



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

May 14, 2025

Tasha Lott
Product Registration Manager
Albaugh, LLC
1525 NE 36th Street
Ankeny, IA 50021

Subject: Label Amendment - Registration Review Mitigation for Lambda-Cyhalothrin
Product Name: Lambda Cyhalothrin 12.7% EC
EPA Registration Number: 42750-373
Application Date: February 18, 2022
Decision Number: 582064
Case Number: 483063

Dear Tasha Lott:

The Agency, in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Lambda-Cyhalothrin Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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 Assurance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling and must be used at your next label printing. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Caleb Carr by phone at (202) 566-0636, or via email at carr.caleb@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Linda Arrington', with a stylized flourish at the end.

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

ENCLOSURE: Stamped label

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.

LAMBDA-CYHALOTHRIN	GROUP	3A	INSECTICIDE
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LAMBDA CYHOLOTHRIN 12.7% EC

[Alternate Brand Name Crusader 1EC]

Insecticide

ACTIVE INGREDIENT:

Lambda-cyhalothrin.....12.7%

OTHER INGREDIENTS:87.3%

TOTAL:100.0%

Contains 1 pound of active ingredient per gallon

Contains petroleum distillate

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 this label, find someone to explain it to you)

FIRST AID	
IF SWALLOWED:	<ul style="list-style-type: none">• Immediately call a poison control center or doctor.• DO NOT induce vomiting unless told by a poison control center or doctor.• DO NOT give any liquid to the person.• DO NOT give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• Takeoff contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes• Call a poison control center or doctor for treatment advice.
IF INHALED:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible.• Call a poison control center or doctor for further treatment advice.
IF IN EYES:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For non-emergency exposure information on this product, call 1-888-347-6732 (7 days/week, 24-hr). For medical emergencies, dial 911.

NOTE TO PHYSICIAN: Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

[See [inside] booklet for [additional] [complete] [First Aid,] [Precautionary Statements,] [Directions For Use,] [Storage and Disposal,] [and] [Conditions of Sale and Warranty].]

For 24-hour chemical spill, leak, fire, exposure or accident response information, call CHEMTREC toll free at 1-800-424-9300.

ACCEPTED

May 14, 2025

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 42750-373

EPA Reg. No. 42750-373
EPA Est. No. XXX-XX-XXXX

Net Contents: _____ gallons

MANUFACTURED FOR
Albaugh, LLC
1525 NE 36th Street
Ankeny, IA 50021



PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING/AVISO: May be fatal if swallowed. Harmful if absorbed through skin or inhaled. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions 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 hours after exposure and may last 2 to 30 hours, 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)

Applicators and other handlers must wear:

1. Long-sleeved shirt and long pants
2. Chemical resistant gloves, made of barrier laminate or viton (> 14 mils)
3. Shoes plus socks

Mixers/loaders supporting aerial applications to Wild rice at the rate of 0.04 lb. a.i. (5.12 fl. ozs.) per acre and treating 1,200 acres (or more) per day must wear: Wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any R or P filter; OR a NIOSH approved elastometric particulate respirator with any R, or P filter; OR a NIOSH approved powered air-purifying respirator with a HE filter.

Mixers, loaders, and applicators treating nurseries as a foliar broadcast spray treatment or drench/soil/ground directed liquid treatment using a mechanically pressurized handgun must wear: long-sleeved shirt, long pants, shoes and socks, gloves and a respirator. Wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any R or P filter; OR a NIOSH approved elastometric particulate respirator with any R, or P filter; OR a NIOSH approved powered air-purifying respirator with a HE filter.

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 and maintaining PPE. If no such instructions for washables exist, 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:

1. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. 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.

PHYSICAL AND CHEMICAL HAZAARDS

DO NOT mix or allow to come into contact with oxidizing agent. Hazardous Chemical reaction may occur.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic organisms and toxic to wildlife. **DO NOT** apply directly to water, 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 wash water.

NON-TARGET ORGANISM ADVISORY: This product is highly toxic to bees and other pollinating insects exposed to direct treatment or to residues in/on blooming crops or weeds. **DO NOT** apply this product or allow it to drift to blooming crops or weeds if bees are foraging in the treatment area. **Protect pollinating insects by following label directions intended to minimize drift and reduce pesticide risk to these organisms.**

DIRECTIONS FOR USE

Restricted Use Pesticide

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

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.

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.

The restricted-entry interval (REI) is 48 hours for the following activities:

- Hand detasseling or mechanically assisted detasseling of field corn grown for seed.
- Hand detasseling or mechanically assisted detasseling of pop corn grown for seed.

- Hand detasseling or mechanically assisted detasseling of sweet corn grown for seed.
- Hand harvesting of sweet corn grown for grain.

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:

1. Coveralls
2. Chemical-resistant gloves, made of barrier laminate or viton (> 14 mils)
3. 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 Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and greenhouses.

Do not allow people or pets on treated surfaces until the spray has dried.

PRODUCT INFORMATION

Apply in sufficient water for thorough coverage of listed crops unless otherwise specifically noted. Base rate of application upon pest pressure, timing of sprays, and field scouting. Use higher rates under heavy pest pressure and lower rates under low to moderate pest pressure. Base timing and frequency of applications upon insect populations reaching locally determined economic thresholds and other local methods. For ground and air applications, unless otherwise noted, use the following spray volumes:

Row Crops:

By ground, apply in a minimum of 10 gallons of finished spray per acre.

By air, apply in a minimum of 2 gallons of finished spray per acre.

DO NOT apply as a foliar broadcast application using a mechanically pressurized handgun on: brassica (head and stem), cucurbit vegetables, fruiting vegetables, garlic, legume vegetables, lettuce (head and leaf), onion (dry bulb), tobacco, tuberous and corm vegetables.

Orchard and Vine Crops:

By ground, apply in a minimum of 50 gallons of finished spray per acre.

By air, apply in a minimum of 10 gallons of finished spray per acre.

DO NOT apply as a foliar broadcast application using a mechanically pressurized handgun on orchards and vineyards.

DO NOT apply as a soil, drench, or ground-directed application using a mechanically pressurized handgun on orchards and vineyards.

For cutworm control, LAMDA-CYHALOTHRIN 12.7% EC may be applied before, during, or after planting. For soil incorporated applications, use listed higher rates for improved control.

Removable chemical extraction probes (also known as "stingers") used in suction/extraction systems must be rinsed within the pesticide container prior to removal.

Following best management practices can help reduce risk to terrestrial pollinators. Examples of best management practices include applying pesticides in the evening and at night when pollinators are not foraging and checking to confirm hive locations before spraying. For additional resources on pollinator best management practices, visit <https://www.epa.gov/pollinator-protection/find-best-management-practices->

[protect-pollinators.](#)

Managed pollinator protection plans are developed by states/tribes to promote communication between growers, landowners, farmers, beekeepers, pesticide users, and other pest management professionals to reduce exposure of bees to pesticides. If available, visit state plans for additional information on how to protect pollinators.

HOW TO REPORT BEE KILLS

It is recommended that users contact both the state lead agency and the U.S. Environmental Protection Agency to report bee kills due to pesticide application. Bee kills can be reported to EPA at beekill@epa.gov. To contact your state lead agency, see the current listing of state pesticide regulatory agencies at the National Pesticide Information Center's website: http://npic.orst.edu/reg/state_agencies.html.

RESISTANCE MANAGEMENT

For resistance management, this product contains a Group 3 insecticide. Any insect population may contain individuals naturally resistant to this product and other Group 3 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed. -Rotate the use of this product or other Group 3 insecticides within a growing season, or among growing seasons, with different groups that control the same pests. Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. **DO NOT** rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):

Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.

Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.

When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).

Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.

The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active. Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices. -Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area. For further information or to report suspected resistance contact Albaugh, LLC at 1-800-247-8013.

MANDATORY SPRAY DRIFT MANAGEMENT

Aerial Applications:

- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to select nozzle and pressure that deliver medium or coarser droplets according to the most current version of the American Society of Agricultural & Biological Engineers Standard 641 (ASABE S641).
- Do not apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed wing aircraft and 90% or less of the rotor diameter for helicopters.
- If the windspeed is 10 mph or less, applicators must use ½ swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 mph, applicators must use ¾ swath displacement upwind at the downwind edge of the field.
- Do not apply during temperature inversions.

Airblast Applications:

- Sprays must be directed into the canopy.
- Do not apply when wind speeds exceed 15 mph at the application site.
- User must turn off outward pointing nozzles at row ends and when spraying outer row.
- Do not apply during temperature inversions.

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a Medium or coarser droplet size according to the most current version of the American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).
- Do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

Boomless Ground Applications:

- Applicators are required to select nozzle and pressure that deliver a medium or coarser droplet size according to the most current version of the American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572) for all applications.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.

- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

Handheld Technology Applications:

- Take precautions to minimize spray drift.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

VEGETATIVE FILTER STRIPS

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

Only apply products containing lambda-cyhalothrin onto fields where a maintained vegetative buffer strip of **at least 25 feet** exists between the field edge and where a down gradient aquatic habitat exists. The minimum required width of 25 feet may be reduced or removed under the following conditions:

- For Western irrigated agriculture, a maintained vegetative filter strip of at least 10 feet wide is required. Western irrigated agriculture is defined as irrigated farmland in the following states: WA, OR, CA, ID, NV, UT, AZ, MT, WY, CO, NM, and TX (west of I-35).
 - For Western irrigated agriculture, if a sediment control basin is present, a vegetative filter strip is not required.

- In all other areas, a vegetative filter strip with a minimum width of 25 feet is required, unless the following conditions are met. The vegetative filter strip requirement may be reduced from 25 feet to 15 feet if at least one of the following applies:
 - The area of application is considered prime farmland (as defined in 7 CFR § 657.5).
 - Conservation tillage is being implemented on the area of application. Conservation tillage is defined as any system that leaves at least 30% of the soil surface covered by residue after planting. Conservation tillage practices can include mulch-till, no-till, or strip-till.
 - A functional terrace system is maintained on the area of application.
 - Water and sediment control basins for the area of application are functional and maintained.
 - The area of application is less than or equal to 10 acres.

For further guidance on vegetated filter strips, refer to the following publication for information on constructing and maintaining effective buffers: Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. <https://www.regulations.gov/document?D=EPA-HQ-OPP-2008-0331-0175>

Ground Application

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

Ultra-Low Volume (ULV) Aerial Application

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

Non-ULV Aerial Application

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

In the state of New York, a 25-foot 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-foot vegetated non-cropped buffer strip for runoff protection would be part of the larger 150-foot buffer strip (or 450-foot buffer strip for ULV application) required for spray drift.

TANK MIX APPLICATION

Fill the spray tank at least one-third full of clean water or diluent. With the pump and agitator running continuously, add the specified amount of each product in the tank mix to the spray tank and allow to fully disperse, adding this product last. Add the remainder of water or diluent to the spray tank. Follow the precautions and limitations of the most restricted product in the tank mixture.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Compatibility testing for tank mixing partners: Test compatibility of the intended tank mixture by adding proportionate amounts of each ingredient to a pint or quart jar, cap, shake, and let set 15 minutes. Formation of precipitates that **DO NOT** readily redisperse indicates an incompatible mixture that must not be used.

DO NOT use non-emulsifiable oils in combination with this product. If adjuvants are used, use only:

- Nonionic Surfactant (NIS) containing at least 75% surface agent, or
- Non-phytotoxic Crop Oil Concentrate (COC) including once refined Vegetable Oil concentrate (VOC), or
- Methylated Seed Oils (MSO) containing a minimum of 17% emulsifier.

Adjuvants other than NIS or COC may be used providing the product;

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

The following may be used as diluents:

Crop Oil Concentrate
Methylated Seed Oils
Urea-Ammonium Nitrate

DO NOT use the following in combination with this product as diluents or adjuvants:

Non-emulsifiable Oils
Diesel Fuel
Straight Mineral Oil

When an adjuvant is to be used with this product, Albaugh suggests the use of a Chemical Producers and Distributors Association certified adjuvant.

CHEMIGATION

Sprinkler Irrigation Application

Apply this product at rates and timing described elsewhere in this label. Consult your local State Extension Service or other local experts for specifications pertinent for your area.

Thorough, uniform coverage of foliage is required for good control. Maintain good agitation in the pesticide supply tank prior to and during the entire application period.

Apply by injecting the specified rate of this 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. Use the least amount of water required for proper distribution and coverage. Inject the product 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.

Additionally, if application is being made during a normal irrigation set of a stationary sprinkler, inject the specified rate of this product for the area covered into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.

DO NOT apply this product 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 and average of at least 25 individuals daily at least 60 days out of the year.

Use Precautions: Sprinkler Irrigation Application

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.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, contact state extension service specialist, equipment manufacturers, or other experts.

DO NOT connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

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.

The system must contain a functional check valve, vacuum relief valve, and a low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

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.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

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.

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.

DO NOT apply when wind speed favors drift beyond the area intended for treatment.

CROP USE DIRECTIONS AGRICULTURAL USES

[NOTE TO REVIEWER: The following statement may be added to Crop Specific Use Directions as per CDPR requirement] [Not approved for use in California.]

ALFALFA AND ALFALFA GROWN FOR SEED			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Alfalfa Caterpillar Army cutworm Cutworm spp. Green Cloverworm Leafhopper spp. Looper spp. Threecornered Alfalfa Hopper Velvetbean Caterpillar Webworm spp.	0.015-0.025	1.92-3.20	<p>Ground application: Apply in a minimum of 10 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.</p> <p>Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.</p> <p>Make applications when pests appear. Apply in sufficient volume to ensure sufficient coverage of foliage.</p>
Alfalfa Seed Chalcid (Adult) Alfalfa Weevil Armyworm Bean Leaf Beetle (Adult) Blister Beetle spp. Blue Alfalfa Aphid Clover Leaf Weevil spp. Clover Root Borer (Adult) Clover Root Curculio spp. (Adult) Clover Stem Borer (Adult) Corn Earworm Cowpea Aphid Cowpea Curculio (Adult) Cowpea Weevil (Adult) Cucumber Beetle spp. (Adult) Egyptian Alfalfa Weevil Fall Armyworm ¹ Grape Colaspis (Adult) Grasshopper spp. Green June Beetle (Adult) Green Peach Aphid ³ Japanese Beetle (Adult) Meadow Spittlebug Mexican Bean Beetle Pea Aphid Pea Weevil (Adult) Plant Bug spp., including Lygus spp. ³ Spotted Alfalfa Aphid Stink Bug spp. Sweet Clover Weevil (Adult) Thrips spp. ⁴ Western Yellow-striped Armyworm Whitefringed Beetle spp. (Adult) Yellow-striped Armyworm	0.02-0.03	2.56-3.84	<p>When foliage is dense and/or pest populations are high, use 5-10 gals/A by air or 20 gals/A by ground and higher use rates. Use higher rates for increased residual control.</p> <p>DO NOT apply when bees are foraging. Apply during the early morning or evening hours. Be aware of bee hazard resulting from a cool evening and/or morning dew.</p> <p>Remove bee shelters during and for 2-3 days following application. DO NOT apply directly to bee shelters.</p> <p>Apply only to fields planted to pure stands of alfalfa.</p> <p>Apply as required by scouting.</p> <p>1 For control of first and second instars only. 2 Suppression only. 3 See resistance statement under PRODUCT INFORMATION. 4 Does not include Western Flower Thrips</p>
Beet Armyworm ^{1,3} Blotch Leafminer ³ Spider Mites ²	0.03	3.84	

ALFALFA AND ALFALFA GROWN FOR SEED			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Restrictions: <ul style="list-style-type: none">DO NOT apply more than 0.03 lb a.i. (0.24 pt) per acre per cutting.DO NOT apply more than the maximum rate per acre specified for each pest in the chart above during a single application..DO NOT apply more than 0.12 lb a.i. (0.96 pt) per acre per season.DO NOT apply within 1 day of harvest for forage or within 7 days of harvest for hay.Restricted Reentry Interval (REI) is 24 hours.			

CANOLA			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Armyworm spp. Cabbage Seedpod Weevil Cutworm spp. Diamondback Moth Flea Beetle Grasshoppers Looper spp. Lygus Bug Cabbage Aphid	0.015-0.03 0.03	1.92-3.84 3.84	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area. Make applications when pests appear. If needed, make repeat applications after at least 5 or more days. Apply in sufficient volume to ensure sufficient coverage of foliage.
Restrictions: <ul style="list-style-type: none">DO NOT apply more than 0.03 lb a.i. (0.24pt) per acre per single application.DO NOT apply within 7 days of harvest.DO NOT apply more than 0.09 lb a.i. (0.72 pt) per acre per year.Restricted Reentry Interval (REI) is 24 hours.			

CEREAL GRAINS: Corn (At-Plant): Field Corn, Popcorn, Seed Corn, Sweet Corn						
TARGET PESTS	RATE			REMARKS		
	lb a.i./A	fl oz product/A				
Corn Rootworm Larvae (Western, Northern, Southern, Mexican) Cutworm spp. Seedcorn Maggot Seedcorn Beetle Lesser Cornstalk Borer White Grub spp. Wireworm spp. Red Imported Fire Ant ¹	0.005 lb a.i. per 1000 ft of row ²	0.66 fl oz per 1000 ft of row ²		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 of finished spray/A. ¹ Suppression only.		
² lbs ai and fl oz/A of LAMDA-CYHALOTHRIN 12.7% EC applied at 0.66 fl oz/1000 ft of row for various row spacings:						
Row Spacing	40"	38"	36"	34"	32"	30"
Linear Ft per acre	13,068	13,756	14,520	15,374	16,335	17,424
Lbs a.i. per acre	0.067	0.07	0.075	0.079	0.084	0.09
Fl oz per acre	8.6	9.1	9.6	10.1	10.8	11.5
Restrictions: <ul style="list-style-type: none">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. (0.72 pt) per acre per crop at-plant.DO NOT apply more than 0.12 lb a.i. per acre per crop from at-plant and foliar applications for field corn, popcorn, and seed corn. For sweet corn, DO NOT apply more than 0.48 lb a.i. per acre per crop from at- plant and foliar applications.Restricted Reentry Interval (REI) is 24 hours.Restricted Reentry Interval (REI) is 48 hours for the following activities:<ul style="list-style-type: none">Hand detasseling or mechanically assisted detasseling of field corn grown for seed, popcorn grown for seed, or						

CEREAL GRAINS:		
Corn (At-Plant): Field Corn, Popcorn, Seed Corn, Sweet Corn		
TARGET PESTS	RATE	
	lb a.i./A	fl oz product/A
sweet corn grown for seed. o Hand harvesting of sweet corn grown for seed.		

CEREAL GRAINS:		
Corn (Foliar): Field Corn, Popcorn, Seed Corn		
TARGET PESTS	RATE	
	lb a.i./A	fl oz product/A
Corn Earworm ¹ Cutworm spp. Green Cloverworm Meadow Spittlebug Western Bean Cutworm ¹	0.015-0.025	1.92-3.20
Armyworm ² Bean Leaf Beetle Bird Cherry-Oat Aphid ³ Cereal Leaf Beetle Corn Leaf Aphid ³ English Grain Aphid ³ European Corn Borer ¹ Fall Armyworm ² Flea Beetle spp. Grasshopper spp. Hop Vine Borer ¹ Japanese Beetle (Adult) Lesser Cornstalk Borer Mexican Corn Rootworm Beetle (Adult) Northern Corn Rootworm Beetle (Adult) Sap Beetle (Adult) Seedcorn Beetle Southern Corn Rootworm Beetle (Adult) Southwestern Corn Borer ¹ Stalk Borer ¹ Stink Bug spp. Tobacco Budworm ^{1,4} Webworm spp. Western Corn Rootworm Beetle (Adult) Yellow-striped Armyworm ²	0.02-0.03	2.56-3.84
Beet Armyworm ⁴ Chinch Bug Green Bug ^{3,4} Southern Corn Leaf Beetle ³ Rice Stalk Borer ¹ Mexican Rice Borer ¹ Sugarcane Borer ¹	0.03	3.84
Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area. Make applications when pests appear. If needed, make repeat applications after at least 7 days. Apply in sufficient volume to ensure sufficient coverage of foliage. 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. LAMDA-CYHALOTHRIN 12.7% EC may only suppress heavy infestations and/or subsequent migrations. Adult corn rootworm beetles (<i>Diabrotica</i> species): Use a minimum of 3.84 fl oz per acre (0.03 lb a.i. per acre) as part of an aerial-applied corn rootworm control program. ¹ For control before the larva bores into the plant stalk or ear. ² For control of first and second instar only. ³ Suppression only. ⁴ See resistance statement under PRODUCT INFORMATION .		
Restrictions: • DO NOT apply within 21 days of harvest.		

CEREAL GRAINS:			
Corn (Foliar): Field Corn, Popcorn, Seed Corn			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
<ul style="list-style-type: none">DO NOT allow livestock to graze in treated areas or harvest treat 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 the maximum rate per acre specified for each pest in the chart above during a single application..DO NOT apply more than 0.12 lb a.i. (0.96 pt) per acre per crop per season.DO NOT apply more than 0.06 lb a.i. (0.48 pt) per acre after silk initiation.DO NOT apply more than 0.03 lb a.i. (0.24 pt) after corn has reached the milk stage (yellow kernels with milky fluid).Restricted Reentry Interval (REI) is 24 hours.Restricted Reentry Interval (REI) is 48 hours for the following activities:<ul style="list-style-type: none">Hand detasseling or mechanically assisted detasseling of field corn grown for seed or popcorn grown for seed.			

CEREAL GRAINS: Corn (Foliar): Sweet Corn			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Aphid spp. ^{2,3} Armyworm ¹ Aster Leafhopper Beet Armyworm ^{1,3} Chinch Bug Common Cornstalk Borer Corn Earworm Cutworm spp. European Corn Borer Fall Armyworm ¹ Flea Beetle spp. Grasshopper spp. J Japanese Beetle (Adult) Mexican Corn Rootworm Beetle (Adult) Northern Corn Rootworm Beetle (Adult) Sap Beetle (Adult) Southern Armyworm ¹ Southern Corn Rootworm Beetle (Adult) Southwestern Corn Borer Spider Mite spp. ² Stink Bug spp. Tarnished Plant Bug Webworm spp. Western Bean Cutworm Western Corn Rootworm Beetle (Adult) Yellow-Striped Armyworm ¹	0.02-0.03	2.56-3.84	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area. Make applications when pests appear. If needed, make repeat applications after at least 4 days and before insects enter the stalk or ear. Apply in sufficient volume to ensure sufficient coverage of foliage and ears (if present). Adult corn rootworm beetles (<i>Diabrotica</i> species): Use a minimum of 3.2 fl oz per acre (0.025 lb a.i. per acre) as part of an aerial-applied corn rootworm control program. ¹ For control of first and second instar only. ² Suppression only. ³ See resistance statement under PRODUCT INFORMATION .
Corn Silkfly (Adult) ²	0.03	3.84	
Restrictions: <ul style="list-style-type: none">• 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 0.03 lb a.i. (0.24 pt) per acre per single application.• DO NOT apply more than 0.48 lb a.i. (3.84 pts) per acre per crop from at plant and foliar applications.• Restricted Reentry Interval (REI) is 24 hours.			

CEREAL GRAINS: Corn (Foliar): Sweet Corn			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
<ul style="list-style-type: none">Restricted Reentry Interval (REI) is 48 hours for the following activities:<ul style="list-style-type: none">Hand detasseling or mechanically assisted detasseling of sweet corn grown for seed.Hand harvesting of sweet corn grown for seed.			

CEREAL GRAINS: Rice, Wild Rice			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl.oz. product/A	
Bird Cherry-Oat Aphid Chinch Bug Fall Armyworm Grasshopper spp. Greenbug Leafhopper spp. Rice Stink Bug Rice Water Weevil (Adult) Riceworm Sharpshooter spp. True Armyworm Yellow Sugarcane Aphid Yellow-striped Armyworm	0.025-0.04	3.20-5.12	<p>Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area.</p> <p>Air application: Mixers/loaders supporting aerial applications to wild rice at a rate of 0.04 a.i./A, and treating 1200 acres (or more) per day must wear dust/mist respirator. Apply in a minimum of 2 gals per acre in sufficient spray volume to obtain full coverage of the foliage or target area. Adding 1 pint per acre of an emulsifiable crop oil will help improve coverage, reduce evaporation, and improve efficacy. Monitor insect populations to determine timing and frequency of applications. Scout fields at a minimum of 5 day intervals.</p> <p>Make applications when pests appear. If needed, make repeat applications after at least 5-7 days. Apply in sufficient volume to ensure sufficient coverage of foliage. LAMDA-CYHALOTHRIN 12.7% EC can be safely used when propanil products are being used for weed control.</p>
European Corn Borer ¹ Mexican Rice Borer ¹ Rice Seed Midge ¹ Rice Stalk Borer ¹ Sugarcane Borer ¹	0.03-0.04	3.84-5.12	<p>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 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. 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.</p> <p>California: In addition to above directions, for control of rice water weevil in water seeded rice, LAMDA-CYHALOTHRIN 12.7% EC may be applied at the 1- to 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.</p> <p>Green Bug: Known to have many biotypes, LAMDA-CYHALOTHRIN 12.7% EC may only provide suppression. If satisfactory control is not achieved, 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</p>

CEREAL GRAINS: Rice, Wild Rice			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl.oz. product/A	
			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. ¹ For control before the larvae bores into the plant stalk.
Restrictions: <ul style="list-style-type: none"> • DO NOT release floodwater within 7 days of an application. • DO NOT apply more than 0.04 lb a.i. (0.32 pt) per acre per single application. • DO NOT apply more than 0.12 lb a.i. (0.96 pt) per acre per season. • DO NOT apply more than 0.04 lb a.i. (0.32 pt) 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. • Restricted Reentry Interval (REI) is 24 hours. 			

CEREAL GRAINS: Wet Sown Rice (CA Only)			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl.oz. product/A	
Rice Water Weevil	0.03-0.04	3.84-5.12	<p>Uniformly apply at 3.84-5.12 fl oz of product per acre as a pre-flood, pre-plant, broadcast soil application for control of Rice Water Weevil (<i>Lissorhoptrus oryzophilus</i>) in wet- sown rice culture.</p> <p>Apply by air or ground equipment using sufficient water to obtain full coverage. Apply in a minimum of 2 gals of water (or a total carrier volume)/Acre by air or a minimum of 20 gals of water (or a total carrier volume)/Acre by ground.</p> <p>For improved efficacy, light incorporation of this product into the upper 1-2 inches of soil following application is recommended – a "roller" may be used for this incorporation. Apply pinpoint flood not more than 5 days after the soil application of this product, or weevil control may be reduced. Scout for feeding scars after plant emergence and apply a second foliar treatment if needed.</p>
Restrictions: <ul style="list-style-type: none"> • DO NOT apply more than 0.04 lb a.i. (0.32 pt) per acre per single application. • DO NOT apply more than 0.04 lb a.i. (5.12 fl oz) per acre per season. • DO NOT release floodwater within 7 days of application. • DO NOT use treated rice fields for aquaculture of edible fish and crustacea. • DO NOT apply as an ultra-low volume (ULV) spray. • DO NOT apply by chemigation. • Restricted Reentry Interval (REI) is 24 hours. 			

CEREAL GRAINS: Sorghum (Grain)			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Cutworm spp. Sorghum Midge	0.015-0.02	1.92-2.56	<p>Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area.</p> <p>Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.</p>
Armyworm Beet Armyworm ³ Corn Earworm	0.02-0.03	2.56-3.84	

CEREAL GRAINS: Sorghum (Grain)			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
European Corn Borer ² Fall Armyworm ¹ Flea Beetle spp. Grasshopper spp. Lesser Cornstalk Borer ² Southwestern Corn Borer ² Stink Bug spp. Webworm spp. Yellow-striped Armyworm ¹			Make applications when pests appear. If needed, make repeat applications after at least 5 days. Apply in sufficient volume to ensure sufficient coverage of foliage. Sorghum Midge: Begin applications when 25% of the sorghum heads have emerged and are in tip bloom. Repeat applications at 5 day intervals if needed. Chinch Bug: 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 to 5 day intervals if needed. LAMDA-CYHALOTHRIN 12.7% EC may only suppress heavy infestations and/or subsequent migrations.
Chinch Bug Mexican Rice Borer ² Rice Stalk Borer ² Sugarcane Borer ²	0.03	3.84	¹ For control of first and second instar only. ² For control before the larva bores into the plant stalk. ³ See resistance statement under PRODUCT INFORMATION .
Restrictions: <ul style="list-style-type: none"> • DO NOT apply within 30 days of harvest. • DO NOT apply more than the maximum rate per acre specified for each pest in the chart above during a single application.. • DO NOT apply more than 0.08 lb a.i. (0.64 pt) per acre per season. • DO NOT apply more than 0.06 lb a.i. (0.48 pt) per acre per season after crop emergence. • DO NOT apply more than 0.02 lb a.i. (0.16 pt) per acre per season once crop is in soft dough stage. • DO NOT graze livestock in treated areas or harvest for fodder, silage, or hay. • Restricted Reentry Interval (REI) is 24 hours. 			

CEREAL GRAINS: Barley, Buckwheat, Oats, Rye, Triticale, Wheat, Wheat Hay			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Army Cutworm Cutworm spp.	0.015-0.025	1.92-3.20	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
Armyworm Bird Cherry-Oat Aphid ¹ Cereal Leaf Beetle English Grain Aphid ¹ Fall Armyworm Flea Beetle spp. Grasshopper spp. Hessian fly ⁴ Orange Blossom Wheat Midge Russian Wheat Aphid ¹ Stink Bug spp. Yellow-striped Armyworm	0.02-0.03	2.56-3.84	Make applications when pests appear. If needed, make repeat applications after at least 5 days. Apply in sufficient volume to ensure sufficient coverage of foliage. Chinch Bug: Repeat applications at 3 to 5 day intervals if needed. LAMDA-CYHALOTHRIN 12.7% EC may only suppress heavy infestations and/or migrations. Green Bug: Known to have many biotypes, LAMDA-CYHALOTHRIN 12.7% EC may only provide suppression. If satisfactory control is not achieved, a resistant biotype may be present. Use alternate chemistry for control.
Grass Sawfly	0.025-0.03	3.20-3.84	
Chinch Bug Corn Leaf Aphid ² Greenbug ^{1,3} Mite spp. ²	0.03	3.84	¹ Best control is obtained before insects begin to roll leaves. Once wheat has started to boot, LAMDA-CYHALOTHRIN 12.7% EC may provide suppression only. Higher rates and increased coverage will be necessary. ² Suppression only. ³ See resistance statement under PRODUCT

CEREAL GRAINS: Barley, Buckwheat, Oats, Rye, Triticale, Wheat, Wheat Hay			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
			INFORMATION. 4 Make applications when adults emerge.
Restrictions: <ul style="list-style-type: none">• 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 the maximum rate per acre specified for each pest in the chart above during a single application..• DO NOT apply more than 0.06 lb a.i. (0.48 pt) per acre per season.• Restricted Reentry Interval (REI) is 24 hours.			

COLE CROPS			
Head and stem brassica crop group : Broccoli, Brussels Sprouts, Cabbage, Cavalo Broccolo, Cauliflower, Chinese Broccoli (gai lon), Chinese Cabbage (napa), Chinese Mustard Cabbage (gai choy), Kohlrabi			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Alfalfa Looper Cabbage Looper Cabbage Webworm Cutworm spp. Imported Cabbageworm Southern Cabbageworm	0.015-0.025	1.92-3.20	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
Aphid spp. ^{2,3} Armyworm Beet Armyworm ^{1,3} Corn Earworm Diamondback Moth ³ Fall Armyworm ¹ Flea Beetle spp. Grasshopper spp. Japanese Beetle (Adult) Leafhopper spp. Meadow Spittlebug Plant Bug spp. including Lygus spp. ³ Spider Mite spp. ² Stink Bug spp. Thrips spp. ² Vegetable Weevil (Adult) Whitefly spp. ^{2,3} Yellow-striped Armyworm	0.02-0.03	2.56-3.84	Make applications when pests appear. If needed, make repeat applications after at least 5 days. Apply in sufficient volume to ensure sufficient coverage of foliage. ¹ For control of first and second instar only. ² Suppression only. ³ See resistance statement under PRODUCT INFORMATION.
Restrictions: <ul style="list-style-type: none">• DO NOT apply within 1 day of harvest.• DO NOT apply more than the maximum rate per acre specified for each pest in the chart above during a single application..• DO NOT apply more than 0.24 lb a.i. (1.92 pts) per acre per season.• DO NOT apply as a foliar broadcast application using a mechanically pressurized handgun.• Restricted Reentry Interval (REI) is 24 hours.			

COTTON			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Cutworm spp. Soybean Thrips Tobacco Thrips	0.015-0.02	1.92-2.56	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. ULV application: LAMDA-CYHALOTHRIN 12.7% EC may be mixed with once-refined vegetable oil and applied in a minimum of at least 1 qt. of finished spray per acre. Make applications when pests appear. If needed, make repeat applications after at least 5 to 7 days. Apply in sufficient volume to ensure sufficient coverage of foliage. Under light bollworm/budworm infestation levels, 0.02 lb a.i. per acre may be applied in conjunction with intense field monitoring. Boll Weevil: Spray on a 3- to 5-day schedule. Cotton Bollworm, Tobacco Budworm: LAMDA-CYHALOTHRIN 12.7% EC also provides ovicidal control of unhatched <i>Heliothine</i> spp. eggs. ¹ For control of first and second instar only. ² Suppression only. ³ See resistance statement under PRODUCT INFORMATION .
Cabbage Looper Cotton Fleahopper Cotton Leafperforator Cotton Leafworm Lygus Bug spp. ³ Pink Bollworm Saltmarsh Caterpillar	0.02-0.03	2.56-3.84	
Bandedwing Whitefly ^{2,3} Beet Armyworm ^{1,3} Boll Weevil Brown Stink Bug Cotton Aphid ^{2,3} Cotton Bollworm European Corn Borer Fall Armyworm Green Stink Bug Southern Green Sting Bug Sweetpotato Whitefly ^{2,3} Tobacco Budworm ³ Two-spotted Spider Mite ²	0.025-0.04	3.20-5.12	
Restrictions: <ul style="list-style-type: none">• DO NOT apply within 21 days of harvest.• DO NOT graze livestock in treated areas.• DO NOT apply more than the maximum rate per acre specified for each pest in the chart above during a single application..• DO NOT apply more than. 1.6 pts (0.2 lb a.i.) 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.• Restricted Reentry Interval (REI) is 24 hours. <p>Synthetic pyrethroid products include but are not limited to permethrin, esfenvalerate, cyfluthrin, bifenthrin, fenpropathrin, or other lambda-cyhalothrin products</p>			

CUCURBIT VEGETABLES CROP GROUP

Including:

Chayote (fruit), Chinese Waxgourd (Chinese preserving melon), Citron Melon, Cucumber, Gherkin, Gourd (edible) *Lagenaria* spp. – (includes: hyotan, cucuzza),
 Luffa acutangula, (includes: hechima, Chinese okra),
 Momordica spp. – (includes: balsam apple, balsam pear, bitter melon, Chinese cucumber),
 Muskmelon (hybrids and/or cultivars of *Cucumis melo*) – (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 (*Cucurbita pepo* var. *melopepo*) – includes: crookneck squash, straightneck squash, vegetable marrow, zucchini),
 Squash, winter (*Cucurbita maxima*, *C. moschata*) – includes: butternut squash, calabaza, hubbard squash (*C. mixta*; *C. pepo*) – includes: acorn squash, spaghetti squash
 Watermelon – includes: Hybrids and/or varieties of *Citrullus lanatus*

TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Armyworm spp. ¹ Blister Beetle spp. Cabbage Looper Corn Earworm Cricket spp. Cucumber Beetle spp. (adults) Cutworm spp. Flea Beetle spp. Grasshopper spp. June Beetle spp. Leaffooted Bug Leafhopper spp. Lygus Bug spp. ¹ Melonworm Pickleworm Plant Bug spp. Rindworm spp. complex Saltmarsh Caterpillar Squash Beetle Squash Bug spp. Squash Vine Borer spp. Stink Bug spp. Thrips spp. ^{1,2} Tobacco Budworm ¹ Webworm spp.	0.02-0.03	2.56-3.84	<p>Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. When applied by ground, use a minimum of 10 gal solution per acre.</p> <p>Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.</p> <p>Monitor insect populations to determine timing and frequency of applications. Scout fields at a minimum of 5 day intervals.</p> <p>Apply in sufficient volume to ensure sufficient coverage of foliage.</p> <p>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 LAMDA-CYHALOTHRIN 12.7% EC.</p> <p>¹See resistance statement under PRODUCT INFORMATION.</p> <p>²Does not include Western Flower Thrips.</p> <p>³Suppression only.</p>
Aphid spp. ¹ Leafminer spp. ^{1,3} Spider Mite spp. ³ Whitefly spp. ^{1,3}	0.03	3.84	

Restrictions:

- **DO NOT** apply more than 0.03 lb a.i. (0.24pt) per acre per single application.
- **DO NOT** apply more than 0.18 lb a.i. (1.44 pts of product) per acre per season.
- **DO NOT** apply within 1 day of harvest.
- **DO NOT** apply as a foliar broadcast application using a mechanically pressurized handgun.
- Restricted Reentry Interval (REI) is 24 hours.

FRUITING VEGETABLES (EXCEPT CUCURBITS) CROP GROUP			
Including: Eggplant, Ground Cherry, Pepino, Peppers (bell and nonbell), Tomatillo, Tomato			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Cabbage Looper Cutworm spp. Hornworm spp.	0.015-0.025	1.92-3.20	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
Aphid spp. ^{2,3} Beet Armyworm ^{1,3} Blister Beetle spp. Colorado Potato Beetle ³ Cucumber Beetle spp. (Adult) European Corn Borer ⁴ Fall Armyworm ¹ Flea Beetle spp. Grasshopper spp. Japanese Beetle (Adult) Leafhopper spp. Leafminer spp. ² Meadow Spittlebug Pepper Weevil (Adult) ² Plant Bug spp. Southern Armyworm ¹ Spider Mite spp. ² Stalk Borer ⁴ Stink Bug spp. Thrips ⁵ Tobacco Budworm ³ Tomato Fruitworm Tomato Pinworm Tomato Psyllid ^{2,3} Vegetable Weevil (Adult) Whitefly spp. ^{2,3} Yellow-striped Armyworm ¹	0.02-0.03	2.56-3.84	Make applications when pests appear. If needed, make repeat applications after at least 5 days. Apply in sufficient volume to ensure sufficient coverage of foliage. ¹ For control of first and second instar only. ² Suppression only. ³ See resistance statement under PRODUCT INFORMATION . ⁴ For control before the larva bores into the plant stalk or fruit. ⁵ Does not include Western Flower Thrips.
Restrictions: <ul style="list-style-type: none">• DO NOT apply within 5 days of harvest.• DO NOT apply more than the maximum rate per acre specified for each pest in the chart above during a single application..• DO NOT apply more than 0.36 lb a.i. (2.88 pts) per acre per season.• DO NOT apply as a foliar broadcast application using a mechanically pressurized handgun.• Restricted Reentry Interval (REI) is 24 hours.			

GRASS FORAGE, FODDER, AND HAY			
Pasture and Rangeland Grass, Grass Grown for Hay or Silage, Grass Grown for Seed			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Army Cutworm Cutworm spp. Essex Skipper Range Caterpillar Striped Grass Looper	0.015-0.025	1.92-3.20	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
Beet Armyworm Billbug spp. ³ Bird Cherry-Oat Aphid ¹ Black Grass Bug Black Turfgrass Beetle (Adult) Blue Stem Midge Cereal Leaf Beetle Chinch Bug Crane Fly spp. Cricket spp. English Grain Aphid ¹ Fall Armyworm Flea Beetle spp. Grass Mealybug Grass Sawfly (Adult) Grasshopper spp. Green June Beetle (Adult) Greenbug ^{1, 2} Japanese Beetle (Adult) Katydid spp. Leafhopper spp. Mite spp. Russian Wheat Aphid ¹ Southern Armyworm Spittlebug spp. Stink Bug spp. Sugarcane Aphid Thrips spp. Tick spp. True Armyworm Webworm spp. Yellowstriped Armyworm	0.02-0.03	2.56-3.84	Monitor insect populations to determine timing and frequency of applications. Scout fields at a minimum of 5 day intervals. Apply in sufficient volume to ensure sufficient coverage of foliage. Chinch bugs: LAMDA-CYHALOTHRIN 12.7% EC may only suppress heavy infestations and/or migrations. In this situation, a second application using an alternative chemistry may be needed. Greenbug: Greenbug is known to have many biotypes. LAMDA-CYHALOTHRIN 12.7% EC 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. Grass grown for seed: Straw and mature seed (seed screenings) may be used as feed 7 days after the last application. ¹ Best control is obtained before insects begin to roll leaves. ² See resistance statement under PRODUCT INFORMATION . ³ Suppression only.
Restrictions: <ul style="list-style-type: none">• DO NOT apply more than 0.03 lb a.i. (0.24 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 a.i./A which have not been cut between applications.• DO NOT apply more than the maximum rate per acre specified for each pest in the chart above during a single application..• DO NOT apply more than 0.09 lb a.i. (0.72 pts of product) per acre per season.• DO NOT cut grass to be dried and harvested for hay until 7 days after the last application.• Restricted Reentry Interval (REI) is 24 hours.			

LEGUME VEGETABLES (SUCCULENT OR DRIED) CROP GROUP			
(BEANS AND PEAS) Edible Podded (only)		Dried Shelled (only)	
<i>Canavalia gladiata</i> - sword bean		<i>Lupinus</i> spp. includes: grain, sweet, white and sweet white lupines	
<i>Canavalia ensiformis</i> – jackbean		<i>Cicer arietinum</i> - chickpea (garbanzo bean)	
<i>Glycine max</i> – Soybean immature seed		<i>Cyamopsis tetragonoloba</i> - guar	
		<i>Lablab purpureus</i> - Lablab bean (hyacinth bean) <i>Lens esculata</i> - Lentils	
Edible Podded, Succulent Shelled, or Dried Shelled			
<i>Phaseolus</i> spp. includes: black, field, kidney, lima, navy, pinto, runner, snap, tepary, and wax beans			
<i>Vigna</i> spp. includes: adzuki, asparagus, moth, mung, rice, urd and yardlong beans, black-eyed pea, catjang, Chinese longbean, cowpea, Crowder pea, and Southern pea			
<i>Pisum</i> spp. includes: dwarf, edible-pod, English, field, garden, green, snow and sugar snap peas			
<i>Cajanus cajan</i> - Pigeon pea Succulent Shelled or Dried Shelled			
<i>Vicia faba</i> .- broadbean (favabeen)			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Cutworm spp. Green Cloverworm Imported Cabbageworm Mexican Bean Beetle Saltmarsh Caterpillar Velvetleaf Caterpillar	0.015-0.025	1.92-3.20	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage
Alfalfa Caterpillar ⁴ Aphid spp. ² Armyworm ² Bean Leaf Beetle Bean Leafskeletonizer Blister Beetle spp. Corn Earworm Corn Rootworm Beetle spp. (Adult) Cucumber Beetle spp. (Adult) Curculio and Weevil spp. ¹ (foliage and pod feeding adults and larvae) European Corn Borer Fall Armyworm ² Flea Beetle spp. (Adult) Flea Hopper spp. Grasshopper spp. Japanese Beetle (Adult) Leafhopper spp. Leaftier spp. Looper spp. Meadow Spittlebug Painted Lady Butterfly (larvae) Plant Bug spp. including Lygus spp. ⁴ Stalk Borer ¹ Stink Bug spp. Three-cornered Alfalfa Hopper Thrips spp. ^{4,5} Tobacco Budworm ⁴ Webworm spp. Western Bean Cutworm Western Yellow-striped Armyworm ² Yellow-striped Armyworm ²	0.02-0.03	2.56-3.84	Make applications when pests appear. If needed, make repeat applications after at least 5 days. Apply in sufficient volume to ensure sufficient coverage of foliage. ¹ For control before the larva bores into the plant stalk or pods. ² For control of the first and second instar only. ³ For suppression only. ⁴ See resistance statement under PRODUCT INFORMATION . ⁵ Does not include Western Flower Thrips.
Beet Armyworm ^{3,4} Leafminer spp. ^{3,4} Lesser Cornstalk Borer ³ Soybean Looper ^{3,4} Spider Mite spp. ³ Whitefly spp. ^{3,4}	0.03	3.84	

Restrictions:

- 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 the maximum rate per acre specified for each pest in the chart above during a single application..
- **DO NOT** apply more than 0.12 lb a.i. (0.96 pt) 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.
- **DO NOT** apply as a foliar broadcast application using a mechanically pressurized handgun
- Restricted Reentry Interval (REI) is 24 hours.

LEGUME VEGETABLES Soybean			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Bean Leaf Beetle Cabbage Looper Corn Earworm Cutworm spp. Green Cloverworm Mexican Bean Beetle Mexican Corn Rootworm Beetle (Adult) Northern Corn Rootworm Beetle (Adult) Painted Lady (Thistle) Caterpillar Potato Leafhopper Saltmarsh Caterpillar Southern Corn Rootworm Beetle (Adult) Soybean Aphid ⁴ Three-Cornered Alfalfa Hopper Thrips spp. ⁵ Velvetbean Caterpillar Western Corn Rootworm Beetle (Adult) Woollybear Caterpillar	0.015-0.02	1.92-3.20	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area. Make applications when pests appear. If needed, make repeat applications after at least 5 or more days. Apply in sufficient volume to ensure sufficient coverage of foliage. Adult corn rootworm beetles (<i>Diabrotica</i> species): Use a minimum of 2.56 fl oz per acre (0.02 lb a.i. per acre) as part of an aerial-applied corn rootworm control program. ¹ Use higher rates for large larvae. ² Suppression only. ³ See resistance statement under PRODUCT INFORMATION . ⁴ Use lower rates for early season applications and/or lighter populations. ⁵ Does not include Western Flower Thrips.
Armyworm ¹ Blister Beetle spp. European Corn Borer Fall Armyworm ¹ Grasshopper spp. Japanese Beetle (Adult) Plant Bug spp. Silverspotted Skipper Stink Bug spp. Tobacco Budworm ³ Webworm spp. Yellow-striped Armyworm ¹	0.025-0.03	3.20-3.84	
Beet Armyworm ^{2,3} Lesser Cornstalk Borer ² Soybean Looper ^{2,3} Spider Mite spp. ²	0.03	3.84	

Restrictions:

- **DO NOT** apply within 30 days of harvest.
- **DO NOT** apply more than the maximum rate per acre specified for each pest in the chart above during a single application..
- **DO NOT** apply more than 0.06 lb a.i. (0.48 pt) per acre per season.
- **DO NOT** graze or harvest treated soybean forage, straw, or hay for livestock feed.
- **DO NOT** apply as a foliar broadcast application using a mechanically pressurized handgun
- Restricted Reentry Interval (REI) is 24 hours.

LETTUCE (HEAD AND LEAF)			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Alfalfa Looper Cabbage Looper Cutworm spp. Green Cloverworm Imported Cabbageworm Saltmarsh Caterpillar	0.015-0.025	1.92-3.20	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
Aphid spp. ^{2,3} Armyworm Beet Armyworm ^{1,3} Corn Earworm Diamondback Moth ³ European Corn Borer Fall Armyworm ¹ Flea Beetle spp. Grasshopper spp. Japanese Beetle (Adult) Leafhopper spp. Meadow Spittlebug Plant Bug spp. including Lygus spp. ³ Southern Armyworm Spider Mite spp. ² Stink Bug spp. Tobacco Budworm ³ Vegetable Weevil (Adult) Whitefly spp. ^{2,3}	0.02-0.03	2.56-3.84	Make applications when pests appear. If needed, make repeat applications after at least 5 or more days. Apply in sufficient volume to ensure sufficient coverage of foliage. ¹ For control of first and second instar only. ² Suppression only. ³ See resistance statement under PRODUCT INFORMATION .
Restrictions: <ul style="list-style-type: none">DO NOT apply within 1 day of harvest.DO NOT apply more than the maximum rate per acre specified for each pest in the chart above during a single application..DO NOT apply more than 0.3 lb a.i. (2.4 pts) per acre per season.DO NOT apply as a foliar broadcast application using a mechanically pressurized handgunRestricted Reentry Interval (REI) is 24 hours.			

ONION (BULB) AND GARLIC			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Cutworm spp. Leafminer spp. (Adult) Onion Maggot (Adult) Seedcorn Maggot (Adult)	0.015-0.025	1.92-3.20	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
Aphid spp. ² Armyworm spp. ¹ Flower Thrips ^{2,3} Onion Thrips ³ Plant Bug spp. Stink Bug spp. Tobacco Thrips ³ Western Flower Thrips ^{2,3}	0.02-0.03	2.56-3.84	
			Make applications when pests appear. If needed, make repeat applications after at least 5 or more days. Apply in sufficient volume to ensure sufficient coverage of foliage. Use the higher label rates as thrips population increases and avoid rescue situations. For thrips control by aerial application, the addition of 1% COC v/v, ¼% NIS v/v, or a silicone adjuvant (follow manufacturer's use directions) may enhance the deposition of the spray and increase plant coverage. ¹ For control of the first and second instars only. ² Suppression only.

ONION (BULB) AND GARLIC			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
			³ See resistance statement under PRODUCT INFORMATION .
Restrictions:			
<ul style="list-style-type: none">• DO NOT apply within 14 days of harvest.• DO NOT apply more than the maximum rate per acre specified for each pest in the chart above during a single application..• DO NOT apply more than 0.24 lb a.i.(1.92 pts) per acre per season.• DO NOT apply as a foliar broadcast application using a mechanically pressurized handgun• Restricted Reentry Interval (REI) is 24 hours.			

PEANUT			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Cutworm spp. Green Cloverworm Potato Leafhopper Red-necked Peanut Worm Threecornered Alfalfa Hopper Velvetbean Caterpillar	0.015-0.025	1.92-3.20	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
Bean Leaf Beetle Corn Earworm Fall Armyworm ¹ Grasshopper spp. Southern Corn Rootworm (Adult) Stink Bug spp. Tobacco Thrips Vegetable Weevil Whitefringed Beetle (Adult)	0.02-0.03	2.56-3.84	
Aphid spp. ² Beet Armyworm ^{2,3} Lesser Cornstalk Borer ² Soybean Looper ^{2,3} Spider Mite spp. ²	0.03	3.84	¹ Use higher rates for large larvae. ² Suppression only. ³ See resistance statement under PRODUCT INFORMATION .
Restrictions: <ul style="list-style-type: none">• DO NOT apply within 14 days of harvest.• DO NOT apply more than the maximum rate per acre specified for each pest in the chart above during a single application..• DO NOT apply more than 0.12 lb a.i (0.96 pt) per acre per season.• DO NOT graze livestock in treated area.• DO NOT use treated vines or hay for animal feed.• Restricted Reentry Interval (REI) is 24 hours.			

POME FRUITS CROP GROUP			
Apple, Crabapple, Loquat, Mayhaw, Oriental Pear, Pear, Quince			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Apple Aphid Apple Maggot (Adult) Cherry Fruit Fly spp. (Adult) Codling Moth Green Fruitworm Japanese Beetle Leafhopper spp. Leafroller spp. Lesser Appleworm Omnivorous leafroller Orange Tortrix	0.02-0.04	2.56-5.12	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 5 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area. Make applications when pests appear. If needed, make repeat applications after at least 5 or more days. Apply in sufficient volume to ensure sufficient coverage of foliage. ¹ Suppression only.

POME FRUITS CROP GROUP			
Apple, Crabapple, Loquat, Mayhaw, Oriental Pear, Pear, Quince			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Oriental Fruit Moth Pear Psylla ¹ Pear Sawfly Periodical Cicada Plant Bug spp. Plum Curculio Rosy Apple Aphid San Jose Scale (fruit infestations only) Spirea Aphid ¹ Stink Bug spp. Tent Caterpillar spp. Tentiform Leaf Miner spp. Tree Borer spp. Tufted Apple Budworm Webworm spp.			
Restrictions: <ul style="list-style-type: none"> DO NOT apply within 21 days of harvest. DO NOT apply more than 0.04 lb a.i. (0.32 pt) per acre per single application. 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. Restricted Reentry Interval (REI) is 24 hours. 			

STONE FRUITS CROP GROUP			
Apricot, Sweet and Tart Cherry, Nectarine, Peach, Plum, Chickasaw, Plum, Damson Plum, Japanese Plum, Plumcot, Prune			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
American Plum Borer Apple Maggot (Adult) Black Cherry Aphid Cherry Fruit Fly spp. (Adult) Codling Moth Green Fruitworm Japanese Beetle June Beetle Leafhopper spp. Leafroller spp. Oriental Fruit Moth Peach Twig Borer Peachtree Borer spp. Pear Sawfly Periodical Cicada Plant Bug spp. Plum Curculio Rose Chafer Stink Bug spp. Tent Caterpillar spp. Thrips spp.	0.02-0.04	2.56-5.12	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 5 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area. Make applications when pests appear. If needed, make repeat applications after at least 5 or more days. Apply in sufficient volume to ensure sufficient coverage of foliage.
Restrictions: <ul style="list-style-type: none"> DO NOT apply within 14 days of harvest. DO NOT apply more than 0.04 lb a.i. (0.32 pt) per acre per single application. 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. Restricted Reentry Interval (REI) is 24 hours. 			

SUGARCANE			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Mexican Rice Borer ¹ Pygmy Mole Cricket Rice Stalk Borer ¹ Sugarcane Aphid ³ Sugarcane Beetle (Adult) ² Sugarcane Borer ¹ Western Indian Crane fly Yellow Sugarcane Aphid ³	0.025-0.04	3.20-5.12	<p>Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area.</p> <p>Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.</p> <p>Make applications when pests appear. If needed, make repeat applications after at least 7 or more days. Apply in sufficient volume to ensure sufficient coverage of foliage.</p> <p>¹For control before the larva bores into the plant stalk. ²Suppression only of beetles active above ground. ³See resistance statement under PRODUCT INFORMATION.</p>
Restrictions: <ul style="list-style-type: none"> DO NOT apply within 21 days of harvest. DO NOT apply more than 0.04 lb a.i. (0.32 pt) per acre per single application. DO NOT apply more than 0.16 lb a.i. (1.28 pts) per acre per season. Restricted Reentry Interval (REI) is 24 hours. 			

SUNFLOWER			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Cutworm spp. Sunflower Beetle	0.015-0.025	1.92-3.20	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area. Make applications when pests appear. If needed, make repeat applications after at least 5 or more days. Apply in sufficient volume to ensure sufficient coverage of foliage. 1For control of first and second instar only. 2Suppression only. 3See resistance statement under PRODUCT NFORMATION .
Banded Sunflower Moth	0.02-0.03	2.56-3.84	
Fall Armyworm ¹			
Grasshopper spp.			
Head-Clipper Weevil (Adult)			
Japanese Beetle (Adult)			
Leafhopper spp.			
Meadow Spittlebug			
Painted Lady (Thistle)			
Caterpillar			
Seed Weevil (Adult)			
Spotted Cabbage Looper			
Stem Weevil (Adult)			
Stink Bug spp.			
Sunflower Maggot (Adult)			
Sunflower Moth			
Woollybear Caterpillar			
Beet Armyworm ^{2,3}	0.03	3.84	
Spider Mite spp. ²			

Restrictions:

- **DO NOT** apply within 45 days of harvest.
- **DO NOT** apply more than the maximum rate per acre specified for each pest in the chart above during a single application..
- **DO NOT** apply more than 0.12 lb a.i. (0.96 pt) per acre per season. **DO NOT** apply more than 0.09 lb a.i. (0.72 pt) per acre per season after bloom initiation.
- **DO NOT** apply as an ultra-low volume (ULV) spray.
- Restricted Reentry Interval (REI) is 24 hours.

TOBACCO			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Armyworm spp. ¹	0.015-0.03	1.92-3.84	Ground application: Apply in sufficient spray volume to

TOBACCO			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Blister Beetle spp. Cabbage Looper Corn Earworm Cucumber Beetle spp. (Adult) Cutworm spp. Grasshopper spp. Japanese Beetle (Adult) Katydid spp. Plant Bug spp. ³ Potato Tuberworm Salt Marsh Caterpillar Stinkbug spp. Tobacco Aphid spp. ^{2,3} Tobacco Budworm ² Tobacco Flea Beetle (Adult) Tobacco Hornworm Tobacco Thrips spp. ² Tomato Hornworm Tree Cricket spp. Vegetable Weevil (Adult) Webworm spp.			obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area. Make applications when pests appear. If needed, make repeat applications after at least 7 or more days. Apply in sufficient volume to ensure sufficient coverage of foliage. 1For control of first and second instar only. 2Suppression only. 3See resistance statement under PRODUCT INFORMATION .
Restrictions: <ul style="list-style-type: none">• DO NOT apply within 40 days of harvest.• DO NOT apply more than 0.03 lb a.i. (0.24pt) per acre per single application.• DO NOT apply more than 0.09 lb a.i. (0.72 pt) per acre per year.• DO NOT apply as a foliar broadcast application using a mechanically pressurized handgun.• Restricted Reentry Interval (REI) is 24 hours.			

TREE NUTS CROP GROUP			
Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory Nut, Macadamia Nut (Bush Nut), Pistachio, Walnut, Black Walnut, English (Persian)			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Ants Chinch Bug Codling Moth Filbertworm Leaffooted Bug Leafroller spp. Navel Orangeworm Peach Twig Borer Plant Bug spp. Stink Bug spp. Walnut Aphid Walnut Husk Fly spp. (Adult)	0.02-0.04	2.56-5.12	Ground application: Apply in or sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 5 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area. Make applications when pests appear. If needed, make repeat applications after at least 5 or more days. Apply in sufficient volume to ensure sufficient coverage of foliage.
For Pecan Hickory Shuckworm Pecan Casebearer spp. Pecan Weevil Pecan Aphid spp. Pecan Spittlebug Stink bug spp. Pecan Phylloxera spp.	0.02-0.04	2.56-5.12	
Restrictions: <ul style="list-style-type: none">DO NOT apply within 14 days of harvest.DO NOT apply more than 0.04 lb a.i. (0.32 pt) per acre per single application.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 a.i. (0.96 pt) per acre per year post bloom.			

TREE NUTS CROP GROUP			
Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory Nut, Macadamia Nut (Bush Nut), Pistachio, Walnut, Black Walnut, English (Persian)			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
• Restricted Reentry Interval (REI) is 24 hours.			

TUBEROUS AND CORM VEGETABLES CROP GROUP			
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)			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Cutworm spp. Leafhopper spp. Saltmarsh Caterpillar Sweet Potato Hornworm Woolybear Caterpillar spp.	0.015-0.025	1.92-3.20	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
Aphid species ¹ Armyworm spp. ¹ Blister Beetle spp. Colorado Potato Beetle ¹ Corn Earworm Cricket spp. Cucumber Beetle spp. (adults) European Corn Borer Flea Beetle spp. (adults) Grasshopper spp. Looper spp. ¹ Lygus Bug spp. ¹ Plant Bug spp. Potato Psyllid Potato Tuberworm Stink Bug spp. Sweet Potato Leaf Beetle (adults) Sweet Potato Vine Borer Thrips spp. ^{1,2} Tortoise Beetle spp. Webworm spp. Weevil spp. (adults)	0.02-0.03	2.56-3.84	Make applications when pests appear. If needed, make repeat applications after at least 7 or more days. Apply in sufficient volume to ensure sufficient coverage of foliage. 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 LAMDA-CYHALOTHRIN 12.7% EC. ¹ See resistance statement under PRODUCT INFORMATION . ² Does not include Western Flower Thrips. ³ Suppression only.
Leafminer spp. ^{1,3} Whitefly spp. ^{1,3} Spider Mite spp. ³	0.03	3.84	
Restrictions: <ul style="list-style-type: none"> DO NOT apply more than the maximum rate per acre specified for each pest in the chart above during a single application.. DO NOT apply more than 0.12 lb a.i. (0.96 pt) per acre per year per season. DO NOT apply within 7 days of harvest. DO NOT apply as a foliar broadcast application using a mechanically pressurized handgun. Restricted Reentry Interval (REI) is 24 hours. 			

CONIFER AND DECIDUOUS TREES			
Plantations and Nurseries			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Bagworm Balsam Twig Aphid Birch Leafminer Black Pine Weevil Elm Leaf Beetle European Elm Bark Beetle Gypsy Moth Japanese Beetle June Beetle spp. Leaf Beetle spp. Leafroller spp. May Beetle spp. Mealybug spp. ¹ Pales Weevil Pine Chafer Pine Colaspis Beetle Pine Conelet Bug Pine Leaf Chermid Balsam Wooly Aphid Pine Needle Scale Pine Sawfly spp. Pine Tip Moth spp. Pine Tortoise Scale Pine Weevil spp. Poplar Aphid spp. Sawfly spp. Spittlebug spp. Spruce Budworm Tent Caterpillar spp. Tussock Moth spp. Webworm spp.	0.02-0.04	2.56-5.12	Ground application: Apply in sufficient spray volume to obtain full coverage of the foliage or target area. Air application: Apply in a minimum of 2 gals per acre or sufficient spray volume to obtain full coverage of the foliage or target area. Make applications when pests appear. Apply in sufficient volume to ensure sufficient coverage of foliage. To control exposed foliage, flower, cone, seed, and bark feeding insects, apply as required by scouting. ¹ Suppression only.
Restrictions: <ul style="list-style-type: none"> • DO NOT apply more than 0.04 lb a.i. (0.32 pt) per acre per single application. • DO NOT apply more than 0.24 lb ai (1.92 pts) per acre per year. • Restricted Reentry Interval (REI) is 24 hours. 			

CONIFER AND DECIDUOUS TREES			
Seed Orchards			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
Coneworm spp. Seed Bug spp. Thrips spp.	See Remarks	See 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/A in a minimum of 10 gals finished spray per acre.
Restrictions: <ul style="list-style-type: none"> • DO NOT apply more than 0.16 lb a.i. (1.28 pt) per acre per single application. • DO NOT apply more than 0.5 lb a.i. (4 pts) per acre per year. • DO NOT apply as a foliar broadcast application using a mechanically pressurized handgun on orchards and vineyards. • DO NOT apply as a soil, drench, or ground-directed application using a mechanically pressurized handgun on orchards and vineyards. • Restricted Reentry Interval (REI) is 24 hours. 			

NON-AGRICULTURAL USES

NON-CROPLAND (Excluding Public Land)			
TARGET PESTS	RATE		REMARKS
	lb a.i./A	fl oz product/A	
See specific agricultural crop listing on this LAMDA-CYHALOTHRIN 12.7% EC label for target pests and rates.	See specific agricultural crop listing	See specific agricultural crop listing	<p>Spray non-cropland adjacent to agricultural areas to control migratory insects which may threaten crops.</p> <p>Follow use directions, rates, and spray directions found elsewhere on this label for the adjacent crop and target pests. Use highest labeled rates for dense/large foliage, high insect populations and larger larval stages.</p> <p>Repeat as necessary to maintain control.</p>
Restrictions: <ul style="list-style-type: none"> • DO NOT apply more than the max single application rate listed in the specific agricultural crop listing per single application. • 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 ai/A	Fl Oz/A	Pints/A	Treated Acres/ Gallon of product
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: DO NOT freeze. **DO NOT** store below 40°F. If solid crystals are observed, warm material to above 60°F by placing container in warm location. Shake or roll container periodically to redissolve solids.

Keep out of reach of children and animals. Store in original container only. Store in cool, dry place and avoid excess heat. Carefully open containers. 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 and isolate area. Keep out animal and unprotected persons. Call (800) 424-9300 CHEMTREC.

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

PESTICIDE DISPOSAL: Pesticide wastes are toxic. **DO NOT** contaminate water, food or feed by storage or disposal. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. Dispose of excess waste or pesticide by use according to label directions or contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office. Open dumping is prohibited.

CONTAINER HANDLING:

Non-refillable container. **DO NOT** reuse or refill this container. Triple rinse container (or pressure rinse as follows).

Fill the container ¼ full with appropriate solvent. Replace and tighten closures. Tip container on its side and roll back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and flip back and forth several times. Turn the container over onto its other end and flip back and forth several times. Empty the rinsate into a storage container for later use or disposal or into a mix tank for product formulation. Repeat this procedure two more times. Pressure rinse. Empty the remaining contents into a storage container or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over the storage container or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rise at about 40 PSI for at least 30 seconds. Drain for 10 seconds after flow begins to drip. An appropriate solvent would include a solvent that will dissolve technical material. The rinsate may be used later to formulate a product or may be disposed in accordance with local state and national environmental laws, rules, standards and regulations.

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[OPTIONAL MARKETING GRAPHICS]

