



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs

Registration Division (7505C)

1200 Pennsylvania Avenue NW

Washington, D.C. 20460

EPA Reg. Number:

34704-1000

Date of Issuance:

05/27/08

Term of Issuance:

Conditional

Name of Pesticide Product:

LPI Lambda-Cyhalothrin with Zeon Technology

## NOTICE OF PESTICIDE:

 Registration Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (Include ZIP Code):

Loveland Products, Inc.,  
P.O. Box 1286  
Greeley, Colorado 80632-1286

Note: Changes in labelling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

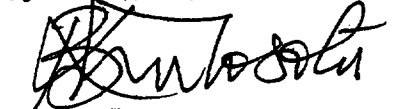
On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for re-registration of your product under FIFRA section 4.
2. Make the following labeling changes before you release the product for shipment:
  - a. Revise the EPA Registration Number to read: "EPA Registration No. 34704-1000"

Signature of Approving Official:

  
George LaRocca  
Product Manager (Team 13)  
Insecticide Branch  
Registration Division (7505P)

Date:

May 27, 2008

- b. Under Conditions of Sale and Limitation of Warranty and Liability: Third paragraph, add "***To the extent consistent with applicable law***" to the beginning of the statement "***Loveland Products, Inc. makes no other warranty, expressed . . .***" Please refer to the following web link for further guidance on our approved warranty statements:  
<http://www.epa.gov/pesticides/regulating/labels/projects.html>
3. Submit copies of the final printed label bearing the above stated revisions prior to releasing this product for sale.

If you fail to comply with the above stated conditions, this registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Enclosed, please find a copy of the stamped label for your records. If you have any questions concerning this action, please contact Dr. B. A. Akinlosotu at (703) 605-0653.

Enclosure

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**RESTRICTED USE PESTICIDE**  
**DUE TO TOXICITY TO FISH AND AQUATIC ORGANISMS**  
For retail sale to and use only by certified applicators, or persons under their direct supervision, and only for those uses covered by the certified applicator's certification.

**ACCEPTED**  
**with COMMENTS**  
**In EPA Letter Dated:**

**MAY 27 2008**

**Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 34704-1000**

**LPI LAMBDA-CYHALOTHRIN**  
**with Zeon Technology®**  
**GROUP 3 INSECTICIDE**

<b>ACTIVE INGREDIENT:</b>	<b>% BY WT.</b>
Lambda-cyhalothrin <sup>1</sup>	
[1α(S*),3α(Z)]-(±)-cyano-(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-Dimethylcyclopropanecarboxylate. . . . .	11.4%
<b>OTHER INGREDIENTS:</b> . . . . .	<u>88.6%</u>
<b>TOTAL</b> . . . . .	100.0%

*LPI Lambda-Cyhalothrin with Zeon Technology® contains 1lb. of active ingredient per gal. and is a capsule suspension.*  
<sup>1</sup>*Synthetic pyrethoid*

**KEEP OUT OF REACH OF CHILDREN**  
**WARNING-AVISO**

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).

See additional precautionary statements and directions for use in booklet.

**NET CONTENTS \_\_\_\_\_ GALS.**  
**EPA Reg. No. 34704-XXX      EPA Est. No. 34704-MS-001**  
**Product of the United Kingdom, formulated in USA**



<b>FIRST AID</b>	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For a medical emergency involving this product call: <b>1-800-301-7976</b> .	
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Do not give any liquid to the person.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
WARNING/AVISO**

May be fatal if swallowed. Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

Skin exposure may also result in a sensation described as a tingling, itching, burning, or prickly feeling. Onset may occur immediately to 4 hrs. after exposure and may last 2-30 hrs., without damage. Wash exposed areas once with soap and water. Relief from the skin sensation may be obtained by applying an oil-based cream.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category F on an EPA chemical resistance category selection chart.

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, Category F, such as barrier laminate, butyl rubber, nitrile rubber, or Viton  $\geq 14$  mils.
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. DO NOT reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### **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.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

This pesticide is extremely toxic to fish and aquatic organisms and toxic to wildlife.

For terrestrial uses: do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

#### **DIRECTIONS FOR USE RESTRICTED USE PESTICIDE**

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

##### **SHAKE WELL BEFORE USING.**

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 agency responsible for pesticide regulation.

This labeling must be in the possession of the user at the time of application.

**AGRICULTURAL USE REQUIREMENTS**

Use this product 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 this label about personal protective equipment (PPE) and restricted-entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not enter or allow worker entry into treated areas during the REI of 24 hrs.**

PPE required for early entry to 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, is:

- Coveralls
- Chemical-resistant gloves, Category F, such as barrier laminate, butyl rubber, nitrile rubber, or Viton  $\geq$  14 mils.
- Shoes plus socks

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR INSECT CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.**

**GENERAL DIRECTIONS FOR USE**

Initial and residual control are contingent upon thorough crop coverage. Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. Apply a minimum of 2 gals. per acre by air or 10 gals. per acre by ground unless otherwise specified in this label. When foliage is dense or pest pressure is high (heavier insect or egg pressure, larger larval stages), use of higher application volumes and/or higher use rates may improve initial and residual control.

For cutworm control, this product may be applied before, during, or after planting. For soil incorporated applications, use higher rates for improved control.

**RESISTANCE MANAGEMENT**

This product is a Group 3 Insecticide (contains the active ingredient lambda-cyhalothrin). Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities for details.

If resistance to this product develops in your area, this product 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 alternative method of control for your area.

### SPRAY DRIFT PRECAUTIONS

**Observe the Following Precautions when Spraying in the Vicinity of Aquatic Areas Such as Lakes; Reservoirs, Rivers; Permanent Streams, Marshes or Natural Ponds; Estuaries and Commercial Fish Farm Ponds.**

- Do not apply by ground within 25 ft., or by air within 150 ft. of lakes, reservoirs, rivers, permanent streams, marshes, pot holes, or natural ponds, estuaries, and commercial fish farm ponds. Increase the buffer zone to 450 ft. when ultra-low volume (ULV) application is made.
- All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers.
- For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used and must not exceed 75% of wing span or rotor diameter.
- Use the largest droplet size consistent with good pest control. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
- Spray should be released at the lowest height consistent with pest control and flight safety. Applications more than 10 ft. above the crop canopy should be avoided.
- Make aerial or ground applications when the wind velocity favors on-target product deposition (approximately 3-10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid applications when wind gusts approach 15 mph.
- Risk of exposure to aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.
- Do not cultivate within 10 ft. of the aquatic area so as to allow growth of a vegetative filter strip.
- Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of increased spray drift to aquatic areas. Avoid spraying during conditions of low humidity and/or high temperature.
- Do not make aerial or ground applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

In the state of New York a 25 ft. vegetated, non-cropped buffer strip untraversed by drainage tiles must be maintained between a treated field and a coastal salt marsh or stream that drains into a coastal salt marsh, for both aerial or ground application. For aerial applications, the 25 ft. vegetated non-cropped buffer strip for runoff protection would be part of the larger 150 ft. buffer strip (or 450 ft. buffer strip for ULV application) required for spray drift.

### TANK MIX APPLICATION

When tank mixing with any other agricultural products, **always add this product last.** Fill the tank with  $\frac{1}{2}$  -  $\frac{3}{4}$  volume of the mixing diluent. Make sure all other products are fully dispersed in the mixing diluent before adding the recommended rate of the product to the tank. Add the remainder of the mixing diluent volume. It is recommended that mixing and spray equipment have continuous agitation for best results. Follow the precautions and limitations of the most restricted product in the tank mixture.

While the product has good flexibility for tank mixing with other agricultural products, a jar test for physical compatibility is recommended for untried mixtures using proper ratios and mixing sequences of all ingredients to be included in the mixture.

This product is an aqueous based formulation. It is recommended that no type of non-emulsifiable oils be used in combination with this product. If adjuvants are used, use only:

- Nonionic Surfactant (NIS) containing at least 7% surface agent, or
- Non-phytotoxic Crop Oil Concentrate (COC), including once refined Vegetable Oil Concentrate (VOC),
- Methylated Sunflower Oils (MSO) containing a minimum of 17% emulsifier.

Adjuvants other than NIS or COC may be used providing the product meets the following criteria:

- Contains only EPA exempt ingredients.
- Is non-phytotoxic to the target crop.
- Is compatible in mixture. (May be established through a jar test).
- Is supported locally for use with this product on the target crop through proven field trials and through university and extension recommendations.

In addition, the following may be used as diluents:

- Crop oil concentrate
- Methylated sunflower oils
- Urea-ammonium nitrate

It is recommended that the following not be used in combination with the product as diluents or adjuvants:

- Non-emulsifiable oils
- Diesel fuel
- Straight mineral oil

### CHEMIGATION

#### **Sprinkler Irrigation Application**

Apply this product at rates and timing described elsewhere in this label. As local recommendations differ, consult your local state extension service or other local experts for recommendations on adjuvant or diluent types, (see TANK MIX APPLICATION) rates and mixing instructions. These recommendations should be proven, through university and extension field trials, to be effective with this product by chemigation.

Check the irrigation system to insure uniform application of water to all areas. Thorough coverage of foliage is required for good control. Good agitation in the pesticide supply tank should be maintained prior to and during the entire application period.

Apply by injecting the recommended rate of the product into the irrigation system using a metering device that will introduce a constant flow and by distributing the product to the target area in 0.1-0.2 acre-inch of water. In general, use the least amount of water required for proper distribution and coverage. It is recommended that the product be injected into the main irrigation line ahead of a right angle turn in the line to insure adequate dispersion or mixing in the irrigation water. Once the application is completed, flush the entire irrigation and injection system with clean water before stopping the system.

In addition to the above recommendations, if application is being made during a normal irrigation set of a stationary sprinkler, the recommended rate of this product for the area covered should be injected into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.



It is not recommended that this product be applied through an irrigation system connected to a public water system. 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 daily at least 60 days out of the year.

**Use Precautions: Sprinkler Irrigation Application**

- A. Apply this product only through (sprinkler including center pivot, lateral move, end tow, side [wheel] roll, traveler, big gun, solid set, or hand move) irrigation system(s). Do not apply this product through any other type of irrigation system.
- B. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- C. If you have questions about calibration, you should contact state extension service specialists, equipment manufacturers or other experts.
- D. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- E. 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.
- F. 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.
- G. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- H. 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.
- I. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- J. 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.
- K. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- L. Any alternatives to the above required safety devices must conform to the list of EPA-approved alternative devices.
- M. Do not apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of treated water.
- N. Do not apply through chemigation systems connected to public water systems.

**SPECIFIC USE DIRECTIONS**

<b>AGRICULTURAL USES</b>			
<b>Crop</b>	<b>Target Pests</b>	<b>Rate</b>	
		<b>lb. a.i./A</b>	<b>fl. oz./A</b>
<b>ALFALFA AND ALFALFA GROWN FOR SEED</b>			
	Alfalfa Caterpillar Army Cutworm Cutworm species Green Cloverworm Leafhopper species Looper species Threecornered Alfalfa Hopper Velvetbean Caterpillar Webworm species	0.015-0.025	1.92-3.20
	Alfalfa Seed Chalcid (adult) Alfalfa Weevil Armyworm Bean Leaf Beetle (adult) Blister Beetle species Blue Alfalfa Aphid Clover Leaf Weevil species Clover Root Borer (adult) Clover Root Curculio species (adult) Clover Stem Borer (adult) Corn Earworm Cowpea Aphid Cowpea Curculio (adult)	0.02-0.03	2.56-3.84
	Cowpea Weevil (adult) Cucumber Beetle species (adult) Egyptian Alfalfa Weevil Fall Armyworm <sup>1</sup> Grape Colaspis (adult) Grasshopper species Green June Beetle (adult) Green Peach Aphid <sup>3</sup> Japanese Beetle (adult) Meadow Spittlebug Mexican Bean Beetle Pea Aphid Pea Weevil (adult) Plant Bug species including Lygus species <sup>3</sup> Spotted Alfalfa Aphid Sink Bug species Sweet Clover Weevil (adult) Thrips species <sup>4</sup> Western Yellowstriped Armyworm Whitefringed Beetle species (adult) Yellowstriped Armyworm	0.02-0.03	2.56-3.84
	Beet Armyworm <sup>1,3</sup> Blotch Leafminer <sup>3</sup> Spider Mites <sup>2</sup>	0.03	3.84

**Remarks**

- Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. Apply in a minimum of 2 gals. per acre by air or 10 gals. per acre by ground. When foliage is dense and/or pest populations are high 5-10 gals. per acre by air or 20 gals. per acre by ground and higher use rates are recommended. Use higher rates for increased residual control.
- Avoid application when bees are actively foraging by applying during the early morning or during the evening hours. Be aware of bee hazard resulting from a cool evening and/or morning dew. It may be advisable to remove bee shelters during and for 2-3 days following application. Avoid direct application to bee shelters.
- **Do not** apply more than 0.03 lb. a.i. (3.84 fl. oz. or 0.24 pts. of product) per acre per cutting.
- **Do not** apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pts. of product) per acre per season.
- **Do not** apply within 1 day of harvest for forage or within 7 days of harvest for hay.

<sup>1</sup> Use higher rates for large larvae.

<sup>2</sup> Suppression only.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

<sup>4</sup> Does not include Western Flower Thrips.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>CANOLA</b>			
	Armyworm species Cabbage Seedpod Weevil Cutworm species Diamondback Moth Flea Beetle Grasshoppers Lygus Bug	0.015-0.03	1.92-3.84
	Cabbage Aphid	0.03	3.84

**Remarks**

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply a minimum of 2 gals. of water per acre.
- **Do not** apply within 7 days of harvest.
- **Do not** apply more than 0.09 lb. a.i. (0.72 pts.) per acre per year.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>CEREAL GRAINS</b>			
Corn (at plant): Field Corn Popcorn Seed Corn Sweet Corn	Corn Rootworm Larvae: Mexican Northern Southern Western Cutworm species Lesser Cornstalk Borer Red Imported Fire Ant <sup>1</sup> Seedcorn Beetle Seedcorn Maggot White Grub species Wireworm species	0.005 lbs. a.i. per 1000 ft. of row <sup>2</sup>	0.66 fl. oz. per 1000 ft. of row <sup>2</sup>

**Remarks**

- **Banded applications** – Apply at planting as a 5-7 inch T-band sprayed across the open seed furrow between the furrow openers and the press wheels or as a band application behind the press wheel.
- **In-furrow applications** – Apply into the seed furrow through spray nozzles or microtubes, behind the planter furrow openers and in front of the press wheel.
- Apply a minimum of 3 gals. finished spray per acre.
- **Do not** harvest or graze livestock or cut treated crops for feed within 21 days of at plant application.
- **Do not** apply more than 0.09 lb. a.i. (11.52 fl. oz. or 0.72 pts. of product) per acre per crop at plant.
- For field corn, popcorn, and seed corn, do not apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pts. of product) per acre per crop from at plant and foliar applications. For sweet corn do not apply more than 0.48 lb. a.i. (61.44 fl. oz. or 3.84 pts. of product) per acre per crop from at plant and foliar applications.

<sup>1</sup> Suppression only.

<sup>2</sup> Lbs. a.i. and fl. oz./A of This Product Applied at 0.66 f. oz./1000 ft. of Row for Various Row Spacings						
Row Spacing	40"	8"	36"	34"	32"	30"
Linear ft./A	13,068	13,756	14,520	15,374	16,335	17,424
Lbs. a.i./A	0.067	0.07	0.075	0.079	0.084	0.09
Fl. oz./A	8.6	9.1	9.6	10.1	10.8	11.5

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>CEREAL GRAINS</b>			
Corn (foliar): Field Corn Popcorn Seed Corn	Corn Earworm <sup>1</sup> Cutworm species Green Cloverworm Meadow Spittlebug Western Bean Cutworm <sup>1</sup>	0.015-0.025	1.92-3.20
	Armyworm <sup>2</sup> Bean Leaf Beetle Bird Cherry-Oat Aphid <sup>3</sup>	0.02-0.03	2.56-3.84

	Cereal Leaf Beetle Corn Leaf Aphid <sup>3</sup> Corn Rootworm Beetle (adult): Mexican Northern Southern Western English Grain Aphid <sup>3</sup> European Corn Borer <sup>1</sup> Fall Armyworm <sup>2</sup> Flea Beetle species Grasshopper species Hop Vine Borer <sup>1</sup> Japanese Beetle (adult) Lesser Cornstalk Borer Sap Beetle (adult) Seedcorn Beetle Southwestern Corn Borer <sup>1</sup> Stalk Borer <sup>1</sup> Stink Bug species Tobacco Budworm <sup>1,4</sup> Webworm species Yellowstriped Armyworm <sup>2</sup>		
	Beef Armyworm <sup>4</sup> Chinch Bug Greenbug <sup>3,4</sup> Mexican Rice Borer <sup>1</sup> Rice Stalk Borer <sup>1</sup> Southern Corn Leaf Beetle <sup>3</sup> Sugarcane Borer	0.03	3.84

**Remarks**

- Apply as required by scouting, or locally prescribed corn growth stages, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds or other locally recommended methods.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of target location. When applying by air, apply in a minimum of 2 gals. of water per acre.
- For chinch bug control, begin applications when bugs migrate from small grains or grass weeds to small corn. Direct spray to the base of corn plants. Repeat applications at 3-5 day intervals if needed. This product may only suppress heavy infestations and/or subsequent migrations.
- For control of adult corn rootworm beetles (*Diabrotica* species) as part of an aerial applied corn rootworm control program use a minimum of 0.03 lb. a.i. (3.84 fl. oz. of product) per acre.
- **Do not** apply within 21 days of harvest.
- **Do not** allow livestock to graze in treated areas of harvest treated corn forage as feed for meat or dairy animals within 1 day after last treatment. **Do not** feed treated corn fodder or silage to meat or dairy animals within 21 days after last treatment.
- **Do not** apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pts. of product) per acre per crop from at plant and foliar applications.

- **Do not** apply more than 0.06 lb. a.i. (7.68 fl. oz. or 0.48 pts. of product) per acre after silk initiation. **Do not** apply more than 0.03 lb. a.i. (3.84 fl. oz. or 0.24 pts. of product) per acre after corn has reached the milk stage (yellow kernels with milky fluid).

<sup>1</sup> For control before the larva bores into the plant stalk or ear.

<sup>2</sup> Use higher rates for large larvae.

<sup>3</sup> Suppression only.

<sup>4</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>CEREAL GRAINS</b>			
Sweet Corn (foliar)	Aphid species <sup>2,3</sup> Armyworm <sup>1</sup> Aster Leafhopper Beet Armyworm <sup>1,3</sup> Chich Bug Common Cornstalk Borer Corn Earworm Corn Rootworm Beetle (adult): Mexican Northern Southern Western Cutworm species European Corn Borer Fall Armyworm <sup>1</sup> Flea Beetle species Grasshopper species Japanese Beetle (adult) Sap Beetle (adult) Southern Armyworm <sup>1</sup> Southwestern Corn Borer Spider Mite species <sup>2</sup> Stink Bug species Tarnished Plant bug Webworm species Western Bean Cutworm Yellowstriped Armyworm <sup>1</sup>	0.02-0.03	2.56-3.84
	Corn Silkfly (adult) <sup>2</sup>	0.03	3.84

#### Remarks

- Apply as required by scouting, or locally prescribed corn growth stages, usually at intervals of 4 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds or other locally recommended methods and should be targeted for control before insects enter the stalk or ear.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage and ears (if present). When applying by air, apply in a minimum of 2 gals. of water per acre.
- For control of adult corn rootworm beetles (*Diabrotica* species) as part of an aerial applied corn rootworm control program use a minimum of 0.025 lb. a.i. (3.2 fl. oz. of product) per acre.

- **Do not** apply within 1 day of harvest.
- **Do not** allow livestock to graze in treated areas or harvest treated corn forage as feed for meat or dairy animals within 1 day after last treatment. **Do not** feed treated corn fodder or silage to meat or dairy animals within 21 days after last treatment.
- **Do not** apply more than 0.48 lb. a.i. (61.44 fl. oz. or 3.84 pts. of product) per acre per crop from at plant and foliar applications.

<sup>1</sup> Use higher rates for large larvae.

<sup>2</sup> Suppression only.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>CEREAL GRAINS</b>			
Rice Wild Rice	Bird Cherry-Oat Aphid Chinch Bug Fall Armyworm Grasshopper species Green Bug Leafhopper species Rice Stink Bug Riceworm Rice Water Weevil (adult) Sharpshooter species True Armyworm Yellow Sugarcane Aphid Yellowstriped Armyworm	0.025-0.04	3.20-5.12
	European Corn Borer <sup>1</sup> Mexican Rice Borer <sup>1</sup> Rice Seed Midge <sup>1</sup> Rice Stalk Borer <sup>1</sup> Sugarcane Borer <sup>1</sup>	0.03-0.04	3.84-5.12

**Remarks**

- Mixers/loaders supporting aerial applications to wild rice at a rate of 0.04 lb. a.i. per acre, and treating 1200 acres (or more) per day must wear dust-mist respirator.
- Apply as required by scouting. Timing and frequency of application should be based upon insect populations reaching locally determined economic thresholds. Determine the need for repeat applications, usually at intervals of 5-7 days, by scouting.
- This product can be safely used when propanil products are being used for weed control.
- Apply by air or by ground equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply a minimum of 2 gals. of water (or a total carrier volume) per acre but ensure sufficient volume is used to provide adequate coverage. In addition, adding an emulsifiable crop oil (e.g., 1 pt. per acre) when lower aerial application volumes are used is recommended to help improve coverage, reduce evaporation, and improve efficacy.
- For control of rice water weevil in dry seeded rice, make a foliar application as indicated by scouting for the presence of adults and/or feeding scars, usually within a time-frame of 0-5 days after permanent flood establishment. Do not exceed 10 days from starting permanent flood until insecticide application unless scouting indicates weevils have not been previously present. Adults may also be treated at later stages of rice development to reduce overwintering populations.

- For control of rice water weevil in water seeded rice, make the first foliar application after pinpoint flood as indicated by scouting for the presence of adults and/or feeding scars usually when rice has emerged 0.5 inch above the waterline. Under conditions of prolonged migration into the field, start field scouting for rice water weevil adults and/or feeding scars 3-5 days after the initial treatment and, if needed, apply a second application within 7-10 days of the first application. Adults may also be treated at later stages of rice development to reduce overwintering populations.
  - California: In addition to above directions for control of rice water weevil in water seeded rice, this product may be applied at the 1-3 leaf growth stage, with the majority at the 2 leaf growth stage. Adults are vulnerable on levees and in the water. Larvae are vulnerable while feeding on the leaf prior to entering the soil. Monitor for adults, based upon field history and density of population. Monitor field edges and levee areas for adults. Treat in the following manner: a) spray the inside perimeter of the field, or b) spray the entire field.
  - Greenbug is known to have many biotypes. This product may only provide suppression. If satisfactory control is not achieved with the first application of this product, a resistant biotype may be present. Use alternate chemistry for control.
  - For control of stem borers, scout fields, when rice growth is near panicle differentiation, for early symptoms of damaging populations exhibited as discoloration (orange-tan) around the junction of the leaf sheath and leaf blade which is caused by feeding of young larvae within the sheath. Applications must be made before larvae bore into rice stems. Make the first application at panicle differentiation to 2 inch panicle for partial control. Make the second application at boot to heading for maximum control. All rice varieties are susceptible to stem borer damage, but Cocodrie and Priscilla are particularly susceptible.
  - **Do not** release flood water within 7 days of an application.
  - **Do not** apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pts. of product) per acre per season.
  - **Do not** apply more than 0.04 lb. a.i. (5.12 fl. oz. or 0.32 pt. of product) per acre within 21 to 27 days of harvest.
  - **Do not** apply within 21 days of harvest.
  - **Do not** use treated rice fields for the aquaculture of edible fish and crustacea.
  - **Do not** apply as an ultra-low volume (ULV) spray.
- <sup>1</sup>For control before the larvae bores into the plant stalk.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>CEREAL GRAINS</b>			
Sorghum (grain)	Cutworm species	0.015-0.02	1.92-2.56
	Sorghum Midge		
	Armyworm		
	Beet Armyworm <sup>3</sup>		
	Corn Earworm		
	European Corn Borer <sup>2</sup>		
	Fall Armyworm <sup>1</sup>		
	Flea Beetle species		
	Grasshopper species		
	Lesser Cornstalk Borer <sup>2</sup>		
	Southwestern Corn Borer <sup>2</sup>		
	Stink Bug species		
Webworm species			
Yellowstriped Armyworm <sup>1</sup>			



**Remarks**

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of target location. When applying by air, apply in a minimum of 2 gals. of water per acre.
- For sorghum midge control, begin applications when 25% of the sorghum heads have emerged and are in tip bloom. Repeat applications at 5-day intervals if needed.
- For chinch bug control, begin applications when bugs migrate from small grains or grass weeds to small sorghum. Direct spray to the base of sorghum plants. Repeat applications at 3-5-day intervals if needed. This product may only suppress heavy infestations and/or subsequent migrations.
- **Do not** apply more than 0.08 lb. a.i. (10.24 fl. oz. or 0.64 pts. of product) per acre per season.
- **Do not** apply more than 0.06 lb. a.i. (7.68 fl. oz. or 0.48 pts. of product) per acre per season after crop emergence.
- **Do not** apply more than 0.02 lb. a.i. (2.56 fl. oz. or 0.16 pts. of product) per acre per season once crop is in soft dough stage.
- **Do not** apply within 30 days of harvest.

<sup>1</sup> Use higher rates for large larvae.

<sup>2</sup> For control before the larva bores into the plant stalk.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>CEREAL GRAINS</b>			
Barley	Cutworm species	0.015-0.025	1.92-3.20
Buckwheat	Sorghum Midge		
Oats	Armyworm	0.02-0.03	2.56-3.84
Rye	Bird Cherry-Oat Aphid <sup>1</sup>		
Triticale	Cereal Leaf Beetle		
Wheat	English Grain Aphid <sup>1</sup>		
Wheat Hay	Fall Armyworm		
	Flea Beetle species		
	Grasshopper species		
	Hessian Fly <sup>4</sup>		
	Orange Blossom Wheat Midge		
	Russian Wheat Aphid <sup>1</sup>		
	Stink Bug species		
	Yellowstriped Armyworm		
	Grass Sawfly		
	Chinch Bug	0.03	3.84
	Corn Leaf Aphid <sup>2</sup>		
	Greenbug <sup>1,3</sup>		
	Mite species <sup>2</sup>		

**Remarks**

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.

- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals. of water per acre.
- For chinch bug control, repeat applications at 3-5-day intervals if needed. This product may only suppress heavy infestations and/or migrations.
- Greenbug is known to have many biotypes, this product may provide suppression only. In this situation, a second application using an alternative chemistry may be needed.
- **Do not** apply within 30 days of harvest.
- **Do not** allow livestock to graze in treated areas or harvest treated wheat forage as feed for meat or dairy animals within 7 days after treatment. **Do not** feed treated straw to meat or dairy animals within 30 days after the last treatment.
- **Do not** apply more than 0.06 lb. a.i. (7.68 fl. oz. or 0.48 of product) per acre per season.

<sup>1</sup> Best control is obtained before insects begin to roll leaves. Once crop has started to boot, this product may provide suppression only. Higher rates and increased coverage will be necessary.

<sup>2</sup> Suppression only.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

<sup>4</sup> Make applications when adults emerge.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>COLE CROPS (HEAD AND STEM BRASSICA)</b>			
Broccoli	Alfalfa Looper	0.015-0.025	1.92-3.20
Brussels Sprouts	Cabbage Looper		
Cabbage	Cabbage Webworm		
Cauliflower	Cutworm species		
Cavalo Broccolo	Imported Cabbageworm		
Chinese Broccoli	Southern Cabbageworm		
(gai lon)	Aphid species <sup>2,3</sup>	0.02-0.03	2.56-3.84
Chinese Cabbage	Armyworm		
Chinese Mustard	Beet Armyworm <sup>1,3</sup>		
Cabbage	Corn Earworm		
(gai choy)	Diamondback Moth <sup>3</sup>		
Kohlrabi	Fall Armyworm <sup>1</sup>		
	Flea Beetle species		
	Grasshopper species		
	Japanese Beetle (adult)		
	Leafhopper species		
	Meadow Spittlebug		
	Plant Bug species including Lygus species <sup>3</sup>		
	Spider Mite species <sup>2</sup>		
	Stink Bug species		
	Thrips species <sup>2</sup>		
	Vegetable Weevil (adult)		
	Whitefly species <sup>2,3</sup>		
	Yellowstriped Armyworm		

**Remarks**

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.

- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals. of water per acre.
- **Do not** apply within 1 day of harvest.
- **Do not** apply more than 0.24 lb. a.i. (30.72 fl. oz. or 1.92 pts. of product) per acre per season.

<sup>1</sup> For control of first and second instar only.

<sup>2</sup> Suppression only.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>COTTON</b>			
	Cutworm species Soybean Thrips Tobacco Thrips	0.015-0.02	1.92-2.56
	Cabbage Looper Cotton Fleahopper Cotton Leafperforator Cotton Leafworm Lygus Bug species <sup>3</sup> Pink Rollworm Saltmarsh Caterpillar	0.02-0.03	2.56-3.84
	Bandedwing Whitefly <sup>2,3</sup> Beet Armyworm <sup>1,3</sup> Boll Weevil Brown Stink Bug Cotton Aphid <sup>2,3</sup> Cotton Bollworm European Corn Borer Fall Armyworm Green Stink Bug Southern Green Stink Bug Sweetpotato Whitefly <sup>2,3</sup> Tobacco Budworm <sup>3</sup> Twospotted Spider Mite <sup>2</sup>	0.025-0.04	3.20-5.12

#### Remarks

- Apply as required by scouting, usually at intervals of 5-7 days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage.
- Applications may also be made with equipment adapted and calibrated for ULV sprays. This product may be mixed with once-refined vegetable oil and applied in a minimum of at least one qt. of finished spray per acre.
- Under light bollworm/budworm infestation levels, 0.02 lb. a.i. (2.56 fl. oz. of product) per acre may be applied in conjunction with intense field monitoring.
- For boll weevil control spray on a 3-5 day schedule.
- When applied according to label directions for control of cotton bollworm and tobacco budworm, this product also provides ovicidal control of unhatched *Heliothine* species eggs.
- **Do not** apply within 21 days of harvest.

- **Do not** graze livestock in treated areas.
- **Do not** apply more than 0.2 lb. a.i. (25.6 fl. oz. or 1.6 pts. of product) per acre per season.
- **Do not** make more than a total of 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.

<sup>1</sup> For control of first and second instar only.

<sup>2</sup> Suppression only.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>CUCURBIT VEGETABLES</b>			
Chayote (fruit)	Armyworm species <sup>1</sup>	0.02-0.03	2.56-3.84
Chinese Waxgourd (Chinese preserving melon)	Blister Beetle species		
Citron Melon	Cabbage Looper		
Cucumber	Corn Earworm		
Gherkin	Cricket species		
Gourd (edible)	Cucumber Beetle species (adults)		
<i>Lagenaria</i> species – includes: hyotan, cucuzza	Cutworm species		
<i>Luffa acutangula</i> , <i>L.</i> <i>cylindrical</i> – includes: hechima, Chinese okra	Flea Beetle species		
<i>Momordica</i> species – includes: balsam apple, balsam pear, bitter melon, Chinese cucumber	Grasshopper species		
Muskmelon (hybrids and/or cultivars of <i>Cucumis melo</i> ) – includes: true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon	June Beetle species		
Pumpkin	Leaffooted Bug		
Squash, summer ( <i>Cucurbita</i> <i>pepo</i> var. <i>melo</i> <i>pepo</i> ) – includes: crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini	Leafhopper species		
Squash, winter ( <i>Cucurbita</i> <i>maxima</i> ; <i>C. moschata</i> ) – includes butternut squash, calabaza, hubbard squash ( <i>C. mixta</i> ; <i>C. pepo</i> ) – includes; acorn squash, spaghetti squash	Lygus Bug species <sup>1</sup>		
	Melonworm		
	Pickleworm		
	Plant Bug species		
	Rindworm species complex		
	Saltmarsh Caterpillar		
	Squash Beetle		
	Squash Bug species		
	Squash Vine Borer species		
	Stink Bug species		
	Thrips species <sup>1,2</sup>		
	Tobacco Budworm <sup>1</sup>		
	Webworm species		
	Aphid species <sup>1</sup>	0.03	3.84
	Leafminer species <sup>1,3</sup>		
	Spider Mite species <sup>3</sup>		
	Whitefly species <sup>1,3</sup>		

Watermelon – includes: hybrids and/or varieties of <i>Citrullus lanatus</i>			
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**Remarks**

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of all plant parts. When applying by air, apply in a minimum of 2 gals. total solution per acre. When applying by ground, a minimum of 10 gals. total solution per acre is recommended.
- Use higher application volumes and/or rates when foliage is dense, pest populations are high, larvae are large, weather conditions are adverse and/or as plant size increases. Use higher rates for longer residual.
- Insects that bore or tunnel into leaves, vines, stems or fruit must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of this product.
- **Do not** apply more than 0.18 lb. a.i. (23 fl. oz. or 1.44 pts. of product) per acre per season. **Do not** apply within 1 day of harvest.

<sup>1</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

<sup>2</sup> Does not include Western Flower Thrips

<sup>3</sup> Suppression only.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>FRUITING VEGETABLES</b>			
Eggplant	Cabbage Looper	0.015-0.025	1.92-3.20
Ground cherry	Cutworm species		
Pepino	Hornworm species		
Peppers (bell and nonbell)	Aphid species <sup>2,3</sup>	0.02-0.03	2.56-3.84
Tomato and Tomatillo	Beet Armyworm <sup>1,3</sup>		
	Blister Beetle species		
	Colorado Potato Beetle <sup>3</sup>		
	Cucumber Beetle species (adult)		
	European Corn Borer <sup>4</sup>		
	Fall Armyworm <sup>1</sup>		
	Flea Beetle species		
	Grasshopper species		
	Japanese Beetle (adult)		
	Leafhopper species		
	Leafminer species <sup>2</sup>		
	Meadow Spittlebug		
	Pepper Weevil (adult) <sup>2</sup>		
	Plant Bug species		
	Southern Armyworm <sup>1</sup>		
	Spider Mite species <sup>2</sup>		
	Stalk Borer <sup>4</sup>		
	Stink Bug species		
	Thrips <sup>3</sup>		
	Tobacco Budworm <sup>3</sup>		

	Tomato Fruitworm Tomato Pinworm Tomato Psyllid <sup>2,3</sup> Vegetable Weevil (adult) Whitefly species <sup>2,3</sup> Yellowstriped Armyworm <sup>1</sup>		
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**Remarks**

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals. of water per acre.
- **Do not** apply within 5 days of harvest,
- **Do not** apply more than 0.36 lb. a.i. (2.88 pts.) per acre per season.

<sup>1</sup> For control of first and second instar only.

<sup>2</sup> Suppression only.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

<sup>4</sup> For control before the larva bores into the plant stalk or fruit.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>GRASS FORAGE, FODDER AND HAY</b>			
Pasture and rangeland grass Grass grown for hay or silage Grass grown for seed	Army Cutworm Cutworm species Essex Skipper Range Caterpillar Striped Grass Looper	0.015-0.025	1.92-3.20
	Beet Armyworm Billbug species <sup>3</sup> Bird Cherry-Oat Aphid <sup>1</sup> Black Grass Bug Black Turfgrass Beetle (adult) Blue Stem Midge Cereal Leaf Beetle Chinch Bug Crane Fly species Cricket species English Grain Aphid <sup>1</sup> Fall Armyworm Flea Beetle species Grass Mealybug Grass Sawfly (adult) Grasshopper species Green June Beetle (adult) Greenbug <sup>1,2</sup> Japanese Beetle (adult) Katydid species Leafhopper species Mite species <sup>3</sup> Russian Wheat Aphid <sup>1</sup> Southern Armyworm	0.02-0.03	2.56-3.84

	Spittlebug species Stink Bug species Sugarcane Aphid Thrips species Tick species True Armyworm Webworm species Yellowstriped Armyworm		
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### Remarks

- Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage. When applying by air, apply a minimum of 2 gals. total solution per acre. When applying by ground, a minimum of 7 gals. total solution per acre is recommended.
- Use higher application volumes and rates when foliage is dense, pest populations are high, larvae are large and/or weather conditions are adverse. Use higher rates for longer residual.
- For chinch bug control, this product may only suppress heavy infestations and/or migrations. In this situation, a second application using an alternative chemistry may be needed.
- Greenbug is known to have many biotypes. This product may provide suppression only. In this situation, a second application using an alternative chemistry may be needed.
- Pasture and rangeland grass may be used for grazing or cut for forage 0 days after application. **Do not** cut grass to be dried and harvested for hay until 7 days after the last application.

#### Grass grown for seed:

- Straw and mature seed (seed screenings) may be used as feed 7 days after the last application. Regrowth of grass grown for seed may be used for grazing, cut for forage or cut to be dried and harvested for hay.
- **Do not** apply more than 0.03 lb. a.i. (3.84 fl. oz. or 0.24 pts. of product) per acre per cutting for pastures, rangeland and grasses grown for seed. A minimum re-treatment interval (Rn) of 30 days is required for pastures and rangeland receiving 0.03 lb. ai. per acre which have not been cut between applications.
- **Do not** apply more than 0.09 lb. a.i. (11.52 fl. oz. or 0.72 pts. of product) per acre per season.

<sup>1</sup> Best control is obtained before insects begin to roll leaves.

<sup>2</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

<sup>3</sup> Suppression only.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>LEGUME VEGETABLES</b>			
<b>Edible Podded (Only)</b> <i>Canavalia ensiformis</i> - jackbean  <i>Canavalia gladiata</i> - sword bean	Cutworm species Green Cloverworm Imported Cabbageworm Mexican Bean Beetle Saltmarsh Caterpillar Velvetleaf Caterpillar	0.015-0.025	1.92-3.20
	Alfalfa Caterpillar Aphid species <sup>4</sup> Armyworm <sup>2</sup> Bean Leaf Beetle Bean Leafskeletonizer Blister Beetle species Corn Earworm Corn Rootworm Beetle species (adult) Cucumber Beetle species (adult) Curculio and Weevil species <sup>1</sup> (foliage and pod feeding adults and larvae) European Corn Borer <sup>1</sup> Fall Armyworm <sup>2</sup> Flea Beetle species (adult) Flea Hopper species Grasshopper species Japanese Beetle (adult) Leafhopper species Leaf-tier species Looper species Meadow Spittlebug Painted Lady Butterfly (larva) Plant Bug species including Lygus species <sup>4</sup> Stalk Borer <sup>1</sup> Stink Bug species Three-Cornered Alfalfa Hopper Thrips species <sup>4</sup> Tobacco Budworm <sup>4</sup> Webworm species Western Bean Cutworm Western Yellow-Striped Armyworm <sup>2</sup> Yellow-Striped Armyworm <sup>2</sup>		
<b>Edible Podded, Succulent Shelled or Dried Shelled</b> <i>Cajanus cajan</i> – Pigeon pea  <i>Phaseolus</i> species – includes: field, kidney, lima, navy, pinto, runner, snap, tepary and wax beans  <i>Pisum</i> species – includes: dwarf, edible-pod, English, field, garden, green, snow and sugar snap peas  <i>Vigna</i> species – includes: adzuki, asparagus, moth, mung, rice, urd and yardlong beans, black-eye pea, catjang, Chinese longbean, cowpea, Crowder pea, and Southern pea	Beet Armyworm <sup>2,3,4</sup> Leafminer species <sup>3,4</sup> Lesser Cornstalk Borer <sup>3</sup> Soybean Looper <sup>3,4</sup> Spider Mite species <sup>3</sup> Whitefly species <sup>3,4</sup>	0.03	3.84
<b>Dried Shelled (Only)</b> <i>Cicer arietinum</i> –			



<p>chickpea (garbonzo bean)</p> <p><i>Cyamopsis tetragonoloba</i> – guar</p> <p><i>Lablab purpureus</i> – Lablab bean (hyacinth bean)</p> <p><i>Lens esculata</i> – Lentils</p> <p><i>Lupinus</i> species – includes: grain, sweet, white and sweet white lupines</p>	<p>Alfalfa Caterpillar</p> <p>Aphid species<sup>4</sup></p> <p>Armyworm<sup>2</sup></p> <p>Bean Leaf Beetle</p> <p>Bean Leaf skeletonizer</p> <p>Blister Beetle species</p> <p>Corn Earworm</p> <p>Corn Rootworm Beetle species (adult)</p> <p>Cucumber Beetle species (adult)</p> <p>Curculio and Weevil species<sup>1</sup> (foliage and pod feeding adults and larvae)</p> <p>European Corn Borer<sup>1</sup></p> <p>Fall Armyworm<sup>2</sup></p> <p>Flea Beetle species (adult)</p> <p>Flea Hopper species</p> <p>Grasshopper species</p> <p>Japanese Beetle (adult)</p> <p>Leafhopper species</p> <p>Leaf-tier species</p> <p>Looper species</p> <p>Meadow Spittlebug</p> <p>Painted Lady Butterfly (larva)</p> <p>Plant Bug species including Lygus species<sup>4</sup></p> <p>Stalk Borer<sup>1</sup></p> <p>Stink Bug species</p> <p>Three-Cornered Alfalfa Hopper</p> <p>Thrips species<sup>4</sup></p> <p>Tobacco Budworm<sup>4</sup></p> <p>Webworm species</p> <p>Western Bean Cutworm</p> <p>Western Yellow-Striped Armyworm<sup>2</sup></p> <p>Yellow-Striped Armyworm<sup>2</sup></p>	<p>0.02-0.03</p>	<p>2.56-3.84</p>
	<p>Beet Armyworm<sup>2,3,4</sup></p> <p>Leafminer species<sup>3,4</sup></p> <p>Lesser Cornstalk Borer<sup>3</sup></p> <p>Soybean Looper<sup>3,4</sup></p> <p>Spider Mite species<sup>3</sup></p> <p>Whitefly species<sup>3,4</sup></p>	<p>0.03</p>	<p>3.84</p>

#### Remarks

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply a minimum of 2 gals. of water per acre.
- For edible podded and succulent shelled legume vegetables, do not apply within 7 days of harvest.
- For dried shelled legume vegetables, do not apply within 21 days of harvest.
- **Do not** apply more than 0.12 lb. a.i. (0.96 pts.) per acre per season.

- For succulent and dried shelled peas and beans, do not graze livestock in treated areas or harvest vines for forage or hay.
- <sup>1</sup> For control before the larva bores into the plant stalk or pods.
- <sup>2</sup> For control of the first and second instar only.
- <sup>3</sup> For suppression only.
- <sup>4</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>LEGUME VEGETABLES (SOYBEANS)</b>			
Soybean	Bean Leaf Beetle	0.015-0.025	1.92-3.20
	Cabbage Looper		
	Corn Earworm		
	Corn Rootworm Beetle (adult):		
	Mexican		
	Northern		
	Southern		
	Western		
	Cutworm species		
	Green Cloverworm		
	Mexican Bean Beetle		
	Painted Lady (Thistle) Caterpillar		
	Potato Leafhopper		
	Saltmarsh Caterpillar		
	Soybean Aphid <sup>4</sup>		
Threecornered Alfalfa Hopper			
Thrips species <sup>5</sup>			
Velvetbean Caterpillar			
Woollybear Caterpillar			
Armyworm <sup>1</sup>	0.025-0.03	3.20-3.84	
Blister Beetle species			
European Corn Borer			
Fall Armyworm <sup>1</sup>			
Grasshopper species			
Japanese Beetle (adult)			
Plant Bug species			
Silverspotted Skipper			
Stink Bug species			
Tobacco Budworm <sup>3</sup>			
Webworm species			
Yellowstriped Armyworm <sup>1</sup>			
Beet Armyworm <sup>2,3</sup>	0.03	3.84	
Lesser Cornstalk Borer <sup>2</sup>			
Soybean Looper <sup>2,3</sup>			
Spider Mite species <sup>2</sup>			

#### Remarks

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- **Do not** graze or harvest treated soybean forage, straw or hay for livestock feed.

- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply a minimum of 2 gals. of water per acre.
- For control of adult corn rootworm beetles (*Diabrotica* species) as part of an aerial applied corn rootworm control program use a minimum of 0.02 lb. a.i. (2.56 fl. oz. of product) per acre.
- **Do not** apply within 30 days of harvest.
- **Do not** apply more than 0.06 lb. a.i. (7.68 fl. oz, or 0.48 pts. of product) per acre per season.

<sup>1</sup> Use higher rates for large larvae.

<sup>2</sup> Suppression only.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

<sup>4</sup> Use lower rates for early season applications and/or lighter populations.

<sup>5</sup> Does not include Western Flower Thrips.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>LETTUCE (HEAD AND LEAF)</b>			
	Alfalfa Looper Cabbage Looper Cutworm species Green Cloverworm Imported Cabbageworm Saltmarsh Caterpillar	0.015-0.025	1.92-3.20
	Aphid species <sup>2,3</sup> Armyworm Beet Armyworm <sup>3</sup> Corn Earworm Diamondback Moth <sup>3</sup> European Corn Borer Fall Armyworm <sup>1</sup> Flea Beetle species Grasshopper species Japanese Beetle (adult) Leafhopper species Meadow Spittlebug Plant Bug species including Lygus species <sup>3</sup> Southern Armyworm Spider Mite species <sup>2</sup> Stink Bug species Tobacco Budworm <sup>3</sup> Vegetable Weevil (adult) Whitefly species <sup>2,3</sup>	0.02-0.03	2.56-3.84

#### Remarks

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air apply a minimum of 2 gals. of water per acre.
- **Do not** apply within 1 day of harvest.
- **Do not** apply more than 0.3 lb. a.i. (38.4 fl. oz, or 2.4 pts. of product) per acre per season.

<sup>1</sup> For control of first and second instar only.

<sup>2</sup> Suppression only.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>ONION (BULB) AND GARLIC</b>			
	Cutworm species Leaf miner species (adu[t) Onion Maggot (adult) Seedcorn Maggot (adult)	0.015-0.025	1.92-3.20
	Aphid species <sup>2</sup> Armyworm species <sup>1</sup> Flower Thrips <sup>2,3</sup> Onion Thrips <sup>3</sup> Plant Bug species Stink Bug species Tobacco Thrips <sup>3</sup> Western Flower Thrips <sup>2,3</sup>	0.02-0.03	2.56-3.84

**Remarks**

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Use the higher label rates as thrips population increases and avoid rescue situations.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage. When applying by air, apply a minimum of 2 gals. of water per acre.
- For thrips control by aerial application, the addition of 1% COC v/v, 0.25% NIS v/v or a silicone adjuvant (follow manufacturers use directions) may enhance the deposition of the spray and increase plant coverage.
- **Do not** apply within 14 days of harvest.
- **Do not** apply more than 0.24 lb. a.i. (30.72 fl. oz. or 1.2 pts. of product) per acre per season.

<sup>1</sup> For control of the first and second instar only.

<sup>2</sup> Suppression only.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>PEANUT</b>			
	Cutworm species Green Cloverworm Potato Leafhopper Rednecked Peanut Worm Threecornered Alfalfa Hopper Velvetbean Caterpillar	0.015-0.025	1.92-3.20
	Bean Leaf Beetle Corn Earworm Fall Armyworm <sup>1</sup> Grasshopper species Southern Corn Rootworm (adult) Stink Bug species Tobacco Thrips Vegetable Weevil Whitefringed Beetle (adult)	0.02-0.03	2.56-3.84
	Aphid species <sup>2</sup> Beet Armyworm <sup>2,3</sup> Lesser Cornstalk Borer <sup>2</sup> Soybean Looper <sup>2,3</sup> Spider Mite species <sup>2</sup>	0.03	3.84

**Remarks**

- Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals. of water per acre.
- **Do not** apply within 14 days of harvest.
- **Do not** apply more than 0.12 lb. a.i., (15.36 fl. oz. or 0.96 pts. of product) per acre per season.

<sup>1</sup> Use higher rates for large larvae.

<sup>2</sup> Suppression only.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTINS FOR USE.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>POME FRUITS</b>			
Apple	Apple Aphid	0.02-0.04	2.56-5.12
Crabapple	Apple Maggot (adult)		
Loquat	Cherry Fruit Fly species (adult)		
Mayhaw	Codling Moth		
Oriental Pear	Green Fruitworm		
Pear	Japanese Beetle		
Quince	Leafhopper species		
	Leafroller species		
	Lesser Appleworm		
	Oriental Fruit Moth		
	Pear Psylla		
	Pear Sawfly		
	Periodical Cicada		
	Plant Bug species		
	Plum Curculio		
	Rosy Apple Aphid		
	San Jose Scale (fruit infestations only)		
	Stink Bug species		
	Tent Caterpillar species		
	Tentiform Leaf Miner species		
	Tufted Apple Budworm		

**Remarks**

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply a minimum of 5 gals. of water per acre.
- **Do not** apply within 21 days of harvest.
- **Do not** apply more than 0.2 lb. a.i. (1.6 pts.) per acre per year. **Do not** apply more than 0.16 lb. a.i. (1.28 pts.) per acre per year post bloom.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>STONE FRUITS</b>			
Apricot	American Plum Borer	0.02-0.04	2.56-5.12
Chickasaw Plum	Black Cherry Aphid		
Damson Plum	Cherry Fruit Fly species (adult)		
Japanese Plum	Green Fruitworm		
Nectarine	Japanese Beetle		
Peach	Leafhopper species		
Plum	Leafroller species		
Plumcot	Oriental Fruit Moth		
Prune	Peach Twig Borer		
Sweet and Tart Cherry	Peachtree Borer species		
	Periodical Cicada		
	Plant Bug species		
	Plum Curculio		
	Rose Chafer		
	Stink Bug species		
	Tent Caterpillar species		

**Remarks**

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply a minimum of 5 gals. of water per acre.
- **Do not** apply within 14 days of harvest.
- **Do not** apply more than 0.2 lb. a.i. (1.6 pts.) per acre per year **Do not** apply more than 0.16 lb. a.i. (1.28 pts.) per acre per year post bloom.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>SUGARCANE</b>			
	Mexican Rice Borer <sup>1</sup>	0.025-0.04	3.20-5.12
	Pygmy Mole Cricket		
	Rice Stalk Borer <sup>1</sup>		
	Sugarcane Aphid <sup>3</sup>		
	Sugarcane Beetle (adult) <sup>2</sup>		
	Sugarcane Borer <sup>1</sup>		
	West Indian Crane fly		
	Yellow Sugarcane Aphid <sup>3</sup>		

**Remarks**

- Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply a minimum of 2 gals. of water per acre.
- **Do not** apply within 21 days of harvest.



- **Do not** apply more than 0.16 lb. a.i. (20.48 fl. oz. or 1.28 pts. of product) per acre per season.

<sup>1</sup> For control before the larva bores into the plant stalk.

<sup>2</sup> Suppression only of beetles active above ground.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>SUNFLOWER</b>			
	Cutworm species	0.015-0.025	1.92-3.20
	Sunflower Beetle		
	Banded Sunflower Moth	0.02-0.03	2.56-3.84
	Fall Armyworm <sup>1</sup>		
	Grasshopper species		
	Head-Clipper Weevil (adult)		
	Japanese Beetle (adult)		
	Leafhopper species		
	Meadow Spittlebug		
	Painted Lady (Thistle) Caterpillar		
	Seed Weevil (adult)		
	Spotted Cabbage Looper		
	Stem Weevil (adult)		
	Stink Bug species		
Sunflower Maggot (adult)			
Sunflower Moth			
Woollybear Caterpillar			
Beet Armyworm <sup>2,3</sup>	0.03	3.84	
Spider Mite species <sup>2</sup>			

**Remarks**

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of sunflower heads and/or foliage. When applying by air, apply a minimum of 2 gals. of water per acre.
- **Do not** apply within 45 days of harvest.
- **Do not** apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pts. of product) per acre per season. **Do not** apply more than 0.09 lb. a.i. (11.52 fl. oz. or 0.72 pts. of product) per acre per season after bloom initiation.
- **Do not** apply as an ultra-low volume (ULV) spray.

<sup>1</sup> Use higher rates for large larvae.

<sup>2</sup> Suppression only.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>TOBACCO (AIR DRIED): BRLEY TOBACCO AND FLUE-CURED TOBACCO</b>			
	Aphid species <sup>2,3</sup> Armyworm species <sup>1</sup> Blister Beetle species Cabbage Looper Corn Earworm Cucumber Beetle species (adult) Cutworm species Grasshopper species Japanese Beetle (adult) Katydid species Plant Bug species <sup>3</sup> Salt Marsh Caterpillar Stinkbug species Thrips species <sup>2</sup> Tobacco Budworm Tobacco Flea Beetle (adult) Tobacco Hornworm Tree Cricket species Vegetable Weevil (adult) Webworm species	0.015-0.03	1.92-3.84

**Remarks**

- Apply as required by scouting usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage. When applying by air, apply a minimum of 2 gals. of water per acre.
- **Do not** apply within 40 days of harvest.
- **Do not** apply more than 0.09 lb. a.i. (0.72 pts.) per acre per year.

<sup>1</sup> For control of first and second instars only.

<sup>2</sup> Suppression only.

<sup>3</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>TREE NUTS</b>			
Almond Beech Nut Brazil Nut Butternut Cashew Chestnut Chinquapin Filbert (Hazlenut) Hickory Nut Macadamia Nut (Bush Nut) Walnut, Black	Ants Chinch Bug Codling Moth Filbertworm Leaffooted Bug Leafroller species Navel Orangeworm Peach Twig Borer Plant Bug species Stink Bug species Walnut Aphid Walnut Husk Fly species (adult)	0.02-0.04	2.56-5.12

Walnut, English (Persian)			
Pecan	Hickory Shuckworm Pecan Aphid species Pecan Casebearer species Pecan Phylloxera species Pecan Spittlebug Pecan Weevil	0.02-0.04	2.56-5.12

### Remarks

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply a minimum of 5 gals. of water per acre.
- **Do not** apply within 14 days of harvest.
- **Do not** apply more than 0.16 lb. a.i. (1.28 pts.) per acre per year. **Do not** apply more than 0.12 lb. ai. (0.96 pts.) per acre per year post bloom.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>TUBEROUS AND CORM VEGETABLES (POTATO, SWEET POTATO, YAMS AND RELATED)</b>			
Arracacha	Cutworm species	0.015-0.025	1.92-3.20
Arrowroot	Leafhopper species		
Artichoke (Chinese and Jerusalem only)	Saltmarsh Caterpillar		
Canna (edible)	Sweet Potato Hornworm		
Cassava (bitter and sweet)	Woollybear Caterpillar species		
Chayote (root)	Aphid species <sup>1</sup>	0.02-0.03	2.56-3.84
Chufa	Armyworm species <sup>1</sup>		
Dasheen	Blister Beetle species		
Ginger	Colorado Potato Beetle <sup>1</sup>		
Leren	Corn Earworm		
Potato	Cricket species		
Sweet Potato	Cucumber Beetle species (adults)		
Tanier	European Corn Borer		
Turmeric	Flea Beetle species (adults)		
Yam (bean and true)	Grasshopper species		
	Looper species <sup>1</sup>		
	Lygus Bug species <sup>1</sup>		
	Plant Bug species		
	Potato Psyllid		
	Potato Tuberworm		
	Stink Bug species		
	Sweet Potato Leaf Beetle (adults)		
	Sweet Potato Vine Borer		
	Thrips species <sup>1,2</sup>		
	Tortoise Beetle species		
	Webworm species		
	Weevil species (adults)		
	Leafminer species <sup>1,3</sup>	0.03	3.84

	Whitefly species <sup>1,3</sup> Spider Mite species <sup>3</sup>		
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**Remarks**

- Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of all above ground plant parts. When applying by air, apply a minimum of 2 gals. total solution per acre. When applying by ground, a minimum of 10 gals. total solution per acre is recommended.
- Use higher application volumes and/or rates when foliage is dense, pest populations are high, larvae are large, weather conditions are adverse and/or as plant size increases. Use higher rates for longer residual.
- Insects that bore or tunnel into leaves, vines, stems, tubers or corms must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of this product.
- **Do not** apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pts. of product) per acre per season. **Do not** apply within 7 days of harvest.

<sup>1</sup> See RESISTANCE statement under GENERAL DIRECTIONS FOR USE.

<sup>2</sup> Does not include Western Flower Thrips.

<sup>3</sup> Suppression only.

NON-AGRICULTURAL USES			
Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>CONIFER AND DECIDUOUS TREES</b>			
Plantations and Nurseries	Bagworm	0.02-0.04	2.56-5.12
	Balsam Twig Aphid		
	Balsam Woolly Aphid		
	Gypsy Moth		
	Japanese Beetle		
	June Beetle species		
	Leaf Beetle species		
	Leafroller species		
	May Beetle species		
	Pales Weevil		
	Pine Chafer		
	Pine Colaspis Beetle		
	Pine Conelet Bug		
	Pine Leaf Chermid		
	Pine Sawfly species		
	Pine Weevil species		
	Poplar Aphid species		
	Sawfly species		
	Spittlebug species		
Spruce Budworm			
Tent Caterpillar species			
Tussock Moth species			
Webworm species			

**Remarks**

- To control exposed foliage, flower, cone, seed and bark feeding insects, apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground equipment using sufficient water to obtain full coverage of target site. When applying by air, apply a minimum of 2 gals. of water per acre.
- **Do not** apply more than 0.24 lb. a.i. (1.92 pts.) per acre per year.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
Seed Orchards	Coneworm species Seed Bug species	See Remarks	See Remarks

**Remarks**

- For high volume sprayers, dilute 5.12 fl. oz. per 100 gals. of water and apply 5-10 gals. of finished spray per tree.
- For low volume sprayers, dilute 20 fl. oz. per 100 gals. of water and apply 100 gals. of finished spray per acre.
- For aerial applications, apply 15 fl. oz. per acre in a minimum of 10 gals. finish spray per acre.
- **Do not** apply more than 0.5 lb. a.i. (4 pts.) per acre per year

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>NON-CROPLAND (EXCLUDING PUBLIC LAND)</b>			
	See CROP OUTLETS	See Crop Outlets	See Crop Outlets

**Remarks**

- Spray non-cropland adjacent to agricultural areas to control migratory insects, which may threaten crops.
- Follow GENERAL USE DIRECTIONS, rates and spray recommendations found elsewhere in this label for the adjacent crop outlet and target pests.
- Use highest labeled rates for dense/large foliage, high insect populations and larger larval stages.
- Repeat as necessary to maintain control.
- **Do not** exceed 0.2 lb. a.i. (1.6 pts.) per acre per year.
- **Do not** graze livestock in treated areas.

Rate Conversion Chart			
lb. a.i./A	fl. oz./A	pts./A	Treated Acres/gal.
0.015	1.92	0.12	66
0.02	2.56	0.16	50
0.025	3.20	0.20	40
0.03	3.84	0.24	33
0.04	5.12	0.32	25

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE AND SPILL PROCEDURES:** Keep out of reach of children and animals. Store in original containers only, in a cool, dry place and avoid excess heat. Do not freeze. Do not store below 40°F. Carefully open containers.

If crystals are observed, warm material to above 60°F by placing container in warm location. Shake or roll container periodically to redissolve solids.

After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

In case of spill, avoid contact, isolate area, and keep out animals and unprotected persons. Confine spills.

**To confine spill:** If liquid, dike surrounding area or absorb with sand, cat litter, or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL: Metal or Plastic Container:** Triple rinse ( or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by State and local authorities. Do not cut or weld metal containers.

**Returnable, Refillable Containers [U-Turn® Container]:** Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

**For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC – 1-800-424-9300.**

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**BEFORE BUYING OR USING THIS PRODUCT**, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this products label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL, THIS PRODUCT IS SOLD AS IS TO THE EXTENT ALLOWED BY APPLICABLE LAW. LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL, BUYER OR USER MUST SEND, TO THE EXTENT REQUIRED BY APPLICABLE LAW, WRITTEN NOTICE OF SUCH CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, 7251 WEST 4TH STREET, GREELEY, CO 80634.

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