results apply 100 - 150 go 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.  Select a spray volume appropriate for the size of trees or plants and density of foliage.				
these  Low growing berry subgroup except cranberry and strawberry	Cherry fruitworm Cranberry fruitworm Omnivorous leafroller Raspberry crown borer	0.066 - 0.099	3.0 - 4.5	1	
(Berry and small fruit crop group), Including: Bearberry; bilberry; blueberry; blueberry; cloudberry; lingonberry; muntries; partridgeberry; cultivars, varieties, and/or hybrids of these	Make no more than 3 applicatichlorantraniliprole containing The minimum interval between water per acre. Do not apply leper acre.  Spray Volume: Thorough cov. Select a spray volume appropri	products per acre per intreatments is 7 days is than 30 gal water erage is essential to a	crop per season.  Do not apply dilute appl per acre. For best results a achieve best results.	dications of more than 200 gal apply 100 - 150 gal water	( ( ( ( (
Cranberry	Blackheaded fireworm* Cherry fruitworm Cranberry fruitworm Green spanworm Omnivorous leafroller Raspberry crown borer Sparganothis fruitworm	0.066 – 0.099	3.0 – 4.5		
	Make no more than 3 applicati Do not apply more than 9 oz A per crop per season.	ons per season. LTACOR® or 0.2 lb treatments is 7 days		e containing products per acre	

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Crops	DuPont™ ALTACOR® Rate Per Acre		Last Application	REI		
	Insects	Lbs. A.I.	Ounces Product	Days to Harvest	(Hours)	
Caneberry subgroup Berry and small	Omnivorous leafroller Raspberry crown borer*	0.066 - 0.099	3.0 - 4.5	3	4	
fruit crop group), Including: Blackberry; loganberry: red and black raspberry cultivars and/or hybrids of these	Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop per season.  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					
Small fruit vine climbing subgroup	Control raspberry crown borer Omnivorous leafroller Raspberry crown borer	0.066 - 0.099	3.0 - 4.5	1		
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	Make no more than 3 applicat chlorantraniliprole containing The minimum interval betwee Spray Volume: Thorough cov Select a spray volume approp Do not apply dilute applicatio acre. For best results apply 10	products per acre per n treatments is 7 days rerage is essential to a riate for the size of treatments of more than 200 g	r crop per season. s. achieve best results. ses or plants and density of gal water per acre. Do not a			
Cacao	Cacao pod borer	0.066 - 0.099	3.0 - 4.5	1		
	Make no more than 3 applicat chlorantraniliprole containing The minimum interval betwee Spray Volume: Thorough cov for the size of trees or plants a Do not apply dilute application acre. For best results apply 16	products per acre per n treatments is 7 days erage is essential to a nd density of foliage. ns of more than 200 g	crop per season. s. achieve best results. Select gal water per acre. Do not a			
Citrus, Including: Calamondin;	Citrus leafminer Citrus peelminer Omnivorous leafroller	0.066 - 0.099	3.0 - 4.5	1		
citrus citron; citrus hybrids (includes chironja, tangelo, tangor); grapefruit; kumquat; lemon; lime; mandarin (tangerine); orange, sour; orange, sweet; pummelo; Satsuma mandarin	Make no more than 3 applicate chlorantraniliprole containing. The minimum interval betwee Spray Volume: Thorough cov. for the size of trees or plants a Do not apply less than 30 gal of For best results apply 100-15. Where higher spray volumes a	products per acre per n treatments is 7 days erage is essential to a nd density of foliage. water per acre. ) gal water per acre. re used, apply a high	crop per season. s. chieve best results. Select	a spray volume appropriate		
Coffee	Coffee leafminer		3.0 - 4.5	7		
	Make no more than 3 applicate chlorantraniliprole containing The minimum interval betwee Spray Volume: Thorough cov for the size of trees or plants a Do not apply dilute application acre. For best results apply 10	products per acre per n treatments is 14 day erage is essential to a nd density of foliage. ns of more than 200 g	crop per season. ys. achieve best results. Select gal water per acre. Do not a			
Figs	Navel orangeworm	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 lbs a.i. of chlorantraniliprole containing products per acre per crop 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 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.					
Grape	Grape berry moth Grape leaffolder	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	(	( ( ,	
	* Japanese beetle (adult) - use Do not apply more than 9 oz A per crop per season. Make no more than 4 applicat The minimum interval betwee Spray Volume: Thorough cow for the size of trees or plants a Do not apply less than 30 gal For best results apply 100 -15 Where higher spray volumes a	ATACOR® or 0.2 lb ons per season. In treatments is 7 days erage is essential to a nd density of foliage. water per acre. It gal water per acre.	os a.i. of chlorantraniliprok s. chieve best results. Select a	e containing products per acre of		

	DuPont™ ALTACOR® Rate Per Acre		Last Application	REI		
Crops	Insects	Lbs. A.I.	Ounces Product	Days to Harvest	(Hours)	
Olives	American plum borer	0.066 - 0.099	3.0 - 4.5	1	4	
	European grapevine moth  Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop 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 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.					
Persimmons	Leafrollers	0.066 - 0.099	3.0 - 4.5	1		
	Make no more than 3 applicatic chlorantraniliprole containing. The minimum interval between Spray Volume: Thorough covfor the size of trees or plants at Do not apply dilute application acre. For best results apply 10	products per acre per n treatments is 7 days erage is essential to a nd density of foliage. as of more than 200 g	crop per season.  chieve best results. Selected water per acre. Do not a			
Pome Fruits, Including: Apple;	East of the Rocky Mountains Green fruitworm Spotted tentiform leafminer	0.055 - 0.088	2.5 - 4.0	5 (except Mayhaw		
Apple; Crabapple; Loquat; Mayhaw; Pear; Pear, oriental; Quince	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	which is 14)		
	West of the Rocky Mountains 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*					
	Make no more than 4 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop per season. 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 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.  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 Deraeocoris brevis and key parasitoids, Aphelinus mali, Aphytis spp., and Encarsia 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.  * Suppression only.  ** Codling Moth Larvae  Application Timing: 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.  Apples - West of the Rocky Mountains: 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.  When using ALTACOR® in an integrated program with other					

		DuPont™ ALTACOR® Rate Per Acre		Last Application	REI	
Crops	Insects	Lbs. A.I.	Ounces Product	Days to Harvest	(Hours)	
Pomegranates	Navel orangeworm Omnivorous leafroller	0.066 - 0.099	3.0 - 4.5	1	4	
	Make no more than 3 applicat chlorantraniliprole containing The minimum interval betwee Spray Volume: Thorough cov for the size of trees or plants a	products per acre per n treatments is 7 days rerage is essential to a nd density of foliage ns of more than 200 g	crop per season. s. achieve best results. Select gal water per acre. Do not a			
Prickly Pear Cactus	Prickly pear moth	0.066 - 0.099	3.0 - 4.5	1		
	Make no more than 3 applicat chlorantraniliprole containing			LTACOR® or 0.2 lbs a.i. of		
Stone Fruits, Including: Apricot; Cherry, sweet; Cherry, tart; Nectarine; Peach; Plum;	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		
Plum, Chickasaw; Plum, Damson; Plum, Japanese; Plumcot; Prune (fresh)	Make no more than 3 applicat chlorantraniliprole containing treatments is 7 days. A lower (7-10 days) spray program. Do not apply dilute application water per acre.  Do not apply less than 30 gal * Suppression only.  ** Peach twig borer - ALTA through delayed dormant a delayed dormant. Application use of oil consult manufor "May spray" applications before peak egg lay). Higher r and large, dense foliage trees.	products per acre per application rate of 2.0 as of more than 200 g water per acre by group COR® may be used pplications: Use high ons may be made wifeacturer's label. For both the summer general	crop per season. The minity-3.0 oz product per acre cagal water per acre. For best and.  throughout the growing searer rates for dormant applic th an EPA registered dormest performance, apply usintion: Make applications at	mum interval between in be used in short interval results apply 100-150 gal ason, however for dormant ation and lower rates for ant oil; for specific directions ng ground equipment. peak moth flight (timed at or		
Tea	Leafrollers	0.066 - 0.099	3.0 - 4.5	3		
(HI & SC only)	Make no more than 3 applications per season. Do not apply more than 9 oz ALTACOR® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop per season.  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,	Spray Volume: Thorough cover for the size of trees or plants a Do not apply dilute application acre. For best results apply 10th Hickory shuckworm	erage is essential to a nd density of foliage. as of more than 200 g	chieve best results. Select a gal water per acre. Do not a			
Including: Almond; Beech nut; Brazil nut; Butternut; Cashew;	Spray Volume: Thorough cover for the size of trees or plants a Do not apply dilute application acre. For best results apply 10 Hickory shuckworm Pecan nut casebearer  Codling moth Navel orange worm Oblique banded leafroller Oriental fruit moth Peach twig borer	erage is essential to and density of foliage. so of more than 200 g 0 - 150 gal water per 0.044 - 0.099 0.066 - 0.099	chieve best results. Select a gal water per acre. Do not a acre.	pply less than 30 gal water per		
Including: Almond; Beech nut; Brazil nut; Butternut;	Spray Volume: Thorough cover for the size of trees or plants a Do not apply dilute application acre. For best results apply 100 Hickory shuckworm Pecan nut casebearer  Codling moth Navel orange worm Oblique banded leafroller Oriental fruit moth Peach twig borer  Make no more than 4 applicated by the size of trees or plants a Do not apply more than 9 oz Aper crop per season.  Spray Volume: Thorough cover for the size of trees or plants a Do not apply less than 30 gal of the size of the size of trees or plants a Do not apply less than 30 gal of the size of the size of the size of the size of	crage is essential to a and density of foliage.  10 - 150 gal water per 10 - 0.044 - 0.099    10 - 0.066 - 0.099    10 - 0.066 - 0.099    10 - 0.066 - 0.099    10 - 0.066 - 0.099    10 - 0.066 - 0.099    10 - 0.066 - 0.099    10 - 0.066 - 0.099    10 - 0.066 - 0.099    10 - 0.066 - 0.099    10 - 0.066 - 0.099    10 - 0.099    10 - 0.066 - 0.099    10	chieve best results. Select a gal water per acre. Do not a acre.  2.0 – 4.5  3.0 – 4.5  3.0 – 4.5  as a.i. of chlorantraniliprolecthieve best results. Select a creater at or before peak egg lay for solve a composition of the composition of t	e containing products per acre a spray volume appropriate  specified rate range. or targeted generation. her rates and ground -5% hull-split timing; make a set infestation, use of on, however for dormant at oil; for specific recautions and restrictions ound equipment to achieve the applications made at a application at late dormant at oil; application at late dormant at a specific recaution at late and a specific recau	(((()	
Including: Almond; Beech nut; Brazil nut; Butternut; Cashew; Chestnut; Chinquapin; Filbert (hazelnut); Hickory nut; Macadamia (bush) nut; Pecan; Pistachio; Walnut, black and English	Spray Volume: Thorough cov. for the size of trees or plants a Do not apply dilute application acre. For best results apply 100 Hickory shuckworm Pecan nut casebearer  Codling moth Navel orange worm Oblique banded leafroller Oriental fruit moth Peach twig borer  Make no more than 4 applicated Do not apply more than 9 oz Aper crop per season. Spray Volume: Thorough cov. for the size of trees or plants a Do not apply less than 30 gal volume in the minimum interval betwee Codling moth — (Walnut) Ma Depending on level of infestat application equipment to achie Navel orange worm (Hullspli second application approximal higher rates in the labeled rate Peach twig borer — ALTACC applications: ALTACOR® mecommendations on use of oi regarding the use of oils in trethorough uniform coverage of early to mid-dormant timing.	crage is essential to a and density of foliage.  10 - 150 gal water per 10 - 0.044 - 0.099 10 - 0.066 - 0.099 10 -	chieve best results. Select a gal water per acre. Do not a acre.  2.0 – 4.5  3.0 – 4.5  3.0 – 4.5  as a.i. of chlorantraniliprole chieve best results. Select a creater ALTACOR® rate in the set of the company of the c	e containing products per acre a spray volume appropriate  specified rate range. or targeted generation. her rates and ground  -5% hull-split timing; make a est infestation, use of on, however for dormant and oil; for specific recautions and restrictions ound equipment to achieve the contained of application and at application at late dormant at application at late dormant as in the labeled rate	( ((((( (	
Including: Almond; Beech nut; Brazil nut; Butternut; Cashew; Chestnut; Chinquapin; Filbert (hazelnut); Hickory nut; Macadamia (bush) nut; Pecan; Pistachio; Walnut, black and English	Spray Volume: Thorough cov. for the size of trees or plants a Do not apply dilute application acre. For best results apply 10 Hickory shuckworm Pecan nut casebearer  Codling moth Navel orange worm Oblique banded leafroller Oriental fruit moth Peach twig borer  Make no more than 4 applicated by the period of the size of trees or plants a Do not apply more than 9 oz Apper crop per season. Spray Volume: Thorough cov. for the size of trees or plants a Do not apply less than 30 gal by For best results apply 100 -15. Where higher spray volumes a The minimum interval betwee Codling moth — (Walnut) Ma Depending on level of infestat application equipment to achie Navel orange worm (Hullspit second application approximal higher rates in the labeled rate Peach twig borer — ALTACOR® mecommendations on use of oi regarding the use of oils in trethorough uniform coverage of early to mid-dormant timing. Peach twig borer — For spring (just prior to bud break) to early to mid-dormant timing.	crage is essential to a and density of foliage.  10 - 150 gal water per 10 - 0.044 - 0.099 10 - 0.066 - 0.099 10 -	chieve best results. Select a gal water per acre. Do not a acre.  2.0 – 4.5  3.0 – 4.5  3.0 – 4.5  as a.i. of chlorantraniliprole chieve best results. Select a creater ALTACOR® rate in the set of the company of the c	e containing products per acre a spray volume appropriate  specified rate range. or targeted generation. her rates and ground  -5% hull-split timing; make a est infestation, use of on, however for dormant and oil; for specific recautions and restrictions ound equipment to achieve the contained of application and at application at late dormant at application at late dormant as in the labeled rate	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	

Crops		DuPont™ ALTACOR® Rate Per Acre		Last Application	REI	
	Insects	Lbs. A.I.	Ounces Product	Days to Harvest	(Hours)	
ropical fruits:	Leafrollers Leafminers	0.066 - 0.099	3.0 - 4.5	1*	4	
temoya; vocado; vocado; viriba; lack sapote; anistel; herimoya; ustard apple; ilama; eijoa; uava; aboticaba; ongan; ychee; namey sapote; nango; apaya; assionfruit; ineapple; ulasan; ambutan; apodilla; oursop; panish lime; tar apple; tarfruit; ugar apple; vax jambu; Vhite sapote Casimiroa), and ther cultivars nd/or hybrids	Make no more than 3 applica chlorantraniliprole containing Spray Volume: Thorough co for the size of trees or plants. The minimum interval betwee water per acre. Do not apply per acre. *Except acerola, jaboticaba, lychee, papaya an	s products per acre per verage is essential to a and density of foliage. en treatments is 10 day less than 30 gal water ychee, papaya and pas	crop per season. chieve best results. Select vs. Do not apply dilute apper acre. For best results a esionfruit; Last application	a spray volume appropriate blications of more than 200 gal apply 100 - 150 gal water		
of these. 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			
	Do not use an adjuvant with applications of ALTACOR®.  Make no more than 4 applications per acre per crop season.  Do not apply more than 9 oz ALTACOR® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.  The minimum interval between treatments is 5 days.  * Suppression only.  ** 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.					
Potato	Beet and Yellowstriped Armyworms Cabbage looper Colorado potato beetle European corn borer Potato tuberworm	0.044 – 0.066	2.0 – 3.0	14		
	of Colorado potato beetle or verotato beetle must be with an more than once to Colorado potato tuberworm: ALTACO Begin application when field tuberworm often have overlag on field scouting. Avoid treat protect the crop just prior to he potato tuberworm pressure is senescence or vine kill increa provide adequate control of le chemigation or integrate chemigation or integrate chemigation applications, apprays, add Methylated Seed chemigation applications, apprays, apprays, applications, ap	en treatments is 5 days tions per acre per crop ince management: Do within any 30 day perio effective product with otato beetle via overhæ may be applied at scouting indicates the oping generations so reing successive generat high. Failure to adequives the risk of tuber darvae in the mid to low migation applications in Oil (MSO) adjuvant at oly in 0.1 to 0.2 acre in	season. not apply ALTACOR® mod. Application(s) to the new a different mode of action and chemigation. rates of 2.0 - 3.0 oz per act presence of tuberworm addrepeat applications of ALTA in the same mode of arts to senesce. Use the high at all y control potato tuberworm age. Foliar sprays alone, er crop canopy. For best rento the foliar sprays program to the foliar spray program of the solution of the solutions of the solutions of the solutions of the solutions of the solution is season.	ore than twice to a generation ext generation of Colorado a. Do not apply ALTACOR® re to control potato tuberworm. ults and/or larvae. Potato ACOR® may be needed based of action. It is important to he rate of ALTACOR® where form larvae prior to crop by air or ground, may not esults, apply via overhead of spray volume (1% v/v). For O at 12 to 16 fl oz/acre.		

Crops			TM ALTACOR® e Per Acre	Last Application	REI	
	Insects	Lbs. A.I.	Ounces Product	Days to Harvest	(Hours)	
rops otato ont'd	Directions for Chemigation Preparation A pesticide tank is recommon Thoroughly clean the inject clean-out procedure. Disputank 1/4 to 1/2 full with wand add it to the tank. The volume for your application into a dry tank or other mit section of the container lat application process. Use in Injection Into Chemigati Inject the proper amount of injection pump. Injection smixing with the irrigation ALTACOR® into the irrigation ALTACOR® into the irrigation system used ALTACOR® treated wate or illegal pesticide residue uniformly distribute the chlocal University Extension distribution of the applicate Equipment Calibration Calibrate the irrigation sys while the system is running you should contact your stem to the provision of a responsibithe need arise. Wear the papplicators and other hand ALTACOR® is in the irrigations and other hand ALTACOR® is in the irrigation system used applicators and other hand ALTACOR® is in the irrigation in the public of provision to the public of provisio	n:  nended for the application of see of any residues in acater and the agitator rum and additional water to m. Note: Always add the xing equipment without the should occur at a point in water. For continuously gation water line continuintens of water per acre of ALTACOR® to the indicate of the indica	on of ALTACOR® in cheme any fertilizer or chemical recordance with State and Fenning, measure the required a bring your total pesticide in ALTACOR® to water, new first adding water. See "Tatence. Continue to agitate the agitation, do not use air agital irrigation water flow using irrigation water flow using systems, inject the tally and uniformly throughe. For overhead sprinkler syrigation water line and apply the tally and uniformly throughe. For overhead sprinkler syrigation water line and apply treated. Ensure the irrigation the crop. Contact the equipagation rate. If you have queecialists, equipment manufarm and responsible for its opsystem down and make necessate 25 individuals at least 60 keep. Vacuum relief valve and orevent water source contant unctional, automatic, quick pump.  In a functional, normally clomp and connected to the system the irrigation system is a controls to automatically she a functional pressure switch sets to the point where pesticals that are compatible was systems must contain a functional pressure switch sets to the point where pesticals that are compatible was systems must contain a functional pressure switch sets to the point where pesticals that are compatible was systems must contain a functional pressure switch sets to the point where pesticals that are compatible was systems must contain a functional pressure switch sets to the point where pesticals that are compatible was systems must contain a functional pressure from the pute introduction. There shall pe and the top or overflow in the injection system according the injection system according a chief rate per acre in a unifunction injector system to be the desired presseried rate per acre in a unifunction injector system to be the desired presseried rate per acre in a unifunction injector system to be the desired presseried rate per acre in a unifunction injector system to be the desired presseried rate per acre in a unifunction injector system to be the desired presseried rate per acre in a unifunction injector system to	igation systems. esidues using a standard deral laws. With the mix amount of ALTACOR® mixture up to the desired ver put ALTACOR® nix Mixing Sequence" e mixture throughout the ation.  a positive displacement flow to ensure thorough solution containing out the irrigation cycle. stems that are stationary, y no more than 0.2 inches on system is calibrated to prement manufacturer, the achieving uniform  dibrate the injection pump stions about calibration, acturer or other experts.  eration, or under the essary adjustments should section of the label for migation system when  ac water system unless the ans a system for the m has at least 15 service of days out of the year. Illow pressure drain nination from backflow.  -closing check valve to osed, solenoid-operated stem interlock to prevent is either automatically or which will stop the cide distribution is on pump (e.g. diaphragm with pesticides and complete physical nim of the reservoir tank is sure and speed before ding to the directions form manner. When the proughly flushed clean		
	provide uniform applicatio  It is recommended that n and system safety devices  Do not apply when wind	on and coverage.  ozzles in the immediate be plugged to prevent co speed favors drift beyor	on, if they irrigate nontarget area of wells, control panels ontamination of these areas. In the area intended for treas is leak or when nozzles do no	s, chemical supply tanks		
	distribution.  • Do not allow irrigation w			or browing aimorm		
	clean-out procedure. Dispo	ose of any residues in ac	any fertilizer or chemical re cordance with State and Feo r cleanout procedures for yo	esidues using a standard deral laws. Consult your	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	

# 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 HIGHERCAPACITY 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.

#### 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 capopy 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 cutside 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.

13

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<sup>TM</sup> 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.

NOTICE TO BUYER— Purchase of this material does not confer any rights under patents of countries outside of the United States.

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D-1712MSTR 110711

# LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read this Limitation of Warranty and Liability Before Buying or Using This Product. If the Terms Are Not Acceptable, Return the Product at Once, Unopened, and the Purchase Price Will Be Refunded.

It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product, crop injury, or injury to non-target crops or plants. WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.

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