



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

74530-96

Date of Issuance:

7/15/20

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

Lambda 22.8 CS

Name and Address of Registrant (include ZIP Code):

Matt Granahan  
Helm Agro US, Inc.  
401 E. Jackson St., Suite 1400  
Tampa, FL 33602

**Note:** Changes in labeling 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 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 unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Jacquelyn Herrick, Product Manager 03  
Invertebrate-Vertebrate Branch 1, Registration Division (7505P)

Date:

7/15/20

2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 74530-96.”
3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 02/18/2020

If you have any questions, please contact Jamey Shuler at (703) 347-8036 or by email at [Shuler.Jamey@epa.gov](mailto:Shuler.Jamey@epa.gov).

Enclosure

**ACCEPTED**  
**07/15/2020**  
 Under the Federal Insecticide, Fungicide  
 and Rodenticide Act as amended, for the  
 pesticide registered under  
 EPA Reg. No. 74530-96



LAMBDA-CYHALOTHRIN | GROUP **3** | INSECTICIDE

**(Master Label)**

# Lambda 22.8 CS

Controlled Release Insecticide

**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.

**Active Ingredient:**

Lambda-cyhalothrin<sup>1</sup> :

[1 α(S\*),3 α(Z)]-(±)-cyano-(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)- 2,2-  
 dimethylcyclopropanecarboxylate.....22.8%

**Other Ingredients:**.....77.2%  
 Total.....100.0%

Lambda™ 22.8 CS contains 2.08 lbs. of active ingredient per gallon, and is a capsule suspension.

<sup>1</sup> Synthetic pyrethroid

EPA Reg. No. 74530-OA

EPA Est. No. xxxxx-xx-xx

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

## KEEP OUT OF REACH OF CHILDREN WARNING

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

<b>FIRST AID</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 the 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>
<b>NOTE TO PHYSICIAN</b>	
Contains petroleum distillate -vomiting may cause aspiration pneumonia.	
Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
<b>HOT LINE NUMBER</b>	
For 24-Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call CHEMTRAC <b>1-800-424-9300</b>	

**Manufactured for:**  
Helm Agro US, Inc.  
401 E. Jackson St #1400  
Tampa, FL 33602

**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. Avoid breathing (vapor or spray mist). Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. 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. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

**Environmental Hazards**

This product is extremely toxic to fish and other aquatic organisms. Do not contaminate water when cleaning equipment or disposing of equipment wash water. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas

may be hazardous to aquatic organisms in neighboring areas. Apply this product only as specified on this label. When making applications, care should be used to avoid household pets, particularly fish and reptile pets.

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.

### **Physical and Chemical Hazards**

Do not use this product in or on electrical equipment due to the possibility of shock hazard. Do not use with or store near oxidizing agents.

### **GENERAL INFORMATION**

**LAMBDA 22.8 CS** is a unique formulation which is a proprietary blend of ingredients for use with the active ingredient Lambda-cyhalothrin.

### **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 G on an EPA chemical resistant category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of: Barrier Laminate 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 requirement 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.

## **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. 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 restricted entry interval (REI) of 24 hours.**

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 made of: Barrier Laminate or Viton  $\geq$  14 mils
- Shoes plus socks

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**DO NOT** enter or allow others to enter the treated areas until sprays have dried. AVOID working in spray mist.

Keep all unprotected persons out of operating areas or vicinity where there may be danger of drift. Certain states may require more restrictive reentry intervals; consult your State Department of Agriculture for further information.

Failure to follow the directions for use and precautions on this label may result in poor insect control, crop injury, or illegal residues.

## USE INSTRUCTIONS

Initial and residual control are contingent upon thorough crop coverage. Apply with ground or aerial 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 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, **LAMBDA 22.8 CS** may be applied before, during, or after planting. For soil-incorporated applications, use higher rates for improved control.

## RESISTANCE MANAGEMENT

**LAMBDA 22.8 CS** 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:

### BUFFER ZONES

#### Vegetative Buffer strip

Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing **LAMBDA 22.8 CS** onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers:

*Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21 pp. [www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf](http://www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf)*

In the State of New York, a 25ft. 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 150ft. buffer strip (or 450 ft. buffer strip for ULV application) required for spray drift.

#### Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)

Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes; natural ponds; estuaries; and commercial fish ponds).

#### Buffer Zone for ULV Aerial Application

Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes; natural ponds; estuaries; and commercial fish ponds).

#### Buffer Zone for Non-ULV Aerial Application

Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes; natural ponds; estuaries; and commercial fish ponds).

## SPRAY DRIFT REQUIREMENTS

### Wind Direction and Speed

Only apply this product if the wind direction favors on-target deposition.

Do not apply when the wind velocity exceeds 15 mph.

### Temperature Inversion

Do not make aerial or ground applications into 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.

### Droplet Size

Use only medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (8572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

### Additional Requirements for Ground Applications

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

### **Additional Requirements for Aerial Applications**

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

Flight speed and nozzle orientation must be considered in determining drop size. Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a cross-wind, the swath will be displaced downward. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

### **TANK MIX APPLICATION**

When tank mixing with any other agricultural products, always add **LAMBDA 22.8 CS** last. Fill the tank with 1/2 to 2/3 volume of the mixing diluent. Make sure all other products are fully dispersed in the mixing diluent before adding the recommended rate of **LAMBDA 22.8 CS** 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 **LAMBDA 22.8 CS** 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.

**LAMBDA 22.8 CS** is an aqueous based formulation. It is recommended that no type of non-emulsifiable oils be used in combination with **LAMBDA 22.8 CS**. If adjuvants are used, use only:

- Nonionic Surfactant (NIS) containing at least 75% surface agent, or
- Nonphytotoxic Crop Oil Concentrate (COC), including once-refined Vegetable Oil Concentrate (VOC), or,
- 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 nonphytotoxic to the target crop.
- Is compatible in mixture. (May be established through a jar test.)
- Is supported locally for use with **LAMBDA 22.8 CS** 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 **LAMBDA 22.8 CS** as diluents or adjuvants:

- Nonemulsifiable oils,
- Diesel Fuel
- Straight Mineral Oil



## **CHEMIGATION**

### **Sprinkler Irrigation Application**

Apply **LAMBDA 22.8 CS** 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 **LAMBDA 22.8 CS** applied 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 **LAMBDA 22.8 CS** 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 **LAMBDA 22.8 CS** 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 **LAMBDA 22.8 CS** 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 Applications**

A. Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. 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 non-uniform distribution of treated water.

C. If you have any 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 back-flow.

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 are 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 AGRICULTURAL USES

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<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	0.96-1.60
	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) 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 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 Stink Bug species Sweet Clover Weevil (Adult) Thrips species <sup>4</sup> Western Yellowstriped Armyworm Whitefringed Beetle species (Adult) Yellowstriped Armyworm Beet Armyworm <sup>1,3</sup> Blotch Leafminer <sup>3</sup> Spider Mites <sup>2</sup>	0.02-0.03	1.28-1.92
		0.03	1.92

**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.

- Apply during the early morning or during the evening hours. Do not apply when bees are actively foraging. Be aware of bee hazard resulting from a cool evening and/or morning dew. Remove bee shelters during and for 2-3 days following application. Do not apply directly to bee shelters.
- **Do not** apply more than 0.03 lb. a.i. (1.92 fl. oz. or 0.12 pts. of product) per acre per cutting.
- **Do not** apply more than 0.12 lb. a.i. (7.68 fl. oz. or 0.48 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 **USE INSTRUCTIONS**.

<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 Looper species Lygus Bug	0.015-0.03	0.96-1.92
	Cabbage Aphid	0.03	1.92

**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. (5.76 fl. oz. or 0.36 pts. of product) per acre per year.

Crop	Target Pest	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>	0.33 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. (5.76 fl. oz. or 0.36 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. (7.68 fl. oz. or 0.48 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. (30.72 fl. oz. or 1.92 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 <b>LAMBDA 22.8 CS</b> Applied at 0.33 fl. oz./1000 ft. of Row for Various Row Spacings						
Row Spacing	40"	38"	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	4.3	4.55	4.8	5.05	5.4	5.75

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 pittlebug Western Bean Cutworm <sup>1</sup>	0.015-0.025	0.96-1.60
	Armyworm <sup>2</sup> Bean Leaf Beetle Bird Cherry-Oat Aphid <sup>3</sup> 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>	0.02-0.03	1.28-1.92

	Beet Armyworm <sup>4</sup> Chinch Bug Greenbug <sup>4</sup> Mexican Rice Borer <sup>1</sup> Rice Stalk Borer <sup>1</sup> Southern Corn Leaf Beetle <sup>3</sup> Sugarcane Borer <sup>1</sup>	0.03	1.92
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**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. **LAMBDA 22.8 CS** 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. (1.92 fl. oz. of product) per acre.
- **Do not** apply within 21 days 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 0.12 lb. a.i. (7.68 fl. oz. or 0.48 pts. of product) per acre per crop from at plant and foliar applications.
- **Do not** apply more than 0.06 lb. a.i. (3.84 fl. oz. or 0.24 pts. of product) per acre after silk initiation. **Do not** apply more than 0.03 lb. a.i. (1.92 fl. oz. or 0.12 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 Management section under **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> Chinch 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	1.28-1.92
	Corn Silkfly (Adult) <sup>2</sup>	0.03	1.92

**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. (1.60 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. (30.72 fl. oz. or 1.92 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 Management section under **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 Greenbug Leafhopper species Rice Stink Bug Rice Water Weevil (Adult) Rice worm Sharpshooter species True Armyworm Yellow Sugarcane Aphid Yellowstriped Armyworm	0.025-0.04	1.6-2.56
	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	1.92-2.56

**Remarks:**

- 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.
- **LAMBDA 22.8 CS** 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 in a minimum of 2 gals. of water. (or total carrier volume) per acre, but ensure sufficient volume is used to provide adequate coverage. In addition, adding an emulsified 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, **LAMBDA 22.8 CS** 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. **LAMBDA 22.8 CS** may only provide suppression. If satisfactory control is not achieved with the first application of **LAMBDA 22.8 CS**, 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.



- Mixers/loaders supporting aerial applications to wild rice at a rate of 0.04 lb. ai. per acre, and treating 1200 acres (or more) per day must wear dust-mist respirator.
- **Do not** release flood water within 7 days of an application.
- **Do not** apply more than 0.12 lb. a.i. (7.68 fl. oz. or 0.48 pt. of product) per acre per season.
- **Do not** apply more than 0.04 lb. a.i. (2.56 fl. oz. or 0.16 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 Sorghum Midge	0.015-0.02	0.96-1.28
	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>	0.02-0.03	1.28-1.92
	Chinch Bug Mexican Rice Borer <sup>2</sup> Rice Stalk Borer <sup>2</sup> Sugarcane Borer <sup>2</sup>	0.03	1.92

**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 aerial 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. **LAMBDA 22.8 CS** may only suppress heavy infestations and/or subsequent migrations.
- **Do not** apply more than 0.08 lb..a.i. (5.12 fl. oz. or 0.32 pt. of product) per acre per season.
- **Do not** apply more than 0.06 lb. a.i. (3.84 fl. oz. or 0.24 pt. of product) per acre per season after crop emergence.
- **Do not** apply more than 0.02 lb. a.i. (1.28 fl. oz. or 0.08 pt. 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 Management section under **Directions for Use**.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>CEREAL GRAINS</b>			
Barley Buckwheat Oats	Army Cutworm Cutworm species	0.015-0.025	0.96-1.60
Rye Triticale Wheat Wheat Hay	Armyworm Bird Cherry-Oat Aphid <sup>1</sup> Cereal Leaf Beetle English Grain Aphid <sup>1</sup> 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	0.02-0.03	1.28-1.92
	Grass Sawfly	0.025-0.03	1.60-1.92
	Chinch Bug Corn Leaf Aphid <sup>2</sup> Greenbug <sup>1,3</sup> Mite species <sup>2</sup>	0.03	1.92

**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. **LAMBDA 22.8 CS** may only suppress heavy infestations and/or migrations.
- Greenbug is known to have many biotypes. **LAMBDA 22.8 CS** 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. (3.84 fl. oz. or 0.24 pts. 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, **LAMBDA 22.8 CS** may provide suppression only. Higher rates and increased coverage will be necessary.

<sup>2</sup> Suppression only.

<sup>3</sup> See Resistance Management section under **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 Brussels Sprouts Cabbage Cavalo Broccolo Cauliflower Chinese Broccoli (gai ion) Chinese Cabbage (napa) Chinese Mustard Cabbage (gai choy) Kohlrabi	Alfalfa Looper Cabbage Looper Cabbage Webworm Cutworm species Imported Cabbageworm Southern Cabbageworm	0.015-0.025	0.96-1.60
	Aphid species <sup>2,3</sup> Armyworm Beet Armyworm <sup>1,3</sup> Corn Earworm Diamondback Moth <sup>3</sup> 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>1</sup> Stink Bug species Thrips species <sup>2</sup> Vegetable Weevil (Adult) Whitefly species <sup>2,3</sup> Yellowstriped Armyworm	0.02-0.03	1.28-1.92

**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/A.
- **Do not** apply within 1 day of harvest.
- **Do not** apply more than 0.24 lb. a.i. (15.36 fl. oz. or 0.96 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 Management section under **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	. 0.96-1.28
	Cabbage Looper Cotton Fleahopper Cotton Leafperforator Cotton Leafworm Lygus Bug species <sup>3</sup> Pink Bollworm Saltmarsh Caterpillar	0.02-0.03	1.28-1.92
	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 Sweet Potato Whitefly <sup>2,3</sup> Tobacco Budworm <sup>3</sup> Twospotted Spider Mite <sup>2</sup>	0.025-0.04	1.60-2.56

**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 aerial equipment using sufficient water to obtain full coverage of foliage.
- Applications may also be made with equipment adapted and calibrated for ULV sprays. **LAMBDA 22.8 CS** 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 (1.28 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, **LAMBDA 22.8 CS** 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. (12.8 fl. oz. or 0.8 pt. 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 the first and second instar only.

<sup>2</sup>Suppression only.

<sup>3</sup> See Resistance Management section under **Directions for Use**.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>CUCURBIT VEGETABLES</b>			
Chayote (fruit) Chinese Waxgourd (Chinese preserving melon) Citron Melon Cucumber Gherkin Gourd (edible) <i>Lagenaria</i> species – includes: hyotan, cucuzza <i>Luffa acutangula</i> , <i>L. cylindrical</i> - includes: hechima, Chinese okra <i>Momordica</i> species – includes: balsam apple, balsam pear, bitter melon, Chinese cucumber 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 Pumpkin Squash, summer ( <i>Cucurbita pepo</i> var. <i>melopepo</i> )- includes: crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini Squash, winter ( <i>Cucurbita 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 Watermelon –includes: hybrids and/or varieties of <i>Citrullus lanatus</i>	Armyworm species <sup>1</sup> Blister Beetle species Cabbage Looper Corn Earworm Cricket species Cucumber Beetle species (adults) Cutworm species Flea Beetle species Grasshopper species June Beetle species Leaffooted Bug Leafhopper species 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	0.02-0.03	1.28-1.92
	Aphid species <sup>1</sup> Leafminer species <sup>1,3</sup> Whitefly species <sup>1,3</sup> Spider Mite species <sup>3</sup>	0.03	1.92

**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 gal. 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 **LAMBDA 22.8 CS**.
- **Do not** apply more than 0.18 lb. a.i. (11.5 fl. oz. or 0.72 pts. of product) per acre per season.
- **Do not** apply within 1 day of harvest.

<sup>1</sup> See Resistance Management section under **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 Ground cherry Pepino Peppers (bell and nonbell) Tomatillo Tomato	Cabbage Looper Cutworm species Hornworm species	0.015-0.025	0.96-1.60
	Aphid species <sup>2,3</sup> 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>5</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>	0.02-0.03	1.28-1.92

**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. (23.04 fl. oz. or 1.44 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 Management section under **Directions for Use.**

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

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

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, and Grass Grown for Seed	Army Cutworm Cutworm species Essex Skipper Range Caterpillar Striped Grass Looper	0.015-0.025	0.96-1.6
	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 Spittlebug species Stink Bug species Sugarcane Aphid Thrips species Tick species True Armyworm Webworm species Yellowstriped Armyworm	0.02-0.03	1.28-1.92

**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 in 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, **LAMBDA 22.8 CS** 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. **LAMBDA 22.8 CS** 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, hay 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. (1.92 fl. oz. or 0.12 pts. of product) per acre per cutting for pastures, rangeland and grasses grown for seed. A minimum re-treatment interval (RTI) 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. (5.76 fl. oz. or 0.36 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 Management section under **Directions for Use**.

<sup>3</sup> Suppression only.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>LEGUME VEGETABLES</b>	<b>(BEANS AND PEAS)</b>		
<b>Edible Podded (Only)</b> <i>Canavalia ensiformis</i> -jackbean <i>Canavalia gladiata</i> -sword bean <i>Glycine max</i> -soybean (immature seed)	Cutworm species Green Cloverworm Imported Cabbageworm Mexican Bean Beetle Saltmarsh Caterpillar Velvetleaf Caterpillar	0.015-0.025	0.96-1.60
<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, caljang, Chinese longbean, cowpea, Crowder pea, and Southern Pea	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 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 Stink Bug species Threecornered Alfalfa Hopper Thrips species <sup>4,5</sup> Tobacco Budworm <sup>4</sup> Webworm species Western Bean Cutworm Western Yellowstriped Armyworm <sup>2</sup> Yellowstriped Armyworm <sup>2</sup>	0.02-0.03	1.28 - 1.92



Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>LEGUME VEGETABLES (BEANS AND PEAS)</b>			
(continued)			
<b>Succulent Shelled or Dried Shelled</b> <i>Vicia faba.</i> -broadbean (favabean)  <b>Dried Shelled (Only)</b> <i>Cicer arietinum</i> – chickpea (garbanzo bean) <i>Cyamopsis tetragonoloba</i> – guar <i>Lablab purpureus</i> – Lablab bean (hyacinth bean) <i>Lupinus</i> species – includes: grain, sweet, white and sweet white lupines <i>Lens esculata</i> – Lentils	Beet Armyworm <sup>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	1.92

**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.
- 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. (7.68 fl. oz. or 0.48 pts. of product) 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>Use higher rates for large larvae.

<sup>3</sup>For suppression only.

<sup>4</sup>See Resistance Management section under **Directions for Use**.

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

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>LEGUME VEGETABLES (SOYBEANS)</b>			
Soybeans	Bean Leaf Beetle 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 Aphids <sup>4</sup> Threecornered Alfalfa Hopper Thrips species <sup>5</sup> Velvetbean Caterpillar Woollybear Caterpillar	0.015-0.025	0.96- 1.60
	Armyworm <sup>1</sup> Blister Beetle species European Corn Borer Fall Armyworm <sup>1</sup> Grasshopper species Japanese Beetle (Adult) Plant Bug species Silverspotted Skipper Stink Bug species including Kudzu bug Tobacco Budworm <sup>3</sup> Webworm species Yellowstriped Armyworm <sup>1</sup>	0.025-0.03	1.60-1.92
	Beet Armyworm <sup>23</sup> Lesser Cornstalk Borer <sup>2</sup> Soybean Looper <sup>23</sup> Spider Mite species <sup>2</sup>	0.03	1.92

**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 aerial 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.
- 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. (1.28 fl. oz. of product) per acre.
- **Do not** apply within 30 days of harvest.
- **Do not** apply more than 0.06 lb. a.i. (3.84 fl. oz. or 0.24 pt. 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 Management section under **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	0.96-1.60
	Aphid species <sup>2,3</sup> Armyworm Beet Armyworm <sup>1,3</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	1.28-1.92

**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 0.3 lb. a.i. (19.2 fl. oz. or 1.2 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 Management section under **Directions for Use.**

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>ONION (BULB) AND GARLIC</b>			
	Cutworm species Leafminer species (Adult) Onion Maggot (Adult) Seedcorn Maggot (Adult)	0.015-0.025	0.96-1.60
	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	1.28-1.92

**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 in 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. (15.36 fl. oz. or 0.96 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 Management section under **Directions for Use.**

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>PEANUTS</b>			
	Cutworm species Green Cloverworm Potato Leafhopper Rednecked Peanutworm Threecornered Alfalfa Hopper Velvetbean Caterpillar	0.015-0.025	0.96-1.60
	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	1.28-1.92
	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	1.92

**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 aerial 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. (7.68 fl. oz. or 0.48 pt. 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 Management section under **Directions for Use**.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>POME FRUITS</b>			
Apple Crabapple Loquat Mayhaw Oriental Pear Pear Quince	Apple Aphid Apple Maggot (Adult) Cherry Fruit Fly species (Adult) Codling Moth Green Fruitworm Japanese Beetle Leafhopper species Leafroller species Lesser Appleworm Omnivorous Leafroller Orange Tortrix Oriental Fruit Moth Pear Psylla <sup>1</sup> Pear Sawfly Periodical Cicada Plant Bug species Plum Curculio Rosy Apple Aphid San Jose Scale (fruit infestations only) Spirea Aphid <sup>1</sup> Stink Bug species Tent Caterpillar species Tentiform Leaf Miner species Tree Borer species Tufted Apple Budworm Webworm species	0.02-0.04	1.28-2.56

**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 and IPM recommendations.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply in a minimum of 5 gals. of water per acre, but use higher volumes as appropriate for thorough coverage.
- **Do not** apply within 21 days of harvest.
- **Do not** apply more than 0.2 lb. a.i. (12.8 fl. oz. or 0.80 pts. of product) per acre per year.
- **Do not** apply more than 0.16 lb. a.i. (10.24 fl. oz. or 0.64 pts. of product) per acre per year post bloom.

<sup>1</sup>Suppression only

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>STONE FRUITS</b>			
Apricot Chickasaw Plum Damson Plum Japanese Plum Nectarine Peach Plum Plumcot Prune Sweet and Tart Cherry	American Plum Borer Apple Maggot (Adult) Black Cherry Aphid Cherry Fruit Fly species (Adult) Codling Moth Green Fruitworm Japanese Beetle June Beetle Leafhopper species Leafroller species Oriental Fruit Moth Peach Twig Borer Peachtree Borer species Pear Sawfly Periodical Cicada Plant Bug species Plum Curculio Rose Chafer Stink Bug species Tent Caterpillar species Thrips species	0.02-0.04	1.28-2.56

**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 and IPM recommendations.
- 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, but use higher volumes as appropriate for thorough coverage.
- **Do not** apply within 14 days of harvest.
- **Do not** apply more than 0.2 lb. a.i. (12.8 fl. oz. or 0.80 pts. of product) per acre per year. Do not apply more than 0.16 lb. a.i. (10.24 fl. oz. or 0.64 pts. of product) 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> 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>	0.025-0.04	1.60-2.56

**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. (10.24 fl. oz. or 0.64 pt. 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 Management section under **Directions for Use..**



Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>SUNFLOWER</b>			
	Cutworm species Sunflower Beetle	0.015-0.025	0.96-1.60
	Banded Sunflower Moth 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	0.02-0.03	1.28-1.92
	Beet Armyworm <sup>23</sup> Spider Mite species <sup>2</sup>	0.03	1.92

**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 in 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. (7.68 fl. oz. or 0.48 pts. of product) per acre per season. Do not apply more than 0.09 lb. a.i. (5.76 fl. oz. or 0.36 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 Management section under **Directions for Use**.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
<b>TOBACCO</b>			
	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> Potato Tuberworm Salt Marsh Caterpillar Stinkbug species Tobacco Aphid species <sup>2,3</sup> Tobacco Budworm <sup>3</sup> Tobacco Flea Beetle (Adult) Tobacco Hornworm Tobacco Thrips species <sup>2</sup> Tomato Hornworm Tree Cricket species Vegetable Weevil (Adult) Webworm species	0.015-0.03	0.96-1.92

**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 in 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. (5.76 fl. oz. or 0.36 pts. of product) 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 Management section under **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) Pistachio Walnut, Black Walnut, English (Persian)	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	1.28-2.56
Pecan	Hickory Shuckworm Pecan Aphid species Pecan Casebearer species Pecan Phylloxera species Pecan Spittlebug Pecan Weevil Stink Bug species	0.02-0.04	1.28-2.56

**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 in a minimum of 5 gals. of water/per acre, but use higher rates as appropriate for thorough coverage.
- **Do not** apply within 14 days of harvest.
- **Do not** apply more than 0.16 lb. a.i. (10.24 fl. oz. or 0.64 pts. of product) per acre per year.
- **Do not** apply more than 0.12 lb. a.i. (7.68 fl. oz. or 0.48 pts. of product) 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 Arrowroot Artichoke (Chinese and Jerusalem only) Canna (edible) Cassava (bitter and sweet) Chayote (root) Chufa Dasheen Ginger Leren Potato Sweet Potato Tanier Turmeric Yam (bean and true)	Cutworm species Leafhopper species Saltmarsh Caterpillar Sweet Potato Homworm Woollybear Caterpillar species	0.015-0.025	0.96-1.60
	Aphid species <sup>1</sup> Armyworm species <sup>1</sup> Blister Beetle species Colorado Potato Beetle <sup>1</sup> Corn Earworm Cricket species Cucumber Beetle species (Adults) European Corn Borer Flea Beetle species (Adults) 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)	0.02-0.03	1.28-1.92
	Leafminer species <sup>1,3</sup> Spider Mite species <sup>3</sup> Whitefly species <sup>1,3</sup>	0.03	1.92

**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 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, tubers or corms must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of **LAMBDA 22.8 CS**.
- **Do not** apply more than 0.12 lb. a.i. (7.68 fl. oz. or 0.48 pts. of product) per acre per season. Do not apply within 7 days of harvest.

<sup>1</sup> See Resistance Management section under **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 Balsam Twig Aphid Balsam Woolly Aphid Birch Leafminer Black Pine Weevil Elm Leaf Beetle European Elm Bark Beetle Gypsy Moth Japanese Beetle June Beetle species Leaf Beetle species Leafroller species May Beetle species Mealybug species <sup>1</sup> Pales Weevil Pine Chafer Pine Colaspis Beetle Pine Conelet Bug Pine Leaf Chermid Pine Needle Scale Pine Sawfly species Pine Tip Moth species Pine Tortoise Scale Pine Weevil species Poplar Aphid species Sawfly species Spittlebug species Spruce Budworm Tent Caterpillar species Tussock Moth species Webworm species	0.02 - 0.04	1.28-2.56

**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. (15.36 fl. oz. or 0.96 pts. of product) per acre per year.

<sup>1</sup>Suppression only.

Crop	Target Pest	Rate	
		lb. a.i./A	fl. oz./A
<b>CONIFER AND DECIDUOUS TREES</b>			
Seed Orchards	Coneworm species Seed Bug species Thrips species	See Remarks	See Remarks

**Remarks**

- For high volume sprayers, dilute 2.56 fl. oz. per 100 gals. of water and apply 5-10 gals. of finished spray per tree.
- For low volume sprayers, dilute 10 fl. oz. per 100 gals. of water and apply 100 gals. of finished spray per acre.
- For aerial applications, apply 7.5 fl. oz. per acre in a minimum of 10 gals. finish spray per acre.
- **Do not** apply more than 0.5 lb. a.i. (32 fl. oz. or 2 pts. of product) per acre per year.

Crop	Target Pests	Rate	
		lb. a.i./A	fl. oz./A
Non-Cropland (Excluding Public Land}	See Crop Outlets on this <b>LAMBDA 22.8 CS</b> label for target pests and rates.	See Crop Outlets	See Crop Outlets

**Remarks:**

- Spray non-cropland adjacent to agricultural areas to control migratory insects, which may threaten crops. Follow **USE INSTRUCTIONS**, 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 0.21 lb. a.i. (12.8 fl. oz. or 0.8 pt. of product) per acre per year.
- **Do not** graze livestock in treated areas.

**Rate Conversion Chart**

Lb. a.i. Per Acre	Fl. oz. Per Acre	Pints Per Acre	Treated Acres Per Gal.
0.015	0.96	0.06	133
0.02	1.28	0.08	100
0.025	1.60	0.10	80
0.03	1.92	0.12	67
0.035	2.24	0.14	57
0.04	2.56	0.16	50

## STORAGE AND DISPOSAL

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

**Storage and Spill Procedures:** Store upright at room temperature. Do not allow product to freeze. Keep container closed when not in use. Do not store near food or feed. Avoid exposure to extreme temperatures. In case of spillage or leakages, soak up with an absorbent material such as sand, sawdust, earth, Fuller's earth, etc. Dispose of with chemical waste.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. 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 at the nearest EPA Regional Office for guidance.

### **Container Handling:**

**For Containers equal to or less than 5 gallons: Nonrefillable container.** Do not reuse or refill this container. Clean container 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 ¼ 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. Offer for recycling if available.

**For Containers greater than 5 gallons: Nonrefillable container.** Do not reuse or refill this container. Clean equipment or a mix tank. Fill the container ¼ 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. Offer recycling if available.

**For Bulk containers: (Refillable Container)** Refill this container with pesticides only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person refilling. To clean the container before final disposal, empty the remaining contents from this container into application equipment or tank mix. Fill the container about 10 percent full of water. Agitate vigorously or re-circulate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

## LIMITATION OF WARRANTY AND DAMAGES

Seller warrants to those persons lawfully acquiring title to this product that at the time of first sale of this product by Seller that this product conformed to its chemical description and was reasonably fit for the express purposes stated on the label when used in accordance with Seller's directions. To the extent consistent with applicable law, Buyers and users of this product assume the risk of any use contrary to such directions. **TO THE FULLEST EXTENT PERMITTED BY LAW, EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESS REFERENCE TO THIS LIMITATION OF WARRANTY AND LIMITATION OF DAMAGES, SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OR GUARANTY, AND SELLER EXPRESSLY DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE AND EXPRESSLY DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES THAT MAY EXIST UNDER APPLICABLE LAW, COURSE OF DEALING OR USAGE OF TRADE.** There are no warranties which extend beyond the description on the face hereof. **NO AGENT OF MANUFACTURER OR SELLER IS AUTHORIZED TO GRANT ANY WARRANTY IN EXCESS OF THAT GRANTED IN THIS LIMITATION OF WARRANTY AND LIMITATION OF DAMAGES. TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT. TO THE FULLEST EXTENT PERMITTED BY LAW, MANUFACTURER'S AND / OR SELLER'S LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY,**

**CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT SHALL NOT EXCEED THE PURCHASE PRICE OF THE PRODUCT AS TO WHICH A CLAIM IS MADE.** To the fullest extent permitted by law, Buyers and users of this product are responsible for all loss or damage from use or handling of this product, including, but not limited to, incompatibility with other products (unless otherwise expressly provided for in the Directions for Use of this product), weather conditions, cultural practices, moisture conditions or other environmental conditions.

(RV070720)



**Manufactured for:**  
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