OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
WASHINGTON, D.C. 20460

January 28th, 2026

Michele Lussos
Regulatory Consultant
LG Chem Ltd c/o Ag Chem Consulting
12644 Chapel RD
Clifton, VA 20124

Subject: Label Amendment - Registration Review Mitigation for Lambda-Cyhalothrin
Product Name: LAMBDASTAR 1 CS
EPA Registration Number: 71532-25
Case Number: 672652
Application Dates: February 18, 2022

Dear Michele Lussos:

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,

Maryam K. Muhammad-Perch, Team Lead
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 to 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

LAMBDASTAR 1 CS
Insecticide

For the Control of listed Insect Pests on Selected Crops
Contains the same active ingredient as Warrior® Insecticide.

Active Ingredient:

Lambda-cyhalothrin……	12.00%
Inert Ingredients:……	88.00%
Total	100.00%

Contains 1 lb. of active ingredient per gallon.

[See inside booklet for additional Precautionary Statement, [First Aid,] and Directions for Use.]

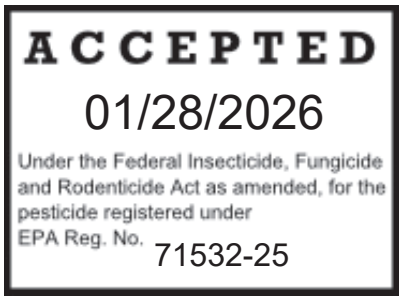
KEEP OUT OF REACH OF CHILDREN

WARNING/AVISO

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

EPA Registration No. 71532-25

EPA Est. No. 5905-AR-01
5905-GA-01
5905-IA-01
44616-MO-01
66196-CA-01
71532-KOR-01



Net Contents:_____Gallons

Manufactured By:
LG Chem, Ltd.
128 YEOUI-DAERO, YEONGDEUNGPO-GU
SEOUL 07336

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in eyes	• Hold eye open and rinse slowly and gently with water 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.
If on skin or clothing	• Take off 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	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also call 1-800-222-1222 for emergency medical treatment information.	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING

May be fatal if swallowed. Causes moderate eye irritation. Harmful if absorbed through skin or inhaled. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes, or clothing. Wear appropriate protective clothing and eyewear as specified in the Personal Protective Equipment (PPE) section of this label. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

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)

Some materials that are chemical-resistant to this product are listed below.

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, made of barrier laminate or viton $\geq$14 mils
- Shoes plus socks
- Protective eyewear

Mixers, loader, applicators and other handler for foliar broadcast spray treatment and drench/soil/ground directed liquid treatment using a mechanically pressurized handgun on nurseries must additionally wear:

- A minimum of a NIOSH-approved elastomeric half mask respirator with vapor (OV) cartridges and combination R, or P filters; OR a NIOSH-approved gas mask with OV canisters; OR a NIOSH-approved powered air purifying respirator with OV cartridges and combinations HE filters.

Mixers, loaders supporting aerial applications to wild rice at a rate of 0.04lb. ai.i per acre, and treating 1200 acres (or more) per day must additionally wear:

- A minimum of a NIOSH-approved elastomeric half mask respirator with vapor (OV) cartridges and combination R, or P filters; OR a NIOSH-approved gas mask with OV canisters; OR a NIOSH-approved powered air purifying respirator with OV cartridges and combinations HE filters.

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

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

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This pesticide is extremely toxic to fish and aquatic organisms and toxic to wildlife. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

Non-target Organism Advisory

This product is highly toxic to bees and other pollinating insects exposed to direct treatment or 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 visiting 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.

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

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

For hand detasseling or mechanically assisted detasseling of corn (field, pop, and sweet) grown for seed and hand harvesting of sweet corn grown for grain, the restricted-entry interval (REI) is 48 hours

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls worn over short-sleeved shirt or short pants.
- Chemical-resistant gloves, made of barrier laminate or viton ≥14 mils
- Shoes plus socks
- Protective eyewear

GENERAL INFORMATION

Apply in sufficient water for thorough coverage of listed crops unless otherwise specifically noted. Rate of application should be based 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. For ground and air applications, unless otherwise noted, the following spray volumes are recommended:

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.

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.

For cutworm control, LambdaStar 1 CS may be applied before, during, or after planting. For soil incorporated applications, use higher rates for improved control.

Resistance Management

For resistance management, LambdaStar 1 CS contains a Group 3A Insecticide. Any insect population may contain individuals naturally resistant to LambdaStar 1 CS and other Group 3A 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.

To delay insecticide resistance, take the following steps:

- Rotate the use of LambdaStar 1 CS or other Group 3A insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticide 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 issue (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 id 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 LG Chem Ltd at www.lgchem.com.

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 15mph at the application site. If the wind speed is greater than 10mph, 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 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 miles per hour, applicators must use ¾ swath displacement upwind at the downwind edge of the field.
- Do not apply during temperature inversion

Airblast Applications:

- Sprays must be directed into the canopy.
- Do not apply when wind speeds exceed 15mph 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 641 (ASABE S641).
- 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 inversion.

SPRAY DRIFT ADVISORIES

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

IMPORTANTANCE 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 higher flow rate.
- Pressure – Use the lowest 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 nozzle designed to reduce drift.

Controlling Droplet Size – Aircraft

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

Boom Height – Ground Boom

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

Release Height - Aircrafts

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 evaporations.

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 aircraft smoke generator. Smoke that layers ad moves laterally in concentrated cloud (under low wind conditions) indicated an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Wind:

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

BUFFER ZONE

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). Not intended for use on rice.

Only apply products containing LambdaStar 1 CS onto fields where a maintained vegetative filter strip of at **least 25 feet** exists between the field edge and where a down gradient aquatic habitat exists. This 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 basin 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. National Resource Conservation Services. https://www.regulations.gov/document?D=EPA-HQ-OPP-2008-0331-0175

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.

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

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

Buffer Zone for 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, natural ponds, estuaries, and commercial fish ponds). Applications made by mosquito control districts and other public health officials are exempt for this requirement.

Buffer Zone for Non-ULV Aerial Application

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

Following best management practices can help reduce risk to terrestrial pollinators. Examples of best management practices includes 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.

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 recommended amount of each product in the tank mix to the spray tank and allow to fully disperse, adding LambdaStar 1 CS 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.

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 should not be used.

LambdaStar 1 CS is an aqueous based formulation. It is recommended that no type of non-emulsifiable oils be used in combination with LambdaStar 1 CS. 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 meets the following criteria:

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 LambdaStar 1 CS on the target crop through proven field trials and through university and extension recommendations.

In addition, the following may be used as diluents:

Crop Oil Concentrate Methylated
Seed Oils
Urea-Ammonium Nitrate

It is recommended that the following not be used in combination with LambdaStar 1 CS as diluents or adjuvants:

Non-emulsifiable Oils
Diesel Fuel
Straight Mineral Oil

CHEMIGATION

Sprinkler Irrigation Application

Apply LambdaStar 1 CS at rates and timing described elsewhere in this label. Consult your local State Extension Service or other local experts for recommendations pertinent for your area.

Thorough coverage of foliage is required for good control. Good agitation in the pesticide supply tank should be maintained prior to and during the entire application period.

Apply by injecting the recommended rate of LambdaStar 1 CS into the irrigation system using a metering device that will introduce a constant flow and by distributing the product to the target area in 0.1-0.2 acre-inch of water. In general, use the least amount of water required for proper distribution and coverage. It is recommended that the product be injected into the main irrigation line ahead of a right angle turn in the line to insure adequate dispersion or mixing in the irrigation water. Once the application is completed, flush the entire irrigation and injection system with clean water before stopping the system.

In addition to the above recommendations, if application is being made during a normal irrigation set of a stationary sprinkler, the recommended rate of LambdaStar 1 CS for the area covered should be injected into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.

Do not apply LambdaStar 1 CS through an irrigation system connected to a public water system. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Use Precautions - Sprinkler Irrigation Application

A. Apply this product only through (sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move) irrigation system(s). Do not apply this product through any other type of irrigation system.

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

C. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

D. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

E. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

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

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

H. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

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

J. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

K. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

L. Do not apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of treated water.

M. Do not apply through chemigation systems connected to public water systems.

SPECIFIC USE DIRECTIONS – AGRICULTURAL USES

ALAFAFA AND ALFALFA GROWN FOR SEED

Target Pests	Rate		Remarks
	lb. a.i/A	fl. oz./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	Apply only to fields planted to pure stands of alfalfa. Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. When foliage is dense and/or pest populations are high 5-10 gallons per acre by air or 20 gallons per acre by ground and higher use rates are recommended. Use higher rates for increased residual control. Avoid application when bees are actively foraging by applying during the early morning or during the evening hours. Be aware of bee hazard resulting from a cool evening and/or morning dew. It may be advisable to remove bee shelters during and for 2-3 days following application. Avoid direct application to bee shelters. [1] For control of first and second instar only. [2] Suppression only. [3] See resistance statement under GENERAL INFORMATION. [4] Does not include Western Flower Thrips.
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	
Beet Armyworm[1, 3] Blotch Leafminer[3] Spider Mites[1]	0.03	3.84	

- Do not apply more than 0.03 lb. a.i. (0.24 pt.) per acre per cutting.
- 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.
- Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.

CANOLA

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Armyworm spp. Cabbage Seedpod Weevil Cutworm spp. Diamondback Moth Flea Beetle Grasshoppers Looper spp. Lygus Bug	0.015-0.03	1.92-3.84	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.
Cabbage Aphid	0.03	3.84	
• 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. • Do not apply more than 0.03 lb a.i. (3.84 fl oz of product) per acre in a single application.			

CEREAL GRAINS:
Corn (At-Plant): Field Corn, Popcorn, Seed Corn, Sweet Corn

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Corn Rootworm Larvae (Western, Northern, Southern, Mexican) Cutworm spp. Lesser Cornstalk Borer Red Imported Fire Ant[1] Seedcorn Beetle Seedcorn Maggot White Grub spp. Wireworm spp.	0.005 lb. a.i. per 1,000 ft. of row[2]	0.66 fl. oz. per 1,000 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 gallons of finished spray per acre. For hand detasseling or mechanically assisted detasseling of corn (field, pop, and sweet) grown for seed and hand harvesting of sweet corn grow for grain, the restricted-entry interval (REI) is 48 hours. [1] Suppression only.

[2]Lbs. a.i. and fl. oz./A of LambdaStar 1 CS applied at 0.66 fl. oz./1000 ft. of row for various row spacings:

Row Spacing	40"	38"	36"	34"	32"	30"
Linear Ft./A	13,068	13,756	14,520	15,374	16,335	17,424
Lbs. a.i./A	0.067	0.07	0.075	0.079	0.084	0.09
Fl. oz./A	8.6	9.1	9.6	10.1	10.8	11.5

- 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 application.
- For field corn, popcorn, and seed corn, do not apply more than 0.12 lb. a.i. (0.96 pt.) per acre per crop from at-plant and foliar applications.
- For sweet corn do not apply more than 0.48 lb. a.i. (3.84 pts.) per acre per crop from at-plant and foliar applications.

CEREAL GRAINS
Corn (Foliar): Field Corn, Popcorn, Seed Corn

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Corn Earworm[1] Cutworm spp. Green Cloverworm Meadow Spittlebug Western Bean Cutworm[1]	0.015-0.025	1.92-3.20	Apply as required by scouting or locally prescribed corn growth stages, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds or other locally recommended methods. Consult your local advisor or extension office for details. For hand detasseling or mechanically assisted detasseling of corn (field, pop, and sweet) grown for seed and hand harvesting of sweet corn grow for grain, the restricted-entry interval (REI) is 48 hours. **Ground application:** Apply in a minimum of
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]	0.02-0.03	2.56-3.84	

<table>
<tr><td>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
Stalk Borer[1]
Stink Bug spp.
Tobacco Budworm[1, 4]
Webworm spp.
Western Corn Rootworm Beetle (Adult)
Yellow-striped Armyworm[2]</td><td></td><td></td><td rowspan="2">10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.

Air application: Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.

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. LambdaStar 1 CS may only suppress heavy infestations and/or subsequent migrations.

Adult corn rootworm beetles (Diabrotica 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.

'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 GENERAL INFORMATION.</td></tr>
<tr><td>Beet Armyworm[2, 4]
Chinch Bug
Green Bug[3,4]
Mexican Rice Borer[1]
Rice Stalk Borer[1]
Southern Corn Leaf Beetle[3]
Sugarcane Borer[1]</td><td>0.03</td><td>3.84</td></tr>
<tr><td colspan="4">• Do not apply within 21 days of harvest.
• 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 0.12 lb. a.i. (0.96 pt.) per acre per crop from at-plant and foliar applications.
• Do not apply more than 0.06 lb. a.i. (0.48 pt.) per acre after silk initiation with no more than 0.03lb. a.i. (0.24 pt.) applied per acre per application.
• Do not apply more than 0.03 lb. a.i. (0.24 pt.) per acre after corn has reached the milk stage (yellow kernels with milky fluid).
• Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.</td></tr>
</table>

CEREAL GRAINS
Corn (Foliar): Sweet Corn

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./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. 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	Apply as required by scouting, or locally prescribed corn growth stages, usually at intervals of 4 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds or other locally recommended methods and should be targeted for control before insects enter the stalk or ear. Consult your local advisor or extension office for details. For hand detasseling or mechanically assisted detasseling of corn (field, pop, and sweet) grown for seed and hand harvesting of sweet corn grow for grain, the restricted-entry interval (REI) is 48 hours. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Adult corn rootworm beetles *(Diabrotica* 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 GENERAL INFORMATION.
Corn Silkfly (Adult)[2]	0.03	3.84	

- Do not apply within 1 day of harvest.
- Do not allow livestock to graze in treated areas or harvest treated corn forage as feed for meat or dairy animals within 1 day after last treatment.
- Do not feed treated corn fodder or silage to meat or dairy animals within 21 days after last treatment.
- Do not apply more than 0.48 lb. a.i. (3.84 pts.) per acre per crop from at-plant and foliar applications.
- Do not apply more than 0.03 lb a.i. (3.84 fl oz of product) per acre in a single application.

CEREAL GRAINS
Sorghum (Grain)

Target Pests	Rate lb. a.i./A	Rate fl. oz./A	Remarks
Cutworm spp. Sorghum Midge	0.015-0.02	1.92-2.56	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.
Armyworm Beet Armyworm[1,3] Corn Earworm European Corn Borer[2] Fall Armyworm[1] Flea Beetle spp. Grasshopper spp. Lesser Cornstalk Borer[2] Southwestern Corn Borer[2] Stink Bug spp. Yellow-striped Armyworm[1] Webworm spp.	0.02-0.03	2.56-3.84	
Chinch Bug Mexican Rice Borer[2] Rice Stalk Borer[2] Sugarcane Borer[2]	0.03	3.84	**Sorghum Midge control:** Begin applications when 25% of the sorghum heads have emerged and are in tip bloom. Repeat applications at 5-day intervals if needed. **Chinch Bug control:** Begin applications when bugs migrate from small grains or grass weeds to small sorghum. Direct spray to the base of sorghum plants. Repeat applications at 3- to 5-day intervals if needed. LambdaStar 1 CS may only suppress heavy infestations and/or subsequent migrations. [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 GENERAL INFORMATION.

- Do not apply within 30 days of harvest.
- 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 apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.

CEREAL GRAINS
Barley, Buckwheat, Oats, Rye, Wheat, Wheat Hay, Triticale

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Army Cutworm Cutworm spp.	0.015-0.025	1.92-3.20	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Chinch Bug control:** Repeat applications at 3- to 5-day intervals if needed. LambdaStar 1 CS may only suppress heavy infestations and/or migrations. **Greenbug**: Known to have many biotypes. LambdaStar 1 CS may provide suppression only. In this situation, a second application using an alternative chemistry may be needed. [1] Best control is obtained before insects begin to roll leaves. Once wheat has started to boot, LambdaStar 1 CS may provide suppression only. Higher rates and increased coverage will be necessary. [2]Suppression only. [3]See resistance statement under GENERAL INFORMATION. [4] Make applications when adults emerge.
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	
Grass Sawfly	0.025-0.03	3.20-3.84	
Chinch Bug Corn Leaf Aphid[2] Greenbug[1],[2] Mite Spp.[2]	0.03	3.84	

- 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 last treatment. Do not feed treated straw to meat or dairy animals within 30 days after last treatment.
- Do not apply more than 0.06 lb. a.i. (0.48 pt.) per acre per season.
- Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.

CEREAL GRAINS
Rice, Wild Rice

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Bird Cherry-Oat Aphid Chinch Bug Fall Armyworm Grasshopper spp. Greenbug Leafhopper spp. Rice Stink Bug Riceworm Rice Water Weevil (Adult) Sharpshooter spp. True Armyworm Yellow Sugarcane Aphid Yellowstriped Armyworm	0.025-0.04	3.20-5.12	Mixers/loaders supporting aerial applications to wild rice at a rate of 0.04 lb. a.i. per acre, and treating 1200 acres (or more) per day must wear minimum of a NIOSH-approved elastomeric half mask respirator with vapor (OV) cartridges and combination R, or P filters; OR a NIOSH-approved gas mask with OV canisters; OR a NIOSH-approved powered air purifying respirator with OV cartridges and combinations HE filters. Apply as required by scouting. Timing and frequency of application should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. Determine the need for repeat applications, usually at intervals of 5-7 days, by scouting. LambdaStar 1CS can be applied to cereal grains (rice and wild rice) that have been treated with propanil-containing products. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. In addition, adding an emulsifiable crop oil (e.g., 1 pt. per acre) when lower aerial application volumes are used is recommended to help improve coverage, reduce evaporation, and improve efficacy. For control of rice water weevil in dry seeded rice, make a foliar application as indicated by scouting for the presence of adults and/or feeding scars, usually within a time-frame of 0-5 days after permanent flood establishment. Do not exceed 10 days from starting permanent flood until insecticide application unless scouting indicates weevils have not been previously present. Adults may also be treated at later stages of rice development to reduce overwintering populations. For control of rice water weevil in water seeded rice, make the first foliar application after pinpoint flood as indicated by scouting for the presence of adults and/or feeding scars usually when rice has emerged 0.5 inch above the waterline. Under conditions of prolonged migration into the field, start field scouting for rice water weevil adults and/or feeding scars 3-5 days after
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	

			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. <u>California:</u> In addition to above directions for control of rice water weevil in water seeded rice, LambdaStar 1CS may be applied at the 1-3 leaf growth stage, with the majority at the 2 leaf growth stage. Adults are vulnerable on levees and in the water. Larvae are vulnerable while feeding on the leaf prior to entering the soil. Monitor for adults, based upon field history and density of population. Monitor field edges and levee areas for adults. Treat in the following manner: a) spray the inside perimeter of the field, or b) spray the entire field. Greenbug is known to have many biotypes. LambdaStar 1CS may only provide suppression. If satisfactory control is not achieved with the first application of LambdaStar 1CS, a resistant biotype may be present. Use alternate chemistry for control. For control of stem borers, scout fields, when rice growth is near panicle differentiation, for early symptoms of damaging populations exhibited as discoloration (orange—tan) around the junction of the leaf sheath and leaf blade which is caused by feeding of young larvae within the sheath. Applications must be made before larvae bore into rice stems. Make the first application at panicle differentiation to 2 inch panicle for partial control. Make the second application at boot to heading for maximum control. All rice varieties are susceptible to stem borer damage, but Cocodrie and Priscilla are particularly susceptible. [1]For control before the larvae bores into the plant stalk.

- Do not apply within 21 days of harvest.
- Do not release flood water within 7 days of an 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 use treated rice fields for the aquaculture of edible fish and crustacea.
- Do not apply as an ultra-low volume (ULV) spray.
- Do not apply more than 0.04 lb a.i. (5.12 fl oz of product) per acre in a single application.

COLE CROPS (HEAD AND STEM BRASSICA)

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./A	
Alfalfa Looper Cabbage Looper Cabbage Webworm Cutworm spp. Imported Cabbageworm Southern Cabbageworm	0.015-0.025	1.92-3.20	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. [1]For control of first and second instar only. [2]Suppression only. [3]See resistance statement under GENERAL INFORMATION.
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	

- Do not apply within 1 day of harvest.
- Do not apply more than 0.24 lb. a.i. (1.92 pts.) per acre per season.
- Do not apply as foliar broadcast application using a mechanically pressurized handgun on Brassica (head and stem).
- Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.

COTTON

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Cutworm spp. Soybean Thrips Tobacco Thrips	0.015-0.02	1.92-2.56	Apply as required by scouting, usually at intervals of 5-7 days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. Applications may also be made with equipment adapted and calibrated for ULV sprays. LambdaStar 1 CS may be mixed with once-refined vegetable oil and applied in a minimum of at least 1 qt. of finished spray per acre. Under light bollworm/budworm infestation levels, 0.02 lb. a.i./A may be applied in conjunction with intense field monitoring, **Boll Weevil**: Spray on a 3- to 5-day schedule. **Cotton Bollworm, Tobacco Budworm:** When applied according to label directions LambdaStar 1 CS also provides ovicidal control of unhatched *Heliothis* spp, eggs. [1]For control of first and second instar only. [2]Suppression only. [3]See resistance statement under GENERAL 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 Stink Bug Sweetpotato Whitefly[2,3] Tobacco Budworm[3] Two-spotted Spider Mite[2]	0.025-0.04	3.20-5.12	

- Do not apply within 21 days of harvest.
- Do not graze livestock in treated areas.
- Do not apply more than 0.2 lb. a.i. (1.6 pts.) 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.
- Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.

CUCURBIT VEGETABLES
Chayote (fruit); Chinese Waxgourd (Chinese preserving melon); Citron Melon; Cucumber; Gherkin; Gourd (edible) [*Lagenaria* species—includes: hyotan, cucuzza; *Luffa acutangula, L. cylindrical* - includes: hechima, Chinese okra] *Momordica* species — includes: balsam apple, balsam pear, bitter melon, Chinese cucumber; Muskmelon (hybrids and/or cultivars of *Cucurnis 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, scallop 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 *Citrulius lanatus*

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./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	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. Use higher application volumes and/or rates when foliage is dense, pest populations are high, larvae are large, weather conditions are adverse and/or as plant size increases. Use higher rates for longer residual. Insects that bore or tunnel into leaves, vines, stems or fruit must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of Lambdastar 1CS. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. [1]See resistance statement under GENERAL INFORMATION . [2]Does not include Western Flower Thrips [3]Suppression only.
Aphid spp.[1] Leafminer spp.[1,3] Spider Mite spp.[3] Whitefly spp.[1,3]	0.03	3.84	

- Do not apply within 1 day of harvest.
- Do not apply more than 0.18 lb. a.i. (1.44 pts.) per acre per season.
- Do not apply as foliar broadcast application using a mechanically pressurized handgun on Cucurbit Vegetables.
- Do not apply more than 0.03 lb a.i. (3.84 fl oz of product) per acre in a single application.

FRUITING VEGETABLES:
Tomato and Tomatillo, Peppers (bell and non-bell), Eggplant, Ground Cherry, Pepino

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Cabbage Looper Cutworm spp. Hornworm spp.	0.015-0.025	1.92-3.20	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. [1]For control of first and second instar only. [2]Suppression only. [3]See resistance statement under GENERAL INFORMATION. [4]For control before the larva bores into the plant stalk or fruit. [5]Does not include Western Flower Thrips.
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	

- Do not apply within 5 days of harvest.
- Do not apply more than 0.36 lb. a.i. (2.88 pts.) per acre per season.
- Do not apply as foliar broadcast application using a mechanically pressurized handgun on Fruiting Vegetables.
- Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.

GRASS FORAGE, FODDER AND HAY

Pasture and Rangeland Grass, Grass Grown for hay or Silage and Grass Grown for Seed

TARGET PESTS	RATE		REMARKS
	lb.a.i./A	fl.oz./A	
Army Cutworm Cutworm spp. Essex Skipper Range Caterpillar Striped Grass Looper	0.015-0.025	1.92-3.2	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details.
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 species[3] 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	**Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. Use higher application volumes and rates when foliage is dense, pest populations are high, larvae are large and/or weather conditions are adverse. Use higher rates for longer residual. For chinch bug control, Lambdastar 1CS may only suppress heavy infestations and/or migrations. In this situation, a second application using an alternative chemistry may be needed. Greenbug is known to have many biotypes. Lambdastar 1CS may provide suppression only. In this situation, a second application using an alternative chemistry may be needed. Pasture and rangeland grass may be used for grazing or cut for forage 0 days after application. Do not cut grass to be dried and harvested for hay until 7 days after the last application. Grass grown for seed: • Straw and mature seed (seed screenings) may be used as feed 7 days after the last application. Regrowth of grass grown for seed may be used for grazing, cut for forage or cut to be dried and harvested for hay. [1]Best control is obtained before insects begin to roll leaves. [2]See resistance statement under GENERAL INFORMATION. [3]Suppression only.
• Do not apply more than 0.03 lb. a.i. (0.24 pt.) 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. per acre which have not been cut between applications.			

- Do not apply more than 0.09 lb. a.i. (0.72 pt.) per acre per season.
- Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.

LEGUME VEGETABLES (BEANS AND PEAS) Edible Podded (only)
Canavalia gladiata- sword bean; *Canavalia ensiformis* – jackbean; *Glycine max* - Soybean (immature seed); **Edible Podded, Succulent Shelled or Dried Shelled -** *Phaseolus* spp. (includes: field, kidney, lima, navy, pinto, runner, snap, tepary, and wax beans); *Vigna* spp. (includes: adzuki, asparagus, moth, mung, rice, urd and yard long beans, black-eyed pea, catjang, Chinese longbean, cowpea, Crowder pea, and Southern pea); *Pisum* spp. (includes: dwarf, edible-pod, English, field, garden, green, snow and sugar snap peas); *Cajanus cajan* - Pigeon pea; **Succulent Shelled or Dried Shelled -** *Vicia faba.*- broadbean (favabean) **Dried Shelled (only)** *Lupinus* spp. (includes: grain, sweet, white and sweet white lupines); *Cicer arietimum* - Chickpea (garbanzo bean); *Cyamopsis tetragonoloba* – guar; *Lablab pupureus* - Lablab bean (hyacinth bean); *Lens esculata* - Lentils

	Rate		
Target Pests	**lb. a.i./A**	**fl. oz./A**	**Remarks**
Cutworm spp. Green Cloverworm Imported Cabbageworm Mexican Bean Beetle Saltmarsh Caterpillar Velvetleaf Caterpillar	0.015-0.025	1.92-3.20	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. [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 GENERAL INFORMATION. [5]Does not include Western Flower Thrips.
Alfalfa Caterpillar Aphid spp[4] 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 (larva) 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	

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	
• For edible podded and succulent shelled legume vegetables, do not apply within 7 days of harvest. • For dried shelled legume vegetables, do not apply within 21 days of harvest. • Do not apply more than 0.12 lb. a.i. (0.96 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 foliar broadcast application using a mechanically pressurized handgun on Legume Vegetables. • Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.			

LEGUME VEGETABLES:

Soybean

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./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	0.015-0.025	1.92-3.20	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Adult Corn Rootworm Beetles *(Diabrotica* species):** As part of an aerial applied corn rootworm control program, use a minimum of 2.56 fl. oz. (0.02 lb. a.i.) per acre. [1] Use higher rates for large larvae. [2]Suppression only. [3]See resistance statement under GENERAL 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]	0.03	3.84	

Lesser Cornstalk Borer[2] Soybean Looper [2,3] Spider Mite spp.[2]			
• Do not apply within 30 days of harvest. • 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 foliar broadcast application using a mechanically pressurized handgun on Legume Vegetables. • Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.			

LETTUCE (HEAD AND LEAF)

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Alfalfa Looper Cabbage Looper Cutworm spp. Green Cloverworm Imported Cabbageworm Saltmarsh Caterpillar	0.015-0.025	1.92-3.20	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. 'For control of first and second instar only. [2]Suppression only. [3]See resistance statement under GENERAL INFORMATION.
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	
• Do not apply within 1 day of harvest. • Do not apply more than 0.3 lb. a.i. (2.4 pts.) per acre per season. • Do not apply as foliar broadcast application using a mechanically pressurized handgun on Lettuce (head and leaf). • Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.			

ONION (BULB) AND GARLIC

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Cutworm spp. Seedcorn Maggot (Adult) Onion Maggot (Adult) Leafminer spp. (Adult)	0.015-0.025	1.92-3.20	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. Use the higher label rates as thrips population increases and avoid rescue situations. **Thrips control by aerial application:** The addition of 1 % COC v/v, 1/4% 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 instar only. [2]Suppression only. [3]See resistance statement under GENERAL INFORMATION.
Armyworm spp.[1] Onion Thrips [3] Tobacco Thrips [3] Western Flower Thrips[2,3] Flower Thrips[2,3] Aphid spp.[2] Plant Bug spp. Stink Bug spp.	0.02-0.03	2.56-3.84	

- Do not apply within 14 days of harvest.
- Do not apply more than 0.24 lb. a.i. (1.92 pts.) per acre per season.
- Do not apply as foliar broadcast application using a mechanically pressurized handgun on Onion (dry bulb) and Garlic.
- Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.

PEANUT

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Cutworm spp. Green Cloverworm Potato Leafhopper Rednecked Peanut Worm Threecornered Alfalfa Looper Velvetbean Caterpillar	0.015-0.025	1.92-3.20	Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. [1] Use higher rates for large larvae. [2]Suppression only. [3]See resistance statement under GENERAL INFORMATION.
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	

- Do not apply within 14 days of harvest.
- Do not apply more than 0.12 lb. a.i. (0.96 pt.) per acre per season.
- Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.

POME FRUITS

Apple, Crabapple, Loquat, Mayhaw, Oriental Pear, Pear, Quince

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Apple Aphid Apple Maggot (Adult) Cherry Fruit Fly spp. (Adult) Leafroller spp. Codling Moth Green Fruitworm Japanese Beetle Leafhopper spp. Leafroller spp. Lesser Appleworm Omnivorous Leafroller Orange Tortrix 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.	0.02-0.04	2.56-5.12	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 50 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. [1]Suppression only.

- Do not apply within 21 days of harvest.
- Do not apply more than 0.2 lb. a.i. (1.6 pts.) per acre per year.
- Do not apply more than 0.16 lb. a.i. (1.28 pts.) per acre per year post bloom.
- Do not apply more than 0.04 lb a.i. (5.12 fl oz of product) per acre in a single application.
- Do not apply as a foliar broadcast application using a mechanically pressurized handgun on orchards
- Do not apply as a soil, drench, or ground-directed application using a mechanically pressurized handgun on orchards.

STONE FRUITS

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./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	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds and IPM. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.

- Do not apply within 14 days of harvest.
- Do not apply more than 0.2 lb. a.i. (1.6 pts.) per acre per year.
- Do not apply more than 0.16 lb. a.i. (1.28 pts.) per acre per year post bloom.
- Do not apply more than 0.04 lb a.i. (5.12 fl oz of product) per acre in a single application.
- Do not apply as a foliar broadcast application using a mechanically pressurized handgun on orchards
- Do not apply as a soil, drench, or ground-directed application using a mechanically pressurized handgun on orchards.

SUGARCANE

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Mexican Rice Borer[1] Pygmy Mole Cricket Rice Stalk Borer [1] Sugarcane Aphid[3] Sugarcane Beetle (Adult)[2] Sugarcane Borer[1] West Indian Cranefly Yellow Sugarcane Aphid[3]	0.025-0.04	3.20-5.12	Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. [1]For control before the larva bores into the plant stalk. [2]Suppression only of beetles active above ground. [3]See resistance statement under GENERAL INFORMATION.
• Do not apply within 21 days of harvest. • Do not apply more than 0.16 lb. a.i. (1.28 pts.) per acre per season. • Do not apply more than 0.04 lb a.i. (5.12 fl oz of product) per acre in a single application.			

SUNFLOWER

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Cutworm spp. Sunflower Beetle	0.015-0.025	1.92-3.20	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. [1] Use control of first and second instar only. [2]Suppression only. [3]See resistance statement under GENERAL INFORMATION.
Banded Sunflower Moth 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	0.02-0.03	2.56-3.84	
Beet Armyworm[2,3] Spider Mite spp.[2]	0.03	3.84	

- Do not apply within 45 days of harvest.
- 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 a ultra-low volume (ULV) spray.
- Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.

TOBACCO (AIR DRIED)
Burley Tobacco and Flue-Cured Tobacco

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Armyworm spp.[1] 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.	0.015-0.03	1.92-3.84	Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. [1]For control of first and second instar only. [2]Suppression only. [3]See resistance statement under GENERAL INFORMATION.

- Do not apply within 40 days of harvest.
- Do not apply more than 0.09 lb. a.i. (0.72 pt.) per acre per year.
- Do not apply as foliar broadcast application using a mechanically pressurized handgun on Tobacco.
- Do not apply more than 0.03 lb a.i. (3.84 fl oz of product) per acre in a single application.

TREE NUTS
Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory Nut, Macadamia Nut (Bush Nut), Pistachio, Walnut [Black, English (Persian)]

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Ants Chinch Bug Codling Moth Filbertworm Leaffooted Bug Leafroller spp. Navel Orangeworm Peach Twig Borer Plant Bug spp.	0.02-0.04	2.56-5.12	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to

Stink Bug spp. Walnut Aphid Walnut Husk Fly spp. (Adult)			obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.
• Do not apply within 14 days of harvest. • Do not apply more than 0.16 lb. a.i. (1.28 pts.) per acre per year. • Do not apply more than 0.12 lb. a.i. (0.96 pt.) per acre per year post bloom. • Do not apply more than 0.04 lb a.i. (5.12 fl oz of product) per acre in a single application. • Do not apply as a foliar broadcast application using a mechanically pressurized handgun on orchards • Do not apply as a soil, drench, or ground-directed application using a mechanically pressurized handgun on orchards.			

Pecan

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Hickory Shuckworm Pecan Aphid spp. Pecan Casebearer spp. Pecan Phylloxera spp. Pecan Spittlebug Pecan Weevil Stink Bug spp.	0.02-0.04	2.56-5.12	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold. Consult your local advisor or extension office for details. **Ground application:** Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.
• Do not apply within 14 days of harvest. • Do not apply more than 0.16 lb. a.i. (1.28 pts.) per acre per year. • Do not apply more than 0.12 lb. a.i. (0.96 pt.) per acre per year post bloom. • Do not apply more than 0.04 lb a.i. (5.12 fl oz of product) per acre in a single application. • Do not apply as a foliar broadcast application using a mechanically pressurized handgun on orchards • Do not apply as a soil, drench, or ground-directed application using a mechanically pressurized handgun on orchards.			

TUBEROUS AND CORM VEGETABLES (Potato, Sweet Potato, Yams and Related)
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)

<table>
<tr><th rowspan="2">TARGET PESTS</th><th colspan="2">RATE</th><th rowspan="2">REMARKS</th></tr>
<tr><th>lb. a.i./A</th><th>fl. oz./A</th></tr>
<tr><td>Cutworm spp.
Leafhopper spp.
Saltmarsh Caterpillar
Sweet Potato Hornworm
Woolybear Caterpillar spp.</td><td>0.015-0.025</td><td>1.92-3.20</td><td rowspan="3">Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details.

Ground application: Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.

Air application: Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.

Use higher application volumes and/or rates when foliage is dense, pest populations are high, larvae are large, weather conditions are adverse and/or as plant size increases. Use higher rates for longer residual.

Insects that bore or tunnel into leaves, vines, stems, tubers or corms must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of LambdaStar 1CS.

[1]See resistance statement under GENERAL INFORMATION.
[2]Does not include Western Flower Thrips.
[3]Suppression only.</td></tr>
<tr><td>Aphid spp.[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)</td><td>0.02-0.03</td><td>2.56-3.84</td></tr>
<tr><td>Leafminer spp.[1,3]
Whitefly spp.[1,3]
Spider Mite spp.[3]</td><td>0.03</td><td>3.84</td></tr>
<tr><td colspan="4">• Do not apply within 7 days of harvest.
• Do not apply more than 0.12 lb. a.i. (0.96 pt.) per acre per season.
• Do not apply as foliar broadcast application using a mechanically pressurized handgun on Tuberous and Corm Vegetables.
• Do not apply more than the maximum rate per acre specified for each pest in the "Rate" column above during a single application.</td></tr>
</table>

OTHER USES

CONIFER AND DECIDUOUS TREES
Plantations, Nurseries

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Bagworm Balsam Twig Aphid Balsam Wooly 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 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 a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. **Air application:** Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. To control exposed foliage, flower, cone, seed, and bark feeding insects, apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. [1] Suppression only.
• Do not apply more than 0.24 lb. a.i. (1.92 pts.) per acre per year. • Do not apply more than 0.04 lb a.i. (5.12 fl oz of product) per acre in a single application. • Wear a minimum of a NIOSH-approved elastomeric half mask respirator with vapor (OV) cartridges and combination R, or P filters; OR a NIOSH-approved gas mask with OV canisters; OR a NIOSH-approved powered air purifying respirator with OV cartridges and combinations HE filters.			

CONIFER AND DECIDUOUS TREES
Seed Orchards

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Coneworm spp. Seed Bug spp. Thrips spp.	See Remarks	See Remarks	For high volume sprayers, dilute 5.12 fl. oz. per 100 gallons of water and apply 5-10 gallons of finished spray per tree. For low volume sprayers, dilute 20 fl. oz. per 100 gallons of water and apply 100 gallons of finished spray per acre. For aerial applications, apply 15 fl. oz. per acre in a minimum of 10 gallons finished spray per acre.

- Do not apply more than 0.5 lb. a.i. (4 pts.) per acre per year.
- Do not apply as foliar broadcast application using a mechanically pressurized handgun on orchards.
- Do not apply as a soil, drench, or ground-directed application using a mechanically pressurized handgun on orchards.

NON-CROPLAND
(Excluding Public Land)

Target Pests	Remarks
See specific crop instructions in sections above for specific pest and rate information.	Spray non-cropland adjacent to agricultural areas to control insects which may migrate to and threaten crops. Follow the General Directions for Use instructions, application rates, and spray recommendations found elsewhere on this label for the specific crop. When foliage is dense/large, insect populations are high or larval stages are large, use the highest labeled rate for that crop-pest combination. Repeat as necessary to maintain control. Do not apply more than 0.2lb a.i. (1.6 pts. or 25.6 fl. Oz. of product) per year. Do not graze livestock in treated areas.

Rate Conversion Chart

Lb. A.I. Per Acre	Fl. Oz. Per Acre	Pints Per Acre	Treated Acres Per Gallon
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 and disposal.

Pesticide Storage: Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with sand, earth, or synthetic absorbent. Remove to chemical waste area.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Container Disposal:
For Containers equal to or less than 5 Gallons : Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For Containers greater than 5 Gallons: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over on to its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances.

Refillable Containers: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into appliction equipment or a mix tank. Fill the container about 10% full of water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times. Return to point of sale. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of LG Chem, LTD. or Seller. To the extent consistent with applicable law all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold LG Chem, LTD. and Seller harmless for any claims relating to such factors.

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