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

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Richard A. Carver  
DuPont Crop Protection  
P.O. Box 30  
Newark, DE 19714-0030

JUN 15 2010

Dear Dr. Carver:

Subject: Labeling Amendment; Revised Resistance Management Section  
Dupont Coragen Insect Control  
EPA Registration No. 352-729  
Submission Date: June 1, 2010

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 Kable Bo Davis at (703) 306-0415 or [davis.kable@epa.gov](mailto:davis.kable@epa.gov).

Sincerely yours,

A handwritten signature in black ink, which appears to read "Venus Eagle", is written over the typed name.

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

Enclosure- Stamped Label



# DuPont™ Coragen®

## insect control

with the active ingredient  
**RYNAXYPYR®**

CORAGEN® is a suspension concentrate.  
Contains 1.67 lb. active ingredient per gallon.

GROUP	28	INSECTICIDE
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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	18.4%
Other Ingredients	81.6%
TOTAL	100.0%

EPA Reg. No. 352-729      EPA Est. No. \_\_\_\_\_

Nonrefillable Container

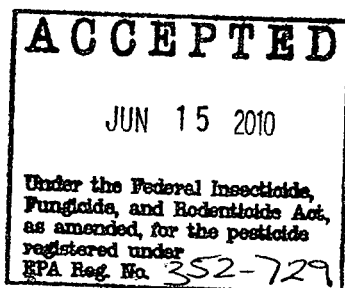
Net: \_\_\_\_\_

OR

Refillable Container

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

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



### 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

- Do not treat plants grown for transplanting. Not for use in nurseries, plant propagation houses, or greenhouses by commercial transplant producers on plants being grown for transplanting.
- Use this product only in commercial and farm 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.
- Not for use in home plantings.
- Do not apply DuPont™ CORAGEN® through any irrigation system unless specified in the crop section of this label or in supplemental labeling.

### For New York State Only:

The following restrictions are required to permit use of CORAGEN® 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

CORAGEN® 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

CORAGEN® 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 non-specified use.

CORAGEN® is a suspension concentrate that can be applied as: an in-furrow spray at planting, transplant water treatment, hill drench at planting, surface band at planting, soil shank injection at planting, drip chemigation, or foliar spray to control listed insects. CORAGEN® is mixed with water for application.

CORAGEN® is a member of the anthranilic diamide class of insecticides with a novel mode of action acting on insect ryanodine receptors. Although CORAGEN® has contact activity, it is most effective through ingestion of treated plant material. After exposure to CORAGEN®, 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.

## 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 CORAGEN® based on locally determined economic thresholds. More than one treatment of CORAGEN® may be required to control a population of pests.

## RESISTANCE MANAGEMENT

For resistance management, CORAGEN® is a Group 28 Insecticide. Repeated and exclusive use of CORAGEN® (chlorantraniliprole) or other Group 28 insecticide belonging to the anthranilic diamide class of chemistry 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 a resistance management strategy 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 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: Avoid using the same mode of action (same insecticide group) on consecutive generations of insect pests. Apply DuPont™ CORAGEN® 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 2 applications of CORAGEN® or other Group 28 insecticides within a single generation of the target pest on a crop or within a 30 day period to the same insect species 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 CORAGEN® develops in your area, CORAGEN® 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 DuPont Crop Protection 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 CORAGEN®, 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 intervals.

Use sufficient water to obtain thorough, uniform coverage.

CORAGEN® may be applied by: ground (including an in-furrow spray at planting, transplant water treatment, hill drench at planting, surface band at planting, soil shank injection at planting, drip chemigation, or foliar), or aerial application equipment. Not all application methods are allowed on all crops; see specific crop sections of this label for which application methods may be used. CORAGEN® may be applied via overhead sprinkler chemigation systems on some crops; see specific crop sections of this label for crops where overhead sprinkler chemigation may be used. For aerial application use the following directions unless otherwise specified in specific crop/pest sections of this label:

use a minimum of 5 gallons per acre (gpa) of water. For all other application methods use the following directions, unless otherwise specified in specific crop/pest sections of this label: use a minimum of 10 gal per acre (GPA) of water for all crops.

Use of adjuvants is only allowed on certain crops - see specific crop instructions for adjuvants in the following crop tables. 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 an adjuvant that does not affect foliage and/or fruit finish. Refer to specific crop sections of this label for additional adjuvant guidance.

## CROP ROTATION

Crops on this label and the following crops or crop groups may be planted immediately following harvest:

Banana/Plantain; Cacao; Caneberry subgroup (Berry and Small Fruit Crop Group subgroup 13-07A); Citrus (Crop Group 10); Coffee; Figs; Grape; Olives; Persimmons; Pome Fruits (Crop Group 11); Pineapple; Pomegranates; Prickly Pear Cactus; Rice; Root and Tuber Vegetables (Crop Group 1); Small Fruit Vine Climbing subgroup, except fuzzy kiwifruit (Berry and Small Fruit Crop Group subgroup 13-07F); Stone Fruits (Crop Group 12); Tree Nuts and Pistachio (Crop Group 14); Tops of Root and Tuber Vegetables (Crop Group 2); and Tropical Fruits (acerola, atemoya, avocado, biriba, black sapote, canistel, cherimoya, custard apple, ilama, feijoa, guava, jaboticaba, longan, lychee, mamey sapote, mango, papaya, passionfruit, pulasan, rambutan, sapodilla, soursop, Spanish lime, star apple, starfruit, sugar apple, wax jambu, and White sapote (Casimiroa), and and/or hybrids of these).

The following crops or crop groups may be planted 30 days following the last application of CORAGEN®: garlic, great-headed garlic, dry bulb onion, leek, green onion, Welsh onion, shallot, peanuts, soybeans, Cereal Grains (Crop Group 15).

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

## SPRAY PREPARATION

Spray equipment must be clean and free of previous pesticide deposits before applying CORAGEN®. Fill spray tank 1/4 to 1/2 full of water. Add CORAGEN® 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. Water dispersible granules.
3. Wettable powders.
4. DuPont™ CORAGEN® and other water based suspension concentrates.
5. Water-soluble concentrates.
6. Oil based suspension concentrates.
7. Emulsifiable concentrates.
8. Adjuvants, surfactants, oils.
9. Soluble fertilizers.
10. Drift retardants.

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

Crop	Application Method	Target Pest	DUPONT™ CORAGEN® RATE		Last Application (Days to Harvest)	REI (Hours)
			Lb. ai per acre	fluid ounces product per acre		
Artichoke	FOLIAR	Artichoke plume moth	0.045-0.098	3.5 - 7.5	3	4
	Make no more than 4 applications per acre per crop. Do not apply more often than each 14 days. Apply no more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop. Make applications between bud formation and harvest of an individual fruit. Apply in a minimum of 10 gallons water per acre by air and 50 - 200 gallons of water per acre by ground (use sufficient water to obtain thorough coverage without excessive runoff).					
Asparagus	FOLIAR	Beet armyworm Western yellowstriped armyworm	0.045-0.065	3.5 - 5.0	1	4
	Make no more than 4 applications per acre per crop. Minimum interval between treatments is 3 days. Do not use an adjuvant with applications of CORAGEN®. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.					
Brassica (Cole) Leafy Vegetables Including Broccoli, Broccoli chinese (gai, lon),	SOIL AT PLANTING† (an in-furrow spray, transplant water treatment, hill drench, surface band, soil shank injection)	Beet armyworm Diamondback moth* Cabbage looper Corn earworm Cross-striped cabbageworm Hawaiian beet webworm Imported cabbageworm Western Yellowstriped Armyworm	0.045 - 0.065	3.5 - 5.0 See rate conversion chart for rate per 1000 linear feet.	3	4
Broccoli raab (rapini), Brussels sprouts, Cabbage, Chinese cabbage (bok choy), Chinese	DRIP CHEMIGATION†	Beet armyworm Diamondback moth* Cabbage looper Corn earworm Cross-striped cabbageworm Hawaiian beet webworm Imported cabbageworm Western Yellowstriped Armyworm	0.045 - 0.065	3.5 - 5.0		
cabbage (napa),		Silverleaf whiteflies (nymphs)**	0.065 - 0.098	5.0 - 7.5		
Cabbage, Chinese mustard (gai choy), Cauliflower, Cavalo broccolo, Collards, Kale,	FOLIAR††	Beet armyworm Cabbage looper Corn earworm Cross-striped cabbageworm Diamondback moth* Hawaiian beet webworm Imported cabbageworm Western Yellowstriped Armyworm	0.045 - 0.065	3.5 - 5.0		
Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens,	Make no more than 4 applications per acre per crop. Minimum interval between treatments is 3 days for foliar applications and 10 days for drip chemigation applications. Application via drip chemigation: drip tape must be placed directly underneath a single row to ensure CORAGEN® is applied in the root zone. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop. †SOIL APPLICATIONS (an in-furrow spray at planting, transplant water treatment, hill drench at planting, surface band at planting, soil shank injection at planting, or drip chemigation): CORAGEN® must be applied uniformly in the root zone or poor performance will result. Surface band application requires sufficient overhead watering following application to ensure the treatment is moved into the root zone. Do not apply more than 7.5 fl oz (0.098 lb ai per acre) of CORAGEN® to the soil at planting. Do not apply more than 10 fl oz (0.132 lb ai per acre) of CORAGEN® per crop by any combination of at plant soil application and drip chemigation. For drip chemigation applications made in the second half of the crop growing cycle: translocation of CORAGEN® into aerial portions of the plant may take up to 7 - 10 days. Do not make more than 2 drip chemigation applications of CORAGEN® per crop. Do not make more than one drip chemigation application per crop if an at plant application of CORAGEN® was made. Refer to the SOIL APPLICATION section of this label for additional guidance; also see the rate conversion chart for application rate per 1000 linear feet. ††FOLIAR. For best performance use an effective adjuvant. * Diamondback moth resistance management: Do not apply CORAGEN® more than twice to any generation of diamondback moth or within any 30 day period. After the second application of CORAGEN® for diamondback moth, rotate to another effective insecticide with a different mode of action (i.e. a product with a different IRAC group number). Application(s) to the next generation of diamondback moth must be with an effective product with a different mode of action. Do not apply less than 3.5 oz. of CORAGEN® per application per acre for diamondback moth control. Do not make more than 6 total applications per calendar year for control of diamondback moth at the same farm location. ** Suppression only. Use in conjunction with an effective adult whitefly control program.					

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Crop	Application Method	Target Pest	DUPONT™ CORAGEN® RATE		Last Application (Days to Harvest)	REI (Hours)
			Lb. ai per acre	fluid ounces product per acre		
Corn (field) Corn (pop)	FOLIAR	Corn earworm Beet armyworm European corn borer Fall armyworm	0.045-0.065	3.5 - 5.0	14	4
		Make no more than 4 applications per acre per crop. Minimum interval between treatments is 7 days. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.				
Corn (sweet) Corn (seed)	FOLIAR	Corn earworm Beet armyworm European corn borer Fall armyworm	0.045-0.065	3.5 - 5.0	1	4
		Make no more than 4 applications per acre per crop. Minimum interval between treatments is 1 day. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.				
Cotton	FOLIAR	Beet armyworm Cotton bollworm** Fall armyworm Saltmarsh caterpillar Southern armyworm Tobacco budworm** Western Yellowstriped Armyworm	0.045 - 0.09	3.5 - 7.0	21	4
		Cabbage looper Soybean looper*	0.065 - 0.098	5.0 - 7.5		
		Make no more than 4 applications per acre per crop. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop. The minimum interval between treatments is 5 days. Do not use an adjuvant with applications of CORAGEN®. *Suppression only. **For Heliothis control (cotton bollworm and/or tobacco budworm) make the first application at rates of 0.065 - 0.09 lb. ai per acre (5.0 - 7.0 oz product). Subsequent applications can be at rates of 0.045 - 0.09 lb. ai acre (3.5 - 7.0 oz product) depending on pest pressure.				

Crop	Application Method	Target Pest	DUPONT™ CORAGEN® RATE		Last Application (Days to Harvest)	REI (Hours)	
			Lb. ai per acre	fluid ounces product per acre			
Cucurbit Vegetables Including Chayote (fruit), Chinese wax-gourd (Chinese pre-serving melon), Citron melon, Cucumber, Gherkin, Edible gourd (includes hyotan, cucuzza, hechima, Chinese okra), Momordica spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon), Pumpkin, Summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), Winter squash (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash), Watermelon	SOIL AT PLANTING† (an in-furrow spray, transplant water treatment, hill drench, surface band, soil shank injection)	Beet armyworm Cabbage looper	0.045 - 0.065	3.5 - 5.0 See rate conversion chart for rate per 1000 linear ft.	1	4	
		Leafminers (larvae)* Silverleaf whiteflies (nymphs)**	0.065 - 0.098	5.0 - 7.5			
	DRIP CHEMIGATION† Make application(s) within the first half of the crop growing cycle, typically up to peak bloom crop stage (approximately 40 days after crop emergence or transplanting).	Melon worm	0.026 - 0.045	2.0 - 3.5			
		Beet armyworm Cabbage looper Pickle worm	0.045 - 0.065	3.5 - 5.0			
		Leafminers (larvae)* Silverleaf whiteflies (nymphs)**	0.065 - 0.098	5.0 - 7.5			
	FOLIAR	Melon worm	0.026 - 0.065	2.0 - 5.0			
		Beet armyworm Cabbage looper Hawaiian beet webworm Pickle worm Western yellowstriped armyworm	0.045 - 0.065	3.5 - 5.0			
		Leafminers (larvae)* Silverleaf whiteflies (nymphs)**	0.065 - 0.09	5.0 - 7.0			
	Make no more than 4 applications per acre per crop. Minimum interval between treatments is 5 days for foliar applications and 10 days for drip chemigation applications. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop. Do not use an adjuvant with applications of CORAGEN® to Cucurbit Vegetables, except on cucumber, Chinese waxgourd, gherkin, and momordica spp. (includes balsam apple, balsam pear, bitter melon, and Chinese cucumber). Adjuvants may be used with CORAGEN® applications to cucumber, Chinese waxgourd, gherkin, and momordica spp. (includes balsam apple, balsam pear, bitter melon, and Chinese cucumber). †SOIL APPLICATIONS (an in-furrow spray at planting, transplant water treatment, hill drench at planting, surface band at planting, soil shank injection at planting, or drip chemigation): CORAGEN® must be applied uniformly in the root zone or poor performance will result. Surface band application requires sufficient overhead watering following application in to ensure the treatment is moved into the root zone. Do not apply more than 7.5 fl oz (0.098 lb ai per acre) of CORAGEN® to the soil at planting. Do not apply more than 10 fl oz (0.132 lb ai per acre) of CORAGEN® per crop by any combination of at plant soil application and drip chemigation. Do not make more than 2 drip chemigation applications of CORAGEN® per crop. Do not make more than one drip chemigation application per crop if an at plant application of CORAGEN® was made. Refer to the SOIL APPLICATION section of this label for additional guidance; also see the rate conversion chart for application rate per 1000 linear feet. * Control of Liriomyza species except suppression only for L. huidabrensis and L. langei. **Suppression only. Use in conjunction with an effective adult whitefly control program.						



Crop	Application Method	Target Pest	DUPONT™ CORAGEN® RATE		Last Application (Days to Harvest)	REI (Hours)		
			Lb. ai per acre	fluid ounces product per acre				
Fruiting Vegetables Including Eggplant, Groundcherry (Physalis spp.), Pepino, Pepper, (including bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato	SOIL AT PLANTING† (an in-furrow spray, transplant water treatment, hill drench, surface band, soil shank injection)	Beet armyworm Fall armyworm Loopers Southern armyworm Tomato fruitworm Tomato pinworm Western yellow striped armyworm	0.045 - 0.065	3.5 - 5.0  See rate conversion chart for rate per 1000 linear ft.	1	4		
		Leafminers (larvae)* Silverleaf whiteflies (nymphs)**	0.065 - 0.098	5.0 - 7.5				
	DRIP CHEMIGATION†	Beet armyworm Colorado potato beetle European corn borer Fall armyworm Garden webworm Hornworms Loopers Southern armyworm Tomato fruitworm Tomato pinworm Western yellowstriped armyworm	0.045 - 0.065	3.5 - 5.0				
		Leafminers (larvae)* Silverleaf whiteflies (nymphs)**	0.065 - 0.098	5.0 - 7.5				
	FOLIAR	Hornworms	0.026 - 0.065	2.0 - 5.0				
		Beet armyworm Colorado potato beetle European corn borer Fall armyworm Garden webworm Loopers Southern armyworm Tomato fruitworm Tomato pinworm Western yellowstriped armyworm	0.045 - 0.065	3.5 - 5.0				
		Leafminers (larvae)* Silverleaf whiteflies (nymphs)**	0.065 - 0.098	5.0 - 7.5				
	Make no more than 4 applications per acre per crop. Minimum interval between treatments is 5 days for foliar applications and 10 days for drip chemigation applications. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop. Do not use an adjuvant with applications of CORAGEN® to chili pepper or pimento. Adjuvants may be used with CORAGEN® applications to eggplant, groundcherry, pepino, bell pepper, paprika, cooking pepper, sweet pepper, tomatillo, and tomato. * Control of Liriomyza species except suppression only for L. huidabrensis and L. langei. ** Suppression only. Use in conjunction with an effective adult whitefly control program. †SOIL APPLICATIONS (an in-furrow spray at planting, transplant water treatment, hill drench at planting, surface band at planting, soil shank injection at planting, or drip chemigation): CORAGEN® must be applied uniformly in the root zone or poor performance will result. Surface band application requires sufficient overhead watering following application to ensure the treatment is moved into the root zone. Do not apply more than 7.5 fl oz (0.098 lb ai per acre) of CORAGEN® to the soil at planting. Do not apply more than 10 fl oz (0.132 lb ai per acre) of CORAGEN® per crop by any combination of at plant soil application and drip chemigation. For drip chemigation applications made in the second half of the crop growing cycle: translocation of CORAGEN® into aerial portions of the plant may take up to 7 - 10 days. Do not make more than 2 drip chemigation applications of CORAGEN® per crop. Do not make more than one drip chemigation application per crop if an at plant application of CORAGEN® was made. Refer to the SOIL APPLICATION section of this label for additional guidance; also see the rate conversion chart for application rate per 1000 linear feet.							

Crop	Application Method	Target Pest	DUPONT™ CORAGEN® RATE		Last Application (Days to Harvest)	REI (Hours)
			Lb. ai per acre	fluid ounces product per acre		
Grass forage, fodder and hay: Any grass, Gramineae family (either green or cured) except sugarcane and those included in the cereal grains group, that will be fed to or grazed by livestock, all pasture and range grasses and grasses grown for hay or silage	FOLIAR	Beet armyworm Corn earworm Fall armyworm Southern armyworm	0.045-0.065	3.5 - 5.0	0	4
Make no more than 4 applications per acre per crop. Minimum interval between treatments is 7 days. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.						
Herb subgroup: Angelica; balm; basil; borage; burnet; camomile; catnip; chervil (dried); chive; chive, Chinese; clary; coriander (leaf); costmary; culantro (leaf); curry (leaf); dillweed; horehound; hyssop; lavender; lemongrass; lovage (leaf); marigold; marjoram; nasturtium; parsley (dried); pennyroyal; rosemary; rue; sage; savory; summer and winter; sweet bay; tansy; tarragon; thyme; wintergreen; woodruff; and wormwood	FOLIAR	Beet armyworm Cabbage looper Corn earworm Fall armyworm Southern armyworm	0.045-0.065	3.5 - 5.0	1	4
Make no more than 4 applications per acre per crop. Minimum interval between treatments is 3 days. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop. <b>PLANT TOLERANCE PHYTOTOXICITY</b> CORAGEN® has been tested on numerous crops and cultivars with no observable phytotoxicity at label rates. However, neither the manufacturer nor the seller has determined whether or not CORAGEN® can be used safely on all herbs and spices for which it is registered for use. Since all herbs and spices and their varieties and cultivars have not been tested for phytotoxicity it is recommended that a small number of plants be sprayed initially to determine if there is any phytotoxicity prior to large scale applications to herbs and spices. The user assumes all risks arising from application of CORAGEN® in a manner that is inconsistent with its labeling.						
Hops (except California)	FOLIAR	Western yellowstriped armyworm	0.045-0.065	3.5 - 5.0	0	4
Make no more than 4 applications per acre per crop. Minimum interval between treatments is 7 days. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.						

Crop	Application Method	Target Pest	DUPONT™ CORAGEN® RATE		Last Application (Days to Harvest)	REI (Hours)
			Lb. ai per acre	fluid ounces product per acre		
Leafy Vegetables (non-brassica) Including Amaranth leafy, Arugula (rocket), Cardoon, Celery, Celery (chinese), Celtuce, Chervil, Chinese spinach, Chrysanthemum (edible leaved), Chrysanthemum, garland, Corn salad, Cress (garden), Cress (upland), Dandelion, leaves, Dock (sorrel), Endive (escarole), Florence fennel, Lettuce (head & leaf), Orach, Parsley, Purslane (garden), (winter), Radicchio (red chicory), Rhubarb, Spinach, Spinach (vine), Spinach (New Zealand), Swiss chard, Tampala	SOIL AT PLANTING† (an in-furrow spray, transplant water treatment, hill drench, surface band, soil shank injection)	Beet armyworm Corn earworm Cabbage looper Tobacco budworm	0.045 - 0.065	3.5 - 5.0 See rate conversion chart for rate per 1000 linear ft.	1	4
		Leafminers (larvae)** Silverleaf whiteflies (nymphs)***	0.065 - 0.098	5.0 - 7.5		
	DRIP CHEMIGATION†	Diamondback moth* Beet armyworm Corn earworm Cabbage looper Hawaiian beet webworm Tobacco budworm	0.045 - 0.065	3.5 - 5.0		
		Leafminers (larvae)** Silverleaf whiteflies (nymphs)***	0.065 - 0.098	5.0 - 7.5		
	FOLIAR	Corn earworm Diamondback moth* Beet armyworm Cabbage looper Hawaiian beet webworm Tobacco budworm Western yellowstriped armyworm	0.045 - 0.065	3.5 - 5.0		
		Leafminers (larvae)** Silverleaf whiteflies (nymphs)***	0.065 - 0.098	5.0 - 7.5		
<p>Make no more than 4 applications per acre per crop. Minimum interval between treatments is 3 days for foliar applications and 10 days for drip chemigation applications. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop. Do not use adjuvants with applications of CORAGEN® to amaranth; arugula; chervil; chrysanthemum, edible-leaved; chrysanthemum, garland; corn salad; cress, garden; cress, upland; dandelion; dock; endive; orach; parsley; purslane, garden; purslane, winter; spinach; spinach, New Zealand; and spinach, vine. Adjuvants may be used with CORAGEN® applications to cardoon; celery; celery, Chinese; celtuce; fennel, Florence; lettuce, head and leaf; radicchio; rhubarb; and Swiss chard. * Diamondback moth resistance management: Do not apply CORAGEN® more than twice to any generation of diamondback moth or within any 30 day period. After the second application of CORAGEN® for diamondback moth, rotate to another effective insecticide with a different mode of action (i.e. a product with a different IRAC group number). Application(s) to the next generation of diamondback moth must be with an effective product with a different mode of action. Do not apply less than 3.5 oz. of CORAGEN® per application per acre for diamondback moth control. Do not make more than 6 total applications per calendar year for control of diamondback moth at the same farm location. ** Control of Liriomyza species except suppression only for L. huidabrensis and L. langei. *** Suppression only. Use in conjunction with an effective adult whitefly control program.</p> <p>† SOIL APPLICATIONS (an in-furrow spray at planting, transplant water treatment, hill drench at planting, surface band at planting, soil shank injection at planting, or drip chemigation): CORAGEN® must be applied uniformly in the root zone or poor performance will result. Surface band application requires sufficient watering in to ensure the treatment is moved into the root zone. Do not apply more than 7.5 fl oz (0.098 lb ai per acre) of CORAGEN® to the soil at planting. Do not apply more than 10 fl oz (0.132 lb ai per acre) of CORAGEN® per crop by any combination of at plant soil application and drip chemigation. Do not make more than 2 drip chemigation applications of CORAGEN® per crop. For drip chemigation applications made in the second half of the crop growing cycle: translocation of CORAGEN® into aerial portions of the plant may take up to 7 - 10 days. Do not make more than one drip chemigation application per crop if an at plant application of CORAGEN® was made. Refer to the SOIL APPLICATION section of this label for additional guidance; also see the rate conversion chart for application rate per 1000 linear feet.</p>						

Crop	Application Method	Target Pest	DUPONT™ CORAGEN® RATE		Last Application (Days to Harvest)	REI (Hours)
			Lb. ai per acre	fluid ounces product per acre		
Legume vegetables except soybean (Succulent or Dried): Bean (Lupinus) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin); bean (Phaseolus) (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean); bean (Vigna) (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean); broad bean (fava); chickpea (garbanzo); guar; jackbean; lablab bean; lentil; pea (Pisum) (includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea); pigeon pea; sword bean	FOLIAR	Corn earworm Beet armyworm European corn borer Fall armyworm	0.045-0.065	3.5 - 5.0	1	4
			Make no more than 4 applications per acre per crop. Minimum interval between treatments is 3 days. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.			
Foliage of Legume vegetables except soybean	FOLIAR	Corn earworm Beet armyworm European corn borer Fall armyworm	0.045 - 0.065	3.5 - 5.0	1	4
Plant parts of any legume vegetable included in the legume vegetables that will be used as animal feed.			Make no more than 4 applications per acre per crop. Minimum interval between treatments is 3 days. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.			

Crop	Application Method	Target Pest	DUPONT™ CORAGEN® RATE		Last Application (Days to Harvest)	REI (Hours)
			Lb. ai per acre	fluid ounces product per acre		
Peppermint and Spearmint	FOLIAR	Cutworms Loopers Mint root borer	0.045-0.065	3.5 - 5.0	3	4
	Make no more than 4 applications per acre per crop. Minimum interval between treatments is 14 days. Do not use an adjuvant with applications of CORAGEN®. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop. CORAGEN® may be applied via overhead sprinkler chemigation systems. See "CHEMIGATION USING OVERHEAD SPRINKLER SYSTEMS - PEPPERMINT, SPEARMINT AND POTATOES" section for instructions on overhead sprinkler chemigation.					
Non-grass animal feeds:	FOLIAR	Alfalfa looper Beet armyworm Western yellowstriped armyworm	0.045-0.065	3.5 - 5.0	0	4
Alfalfa; bean, velvet; clover (Trifolium, Melilotus); kudzu; lespedeza; lupin; sainfoin; trefoil; vetch; vetch, crown; vetch, milk	Make no more than 4 applications per acre per crop. Make one application per cutting. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.					
Okra	FOLIAR	Beet armyworm Corn earworm	0.045-0.065	3.5 - 5.0	1	4
	Make no more than 4 applications per acre per crop. Minimum interval between treatments is 5 days. Do not use an adjuvant with applications of CORAGEN®. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.					
Potato	FOLIAR	Beet and Yellowstriped Armyworms Cabbage looper Colorado potato beetle European corn borer Potato tuberworm	0.045 - 0.065	3.5 - 5.0	14	4
	Make no more than 4 applications per acre per crop. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop. The minimum interval between treatments is 5 days. Colorado potato beetle resistance management: Do not apply CORAGEN® 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. Potato tuberworm: CORAGEN® may be applied at rates of 3.2 - 5.0 fl 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 CORAGEN® 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 CORAGEN® 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. CORAGEN® may be applied via overhead sprinkler chemigation systems. Do not apply CORAGEN® more than once to Colorado potato beetle via overhead chemigation. CORAGEN® may only be applied to potatoes as a direct foliar spray or via chemigation through overhead sprinkler irrigation systems. See "CHEMIGATION USING OVERHEAD SPRINKLER SYSTEMS - PEPPERMINT, SPEARMINT AND POTATOES" section for instructions on overhead sprinkler chemigation.					

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Crop	Application Method	Target Pest	DUPONT™ CORAGEN® RATE		Last Application (Days to Harvest)	REI (Hours)
			Lb. ai per acre	fluid ounces product per acre		
Protected Seed	FOLIAR	Diamondback moth	0.045 - 0.065	3.5 - 5.0	21	4
Oilseeds: crambe, hare's-ear mustard, jojoba, lesquerella, lunaria, milkweed, mustard seed, oil radish, poppy seed, rapeseed, rose hip, sesame, tallowwood, tea oil plant	Make no more than 4 applications per acre per crop. Minimum interval between treatments is 5 days. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop. Do not use an adjuvant with applications of CORAGEN®.					
Spice subgroup	FOLIAR	Beet armyworm Cabbage looper Corn earworm Fall armyworm Southern armyworm	0.045-0.065	3.5 - 5.0	1	4
Allspice; anise (seed); anise, star; annatto (seed); caper (buds); caraway; caraway, black; cardamom; cassia (bark); cassia (buds); celery (seed); cinnamon; clove (buds); coriander (seed); culantro (seed); cumin; dill (seed); fennel, common; fennel, Florence (seed); fenugreek; grains of paradise; juniper (berry); lovage (seed); mace; mustard (seed); nutmeg; pepper, black; pepper, white; poppy (seed); saffron; and vanilla	Make no more than 4 applications per acre per crop. Minimum interval between treatments is 3 days. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop. <b>PLANT TOLERANCE PHYTOTOXICITY</b> CORAGEN® has been tested on numerous crops and cultivars with no observable phytotoxicity at label rates. However, neither the manufacturer nor the seller has determined whether or not CORAGEN® can be used safely on all herbs and spices for which it is registered for use. Since all herbs and spices and their varieties and cultivars have not been tested for phytotoxicity it is recommended that a small number of plants be sprayed initially to determine if there is any phytotoxicity prior to large scale applications to herbs and spices. The user assumes all risks arising from application of CORAGEN® in a manner that is inconsistent with its labeling.					
Strawberry	FOLIAR	Beet armyworm Cabbage looper Corn earworm Japanese beetle (adult)	0.045 - 0.065	3.5 - 5.0	1	4
	Make no more than 4 applications per acre per crop. Minimum interval between treatments is 7 days. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.					
Sugarcane	FOLIAR	Sugarcane borer	0.045-0.065	3.5 - 5.0	14	4
	Make no more than 4 applications per acre per crop. Minimum interval between treatments is 7 days. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.					

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Crop	Application Method	Target Pest	DUPONT™ CORAGEN® RATE		Last Application (Days to Harvest)	REI (Hours)
			Lb. ai per acre	fluid ounces product per acre		
Tobacco (except California)	FOLIAR	Split worm (potato tuberworm) Tobacco budworm Tomato hornworm Tobacco hornworm	0.045-0.098	3.5 - 7.5	1	4
	SOIL AT PLANTING† (transplant water treatment only)	Tobacco budworm Tomato hornworm Tobacco hornworm	0.065 - 0.098	5.0 - 7.5		
	Make no more than 4 applications per acre per crop. Minimum interval between treatments is 3 days. Do not use an adjuvant with applications of CORAGEN®. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop. †SOIL APPLICATIONS (transplant water treatment at planting): CORAGEN® must be applied uniformly in the root zone or poor performance will result. Do not apply more than 7.5 fl oz (0.098 lb ai per acre) of CORAGEN® to the soil at planting. Refer to the SOIL APPLICATION section of this label for additional guidance.					
Tuberous and Corm Vegetables  (except potato): Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava, bitter and sweet; chayote (root); chufa; dasheen (taro); ginger; leren; sweet potato; tanier; turmeric; yam bean; yam, true	FOLIAR	Beet armyworm Western yellowstriped armyworm	0.045-0.065	3.5 - 5.0	14	4
	Make no more than 4 applications per acre per crop. Minimum interval between treatments is 5 days. Do not apply more than 15.4 fl oz CORAGEN® or 0.2 lbs a.i. of chlorantraniliprole containing products per acre per crop.					

### CORAGEN® Conversion Chart for Drip (Trickle) Chemigation and At-Plant Soil Application

Rate in Fluid Ounces Product / 1000 Row-Feet Based on Planted Row Spacing (in inches) of:																
Fl oz/acre	15	20	25	30	34	36	38	40	46	48	60	66	72	78	80	84
2											0.23	0.25	0.28	0.30	0.30	0.32
3.5				0.20	0.23	0.24	0.25	0.27	0.29	0.32	0.40	0.44	0.48	0.52	0.53	0.56
5		0.19	0.24	0.29	0.33	0.34	0.36	0.38	0.41	0.46	0.57	0.63	0.69	0.75	0.76	0.80
6		0.23	0.29	0.34	0.39	0.41	0.44	0.46	0.49	0.55	0.69	0.76	0.83	0.90	0.91	0.96
7	0.20	0.27	0.33	0.40	0.46	0.48	0.51	0.53	0.58	0.64	0.80	0.88	0.96	1.04	1.07	1.13

Level and length of control is affected by rate applied.

Higher labeled rates may be required in heavy texture and/or high organic soils if application is made later in the crop development, or when pest pressure is high.

## 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. **AVOID APPLICATIONS 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.

### AIR ASSISTED (AIRBLAST)

#### FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

**Note:** Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

### SOIL APPLICATIONS

CORAGEN® must be applied in a manner that ensures the product is in the root zone. CORAGEN® must be in the root zone to provide effective control of target pests. CORAGEN® is most effective when it is applied so that the roots are at or near the site of application; manage irrigation so that significant quantities of CORAGEN® remain in the root zone where it is most effective. Unless directed otherwise in the specific crop sections of this label, only one soil application of CORAGEN® may be made per crop.



season, except for drip chemigation where a total of two applications can be made per season at an application rate not to exceed 5 fl oz product (0.066 lb ai/acre) per application.

If DuPont™ CORAGEN® is applied as an at plant soil application, only one subsequent drip chemigation application can be made.

#### **In-Furrow Spray at Planting**

Apply as a narrow band spray into the furrow at the seeding depth.

#### **Transplant water treatment or Hill Drench**

Transplants should be adequately watered before transplanting. Apply at transplanting in a minimum of 2 fluid ounces of treatment solution per transplant. Ensure water volume is sufficient to thoroughly wet the root zone.

#### **Surface Band at Planting**

Apply as a narrow (2 inches or less) surface band spray above the seed line at planting. Incorporate surface band application within 24 hours of application using sufficient irrigation (usually 0.5 – 1.0 inches of water) to reach the seeding depth.

#### **Soil Shank Injection**

Use soil shank injection at planting. Applications must be incorporated using sufficient irrigation (usually 0.5 – 1.0 inches of water) to reach the root zone. Shank injection should be placed in the seed row or just below the seed line, within 1 - 2 inches of the seed line.

For insecticide resistance management it is important to avoid consecutive applications of insecticides with the same mode of action on successive generations of the same pest. See crops on label for recommended treatment rates and additional use information.

### **CHEMIGATION**

The following types of irrigation equipment may be used for chemigation applications: drip (trickle), or strip tubing irrigation systems. On potato, peppermint and spearmint, CORAGEN® may be applied through overhead sprinkler irrigation systems (see CHEMIGATION USING OVERHEAD SPRINKLER SYSTEMS - PEPPERMINT, SPEARMINT AND POTATOES section of this label).

Apply CORAGEN® in sufficient water and of sufficient duration to ensure the recommended rate is applied evenly to the entire treated area. Do not allow irrigation water to collect or runoff during chemigation; do not allow pooling of irrigation water. Inject CORAGEN® downstream from any water filtration system.

CORAGEN® must not be applied at the same time that a drip/irrigation line clean out product is being used as performance may be reduced. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact state extension service specialists, equipment manufacturers, or other experts. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Wear 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 CORAGEN® is in the irrigation water. When the application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system. A pesticide supply tank is recommended for the application of CORAGEN® in chemigation systems.

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 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.

See "Required System Safety Devices For All Chemigation Systems" at the end of the Chemigation section.

### **APPLICATION INSTRUCTIONS**

#### **DRIP (TRICKLE) CHEMIGATION**

CORAGEN® must be applied in a manner that ensures the product is in the root zone. CORAGEN® must be in the root zone to provide effective control of target pests. CORAGEN® is most effective when it is applied so that the roots are at or near the site of application; manage irrigation so that significant quantities of CORAGEN® remain in the root zone where it is most effective. Unless directed otherwise in the specific crop sections of this label, a total of two applications can be made per crop season. Any subsequent CORAGEN® treatments must be foliar applications.

1. Do not begin applications until after crop emergence in direct seeded crops.
2. Do not make applications if soil moisture is below the level required for active plant growth.
3. This product must be applied uniformly in the root zone or poor performance will result. Drip tape or emitters must be located within or directly adjacent to the root zone.
4. The drip system must be properly designed, free of leaks, and operated in manner that provides uniform application of water throughout the field.
5. In most situations, this product should be applied during the first 1/3 of the irrigation cycle, starting just after the system has come up to pressure.
6. The minimum injection period is the time that it takes water to move from the injection point to the furthest emitter in the irrigation zone (propagation time). If this time is not known, it can be calculated by measuring the time for a soluble dye to move from the injection point to the farthest emitter. A longer injection improves uniformity throughout the zone, but needs to allow for at least an equal period of water to flush the system and move the product through the soil.

## **CHEMIGATION USING OVERHEAD SPRINKLER SYSTEMS - PEPPERMINT, SPEARMINT AND POTATOES**

Types of Chemigation Systems: DuPont™ CORAGEN® may be applied to peppermint, spearmint and potatoes through overhead sprinkler irrigation systems, including 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 CORAGEN® 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 CORAGEN® 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 CORAGEN® to water, never put CORAGEN® 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 CORAGEN® into the irrigation water flow using a positive displacement injection pump or a Venturi injector. 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 CORAGEN® 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 CORAGEN® 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 CORAGEN® must provide for uniform distribution of CORAGEN® 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 CORAGEN®. 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 CORAGEN® is in the irrigation water.

#### **Operation**

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.

- End guns must be turned off during the application, if they irrigate nontarget areas or if they do not provide uniform application and coverage.
- 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.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- Do not apply when system connections or fittings leak or when nozzles do not provide uniform distribution.
- Do not allow irrigation water to collect or run-off during chemigation.

#### **Cleaning the System**

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.

### **REQUIRED SYSTEM SAFETY DEVICES FOR ALL CHEMIGATION SYSTEMS**

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 device, such as a positive displacement pump or a Venturi injector, that provides uniform injection of the product, is effectively designed and constructed of materials compatible with the product, and is capable of being fitted with a system interlock.

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.

### 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.

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 5 Gallons) 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 and drain for 10 seconds after the flow begins to drip. 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 5 Gallons) 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.

**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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## **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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