

70506-121

9/8/2009

1 of 35



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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

SEP 8 2009

Mr. Timothy M. Formella
Senior Registration Manager
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

Subject: Label Notifications for Pesticide Registration Notices 2007-4 and 2005-1 (Adding IRAC code)

Dear Mr. Formella,

The Agency is in receipt of your Applications for Pesticide Notification under Pesticide Registration Notices (PRNs) 2005-1 and 2007-4 dated April 3, 2009 and resubmitted August 19, 2009 for the following products:

Lambda-Cyhalothrin Technical
Lambda-Cy EC Insecticide-RUP

EPA Registration Number 70506-118
EPA Registration Number 70506-121

The Registration Division (RD) has conducted its review of these requests for their applicability under PRNs 2005-1 and 2007-4 and finds that the label changes requested fall within the scope of PRNs 2005-1 and 2007-4. The labels submitted with the applications have been stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on nonrefillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please call me directly at 703-305-6249 or Steve Schaible of my staff at 703-308-9362.

Sincerely,



Linda Arrington
Notifications & Minor Formulations Team Leader
Registration Division (7505P)
Office of Pesticide Programs

30285

Please read instructions on reverse before completing form.

Form Approved, OMB No. 2070-0060, Approval expires 05-31-98



EPA

United States
Environmental Protection Agency
Washington, DC 20460

- Registration
- Amendment
- Other:

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 70506-121	2. EPA Product Manager Kimberly Nesci	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Lambda-Cy EC Insecticide - RUP	PM# 13	
5. Name and Address of Applicant (Include ZIP Code) United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

NOTIFICATION

SEP - 8 2009

- Amendment - Explain below.
- Resubmission in response to Agency letter dated _____
- Notification - Explain below.
- Final printed labels in response to Agency letter dated _____
- "Me Too" Application
- Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)
 Notification of label change per PR Notices 2007-4 and 98-10. This notification is consistent with the guidance in PR Notices 2007-4 and 98-10 and the requirements of EPA's regulations at 40 CFR §§ 152.46, 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§ 152.46, 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other _____
*Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1 quart and 1, 15, and 250 gallons	5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Other: _____ <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)		
Name Timothy M. Formella	Title Senior Registration Manager	Telephone No. (Include Area Code) 610-491-2813
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Senior Registration Manager	
4. Typed Name Timothy M. Formella	5. Date August 21, 2009	

Please read instructions on reverse before completing form.

Form Approved, C. No. 2070-0060, Approval expires 05-31-98



United States
Environmental Protection Agency
Washington, DC 20460

- Registration
- Amendment
- Other:

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 70506-121	2. EPA Product Manager Kimberly Nesci	3. Proposed Classification <input type="checkbox"/> None <input checked="" type="checkbox"/> Restricted
4. Company/Product (Name) Lambda-Cy EC Insecticide - RUP	PM# 13	
5. Name and Address of Applicant (Include ZIP Code) United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

- Amendment - Explain below.
- Resubmission in response to Agency letter dated _____
- Notification - Explain below.
- Final printed labels in response to Agency letter dated _____
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- Other - Explain below

NOTIFICATION
SEP - 8 2009

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)
Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
*Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container Including but not limited to 2.0 oz gel per tube		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____					

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)		
Name Timothy M. Formella	Title Senior Registration Manager	Telephone No. (Include Area Code) 610-491-2813
I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Senior Registration Manager	
4. Typed Name Timothy M. Formella	5. Date April 3, 2009	

50635

RESTRICTED USE PESTICIDE
DUE TO TOXICITY TO FISH AND AQUATIC ORGANISMS

For retail sale to and use only by Certified Applicators, or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

GROUP 3 INSECTICIDE

LAMBDA-CY™ EC Insecticide-RUP
For Agricultural and Turf and Ornamental Use

NOTIFICATION
SEP - 8 2009

ACTIVE INGREDIENT	
Lambda-cyhalothrin	
[1a(S*),3a(Z)]-(±)-cyano-(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate.....	11.4%
INERT INGREDIENTS	88.6%
	100.0%

Contains 1 lb. of active ingredient per gallon.
Contains petroleum distillates.

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.)

FIRST AID	
IF SWALLOWED	<ul style="list-style-type: none"> • Call a Poison control center or doctor immediately for treatment advice. • Do not give any liquid to the person. • 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	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, give artificial respiration immediately, preferably by mouth-to-mouth. • Call a poison control center or doctor for treatment advice.
Note to Physician: Contains petroleum distillates. Vomiting may cause aspiration pneumonia.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment information, contact the Rocky Mountain Poison Control Center at 1-866-673-6671.	

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC
1-800-424-9300.

United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
1-800-438-6071

Net Contents:
EPA Reg. No. 70506-121
EPA Est. No.
Batch/Lot # _____

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
WARNING

May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash hands thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash before reuse

Personal Protective Equipment (PPE)

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

Applicators and Other Handlers Must Wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as Barrier Laminate, or Viton ≥14 mils
- Shoes plus socks
- Protective eyewear

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

ENGINEERING CONTROLS STATEMENT

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/clothing 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 wash waters.

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

Physical and Chemical Hazards

Combustible. Do not use or store near heat or open flame. Do not use this product in or on electrical equipment due to the possibility of shock hazard.

DIRECTIONS FOR USE

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.

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

AGRICULTURAL USE REQUIREMENTS

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

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

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

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves made of any waterproof material such as Barrier Laminate, or Viton \geq 14 mils

NON-AGRICULTURAL USE REQUIREMENTS

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

Keep adults, children, and pets off treated areas until spray has dried following the application.

SPRAY DRIFT PRECAUTIONS

BUFFER ZONES

Vegetative Buffer Strip

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

Only apply products containing lambda-cyhalothrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

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

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

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

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

Buffer Zone for ULV Aerial Application

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

Buffer Zone for Non-ULV Aerial Application

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

SPRAY DRIFT REQUIREMENTS

Wind Direction and Speed

Only apply this product if the wind direction favors on-target deposition.
Do not apply when the wind velocity exceeds 15 mph.

Temperature Inversion

Do not make aerial or ground applications into temperature inversions.
Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Droplet Size

Use only Medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

ADDITIONAL REQUIREMENTS FOR GROUND APPLICATIONS

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

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

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

ADDITIONAL REQUIREMENTS FOR AERIAL APPLICATIONS

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

Flight speed and nozzle orientation must be considered in determining droplet size.

Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

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

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

CHEMIGATION

Sprinkler Irrigation Application

Apply LAMBDA-CY EC INSECTICIDE-RUP using rates and timing described on this label. Consultation with your local State Extension Service or other local experts may be useful for recommendations on which adjuvants or diluent types to use, (see Tank Mix Applications section) as well as for rates and mixing instructions. Ascertain that the recommendations have been proven, through university and extension field trials, to be effective with this product applied by chemigation.

Be sure the irrigation system is providing uniform application of water to all areas, because good control requires thorough coverage of foliage. Maintain continuous agitation in the pesticide supply tank before and during the entire application period.

Inject the recommended rate of LAMBDA-CY EC INSECTICIDE-RUP into the irrigation system by means of a metering device that will provide a constant flow and distribute the product to the desired area in 0.1-0.2 inch of water. It is recommended that the minimum amount of water be used that will provide proper distribution and coverage. Inject the product into the main irrigation line ahead of a right angle turn in the line to insure adequate dispersion or mixing in the irrigation water. Following application, flush the entire irrigation and injection system with clean water before stopping it.

If application is being made during a normal irrigation set of a stationary sprinkler, inject the recommended rate of LAMBDA-CY EC INSECTICIDE-RUP for the area covered into the system only during the end of the irrigation set for a sufficient time to provide adequate coverage and product distribution.

It is not recommended that LAMBDA-CY EC INSECTICIDE-RUP be applied through an irrigation system connected to a public water system. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

USE PRECAUTIONS: SPRINKLER IRRIGATION APPLICATION

- A. Apply this product only through (sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move) irrigation system(s). Do not apply this product through any other type of irrigation system.
- B. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- C. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- D. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- E. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- F. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-resource contamination from backflow.
- G. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid 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.
- M. Do not apply through chemigation systems connected to public water systems.

GENERAL DIRECTIONS FOR USE

Thorough crop coverage is necessary for both initial and residual control. Apply by ground in at least 10 gal/A or by air in at least 2 gal/A using sufficient water to obtain full coverage of foliage unless this label specifies otherwise. In situations where foliage is dense or pest pressure is high (heavier insect or egg pressure, larger larval stages), control can be improved by use of higher application volumes and/or higher use rates.

For cutworm control, LAMBDA-CY EC INSECTICIDE-RUP may be applied before, during, or after planting. When making soil incorporated applications, use higher rates for better control.

Resistance Management

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

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

Tank Mix Applications

LAMBDA-CY EC INSECTICIDE-RUP may be tank mixed with other currently registered pesticides unless expressly prohibited by the product label. Adjuvants such as spreader stickers, wetting agents, and penetrants may also be added. Use a small volume mixing test with the other products to confirm compatibility. If other chemicals are added to the applicator tank, LAMBDA-CY EC INSECTICIDE-RUP should be added last. Fill tank to desired volume and continue to agitate while making applications. If mixed with EC formulations, use within 24 hours. Observe all restrictions and precautions found on labels of products in the tank mix.

CROP USES AND SPRAY RECOMMENDATIONS

ALFALFA, ALFALFA GROWN FOR SEED

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Alfalfa Caterpillar Army Cutworm Cutworm spp. Green Cloverworm Leafhopper spp. Looper spp. Threecornered Alfalfa Hopper Velvetbean Caterpillar Webworm spp.	0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. ¹ Use higher rates for large larvae ² Suppression only. ³ See resistance statement under General Directions for Use. ⁴ Does not include Western Flower Thrips.
Alfalfa Seed Chalcid (Adult) Alfalfa Weevil Armyworm	0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)	Do not apply more than 0.03 lb. a.i. (0.24 pt. or 3.84 fl. oz of product)/A per cutting.

<p>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 Armyworm¹ Grape Colaspis (Adult) Grasshopper spp. Green June Beetle (Adult) Green Peach Aphid³ 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 Yellowstriped Armyworm Whitefringed Beetle spp. (Adult) Yellowstriped Armyworm</p>		<p>Do not apply more than 0.12 lb. a.i. (0.96 pt. or 15.36 fl. oz. of product)/A per season.</p> <p>Do not apply within 1 day of harvest for forage or within 7 days of harvest for hay.</p>
<p>Beet Armyworm^{1,3} Blotch Leafminer³ Spider Mites²</p>	<p>0.03 lb. a.i. (3.84 fl. oz.)</p>	
<p>Use scouting to determine need for applications. Base the timing and frequency of applications on the timing when insect populations reach local economic thresholds.</p> <p>Apply by ground or air using enough water to obtain full coverage of foliage. Apply in at least 2 gal./A by air or 10 gal/A by ground. In situations of dense foliage and/or high pest populations, use 5-10 gal/A by air or 20 gal./A by ground and higher use rates. Also use higher rates for improved residual control.</p> <p>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.</p>		

CANOLA

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
<p>Armyworm spp. Cabbage Seedpod Weevil Cutworm spp. Diamondback Moth Flea Beetle Grasshoppers Looper spp. Lygus Bug</p>	<p>0.015-0.03 lb. a.i. (1.92-3.84 fl. oz.)</p>	<p>See additional instructions below.</p> <p>Do not apply within 7 days of harvest. Do not apply more than 0.09 lb. a.i.(0.72 pt. or 11.52 fl. oz. of product)/A per year.</p>
<p>Cabbage Aphid</p>	<p>0.03 lb. a.i.</p>	

120925

(3.84 fl. oz.)
Use scouting to determine need for applications, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Apply by air or ground with enough water to obtain full coverage of foliage. For air applications, apply a minimum of 2 gal. of water /A.

CEREAL GRAINS – CORN (AT PLANT): FIELD CORN, POPCORN, SEED CORN, SWEET CORN

Pests	Rate Lambda-Cy EC Insecticide-RUP per 1,000 ft of Row ²	Remarks
Corn Rootworm Larvae (Western, Northern, Southern, Mexican) Cutworm spp. Lesser Cornstalk Borer Red Imported Fire Ant ¹ Seedcorn Beetle Seedcorn Maggot Wireworm spp. ¹ White Grub spp.	0.005 lb. a.i. (0.66 fl. oz.)	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. or 11.52 fl. oz. of product)/A per crop at plant. For field corn, popcorn, and seed corn do not apply more than 0.12 lb. a.i. (0.96 pts. or 15.36 fl. oz of product)/A per crop from at plant and foliar applications. For sweet corn do not apply more than 0.48 lb. a.i. (3.84 pts. or 61.44 fl. oz of product)/A per crop from at plant and foliar applications. For Banded Applications – Make application 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. For In-Furrow Applications – Make application 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 gal. finished spray/A.
¹ Suppression only.		

² lbs. a.i. and fl. oz./A of LAMBDA-CY EC INSECTICIDE-RUP 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

CEREAL GRAINS – CORN (FOLIAR): FIELD CORN, POPCORN, SEED CORN

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Corn Earworm ¹ Cutworm spp. Green Cloverworm Meadow Spittlebug Western Bean Cutworm ¹	0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. ¹ For control before the larva bores into the plant stalk or ear. ² Use higher rates for large larvae. ³ Suppression only. ⁴ See resistance statement under General Directions for Use.
Amyworm ² Bean Leaf Beetle Bird Cherry-Oat Aphid ³ Cereal Leaf Beetle Corn Leaf Aphid ³	0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)	Do not apply within 21 days of harvest. Do not allow livestock to graze in treated areas or harvest treated corn forage as feed for meat or dairy

<p>Corn Rootworm Beetle (Adult beetles including Mexican, Northern, Southern, Western) English Grain Aphid³ European Corn Borer¹ Fall Armyworm² Flea Beetle spp. Grasshopper spp. Hop vine Borer¹ Japanese Beetle (Adult) Lesser Cornstalk Borer Sap Beetle (Adult) Seedcorn Beetle Southwestern Corn Borer¹ Stalk Borer¹ Stink Bug spp. Tobacco Budworm^{1,4} Webworm spp. Yellowstriped Armyworm²</p>		<p>animals within 1 day after 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. or 15.36 fl. oz. of product)/A per crop from at plant and foliar applications. Do not apply more than 0.06 lb. a.i. (0.48 pt. or 7.68 fl. oz. of product) after silk initiation. Do not apply more than 0.03 lb. a.i. (0.24 pt. or 3.84 fl. oz. of product)/A after corn has reached the milk stage (yellow kernels with milky fluid).</p>
<p>Beet Armyworm⁴ Chinch Bug Green Bug^{3,4} Mexican Rice Borer¹ Rice Stalk Borer¹ Southern Corn Leaf Beetle³ Sugarcane Borer</p>	<p>0.03 lb. a.i. (3.84 fl. oz.)</p>	
<p>Use scouting or locally prescribed corn growth stages to determine need for application, usually at intervals of 7 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds or other locally recommended methods. Apply by ground or air using sufficient water and application methods to obtain full coverage of target location. When applying by air, apply in at least 2 gal. of water/A. For chinch bug control, begin application when bugs migrate from small grains or grass weeds to small corn and direct the spray to the base of corn plants. Make additional applications at 3-5 day intervals if needed. LAMBDA-CY EC INSECTICIDE-RUP may only suppress heavy infestations and/or subsequent migrations. For control of adult corn rootworm beetles (<i>Diabrotica</i> spp.) as part of an aerial applied corn rootworm control program use at least 3.84 fl. oz./A (0.03 lb. a.i./A).</p>		

CEREAL GRAINS – SWEET CORN (FOLIAR)

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
<p>Aphid spp.^{2,3} Armyworm¹ Aster Leafhopper Beet Armyworm^{1,3} Cereal Leaf Beetle Chinch Bug Common Cornstalk Borer Corn Rootworm Beetle (Adult beetles including Mexican, Northern, Southern, Western) Corn Earworm Cutworm spp. European Corn Borer Fall Armyworm¹ Flea Beetle spp. Grasshopper spp. Japanese Beetle (Adult)</p>	<p>0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)</p>	<p>See additional instructions below. ¹Use higher rates for large larvae. ²Suppression only. ³See resistance statement under General Directions for Use. 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.</p>

Sap Beetle (Adult) Southern Armyworm ¹ Southwestern Corn Borer Spider Mite spp. ² Stink Bug spp. Tarnished Plant Bug Yellowstriped Armyworm ¹ Western Bean Cutworm Webworm spp.		(3.84 pt. or 61.44 fl. oz. of product)/A per crop from at plant and foliar applications.
Corn Silkfly (Adult) ² Green Bug ^{2,3}	0.03 lb. a.i. (3.84 fl. oz.)	
<p>Use scouting or locally prescribed corn growth stages to determine need for application, usually at intervals of 4 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. For best results target control before insects enter the stalk or ear.</p> <p>Apply ground or air using enough water and application methods to obtain full coverage of foliage and ears (if present). When applying by air, apply in at least 2 gal. of water per acre.</p> <p>For control of adult corn rootworm beetles (<i>Diabrotica</i> spp.) as part of an aerial applied corn rootworm control program use a minimum of 0.025 lb. a.i (3.2 fl. oz.)/A.</p>		

CEREAL GRAINS – RICE AND WILD RICE

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Bird Cherry-Oat Aphid Chinch Bug Fall Armyworm Grasshopper spp. Green Bug Leafhopper spp. Rice Stink Bug Riceworm Rice Water Weevil (Adult) Sharpshooter spp. True Armyworm Yellowstriped Armyworm Yellow Sugarcane Aphid	0.025-0.04 lb. a.i. (3.20-5.12 fl. oz.)	See additional instructions below. ¹ For control before the larvae bore into the plant stalk. Do not release flood water within 7 days of an application. Do not apply more than 0.12 lb. a.i. (0.96 pt. or 15.36 fl. oz. of product)/A per season. Do not apply more than 0.08 lb. a.i. (0.64 pt.)/A within 28 days of harvest or more than 0.04 lb. a.i. (0.32 pt.)/A within 21 days of harvest. Do not apply within 21 days of harvest.
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 fl. oz.)	Do not use treated rice fields for the aquaculture of edible fish and crustacea. Do not apply as an ultra-low volume (ULV) spray.
<p>Mixers/loaders supporting aerial applications to wild rice at a rate of 0.04 lb. a.i./A, and treating 1200 acres (or more) per day must wear a dust-mist respirator.</p> <p>Use scouting to determine timing of need for application and the need for repeat applications, usually at 5-7 day intervals. Base the timing and frequency of applications on when insect populations reach local economic thresholds.</p> <p>LAMBDA-CY EC INSECTICIDE-RUP can be safely used when propanil products are being used for weed control. Apply by air or ground using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gal. of water (or a total carrier volume)/A but ensure that application is made in sufficient volume to provide adequate coverage. When applying at lower volumes by air, the addition of an emulsifiable crop oil (e.g. 1 pt./A) is recommended to help improve coverage, reduce evaporation, and improve efficacy.</p> <p>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 allow more than 10 days to elapse from starting permanent flood until insecticide application unless scouting indicates weevils have not been previously present. Treatment of adults may also be made at later stages of rice development to reduce overwintering populations.</p> <p>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 1/2 inch above the waterline. When</p>		

there is prolonged migration into the field, begin field scouting for adults and/or feeding scars 3-5 days after the first treatment and, if needed, make a second application within 7-10 days of the first application. Treatment of adults may also be made at later stages of rice development to reduce overwintering populations.

California: In addition to the directions above for control of rice water weevil in water seeded rice, LAMBDA-CY EC INSECTICIDE-RUP may be applied at the 1-3 leaf growth stage, with the majority at the 2 leaf growth stage. Adults are vulnerable both on levees and in the water. Larvae are vulnerable while feeding on the leaves before they enter the soil. Monitor for adults, based upon field history and density of population. Monitor field edges and levee areas for adults, then treat in one of the following ways: 1) spray the inside perimeter of the field, or 2) spray the entire field. Because Green bug is known to have many biotypes, it is possible that LAMBDA-CY EC INSECTICIDE-RUP may only provide suppression. If the first application of LAMBDA-CY EC INSECTICIDE-RUP does not give satisfactory control, a resistant biotype may be present and use of an alternate chemistry may be necessary.

For control of stem borers, scout fields when rice growth is near panicle differentiation for early symptoms of damaging populations. This damage will be 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.

CEREAL GRAINS – SORGHUM (GRAIN)

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Cutworm spp. Sorghum Midge	0.015-0.02 lb. a.i. (1.92-2.56 fl. oz.)	See additional instructions below. ¹ Use higher rates for large larvae. ² For control before the larva bores into the plant stalk.
Armyworm Beet Armyworm 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. Webworm spp. Yellowstriped Armyworm ¹	0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)	³ See resistance statement under General Directions for Use. Do not apply more than 0.08 lb. a.i. (0.64 pt. or 10.24 fl. oz. of product)/A per season. Do not apply more than 0.06 lb. a.i. (0.48 pt. or 7.68 fl. oz. of product)/A per season after crop emergence. Do not apply more than 0.02 lb. a.i. (0.16 pt. or 2.56 fl. oz. of product)/A per season once crop is in soft dough stage. Do not apply within 30 days of harvest.
Chinch Bug Mexican Rice Borer ² Sugarcane Borer ²	0.03 lb. a.i. (3.84 fl. oz.)	
<p>Use scouting to determine need for treatment, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.</p> <p>Apply by ground or air using enough water and application methods to obtain full coverage of target location. When applying by air, apply in at least 2 gal. of water/A.</p> <p>For sorghum midge control, make first application when one quarter of the sorghum heads have emerged and are in tip bloom. If needed, repeat applications at 5-day intervals.</p> <p>For chinch bug control, start applications when bugs migrate from small grains or grass weeds to small sorghum, directing spray to the base of sorghum plants. If needed, repeat applications at 3-5 day intervals.</p> <p>LAMBDA-CY EC INSECTICIDE-RUP may only suppress heavy infestations and/or subsequent migrations.</p>		

CEREAL GRAINS – WHEAT, WHEAT HAY, TRITICALE, BARLEY, BUCKWHEAT, OATS, AND RYE

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Army Cutworm Cutworm spp.	0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. ¹ Best control is obtained before insects begin to roll leaves. Once crop has started to boot, LAMBDA-CY EC INSECTICIDE-RUP may provide suppression only. Higher rates and increased coverage will be necessary. ² Suppression only. ³ See resistance statement under General Directions for Use. ⁴ Make application 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. Yellowstriped Armyworm	0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)	Do not apply within 30 days of harvest. Do not apply more than 0.06 lb. a.i. (0.48 pt. or 7.68 fl. oz. of product)/A per season. Do not allow livestock to graze in treated areas or harvest treated wheat forage as feed for meat or dairy animals within 7 days after treatment. Do not feed treated straw to meat or dairy animals within 30 days after last treatment.
Grass Sawfly	0.025-0.03 lb. a.i. (3.20-3.84 fl. oz.)	
Chinch Bug Corn Leaf Aphid ² Greenbug ^{1,3} Mite spp. ²	0.03 lb. a.i. (3.84 fl. oz.)	
<p>Use scouting to determine need for treatment, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.</p> <p>Apply by ground or air using enough water and application methods to obtain full coverage of foliage. When applying by air, apply in at least 2 gal. of water/A.</p> <p>For chinch bug control, repeat applications at 3-5 day intervals if needed. LAMBDA-CY EC INSECTICIDE-RUP may only suppress heavy infestations and/or migrations.</p> <p>Because Greenbug is known to have many biotypes, it is possible that LAMBDA-CY EC INSECTICIDE-RUP may only provide suppression. If this occurs, a second application using an alternative chemistry may be needed.</p>		

COLE CROPS – BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CAVALO BROCCOLO, CAULIFLOWER, CHINESE BROCCOLI (GAI LON), CHINESE CABBAGE (NAPA), CHINESE MUSTARD CABBAGE (GAI CHOY), KOHLRABI

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Alfalfa Looper Cabbage Looper Cabbage Webworm Cutworm spp. Imported Cabbageworm Southern Cabbageworm	0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. ¹ For control of first and second instars only. ² Suppression only. ³ See resistance statement under General Directions for Use.
Aphid spp. ^{2,3} Armyworm Beet Armyworm ^{1,3}	0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)	Do not apply within 1 day of harvest. Do not apply more than 0.24 lb. a.i. (1.92 pt. or

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} Yellowstriped Armyworm		30.72 fl. oz. of product)/A per season.
Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water/A.		

COTTON

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Cutworm spp. Soybean Thrips Tobacco Thrips	0.015-0.02 lb. a.i. (1.92-2.56 fl. oz.)	See additional instructions below. ¹ For control of first and second instars only. ² Suppression only.
Cabbage Looper Cotton Fleahopper Cotton Leafperforator Cotton Leafworm Lygus Bug spp. ³ Pink Bollworm Saltmarsh Caterpillar	0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)	³ See resistance statement under General Directions for Use. Do not apply within 21 days of harvest. Do not graze livestock in treated areas.
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 Twospotted Spider Mite ²	0.025-0.04 lb. a.i. (3.20-5.12 fl. oz.)	Do not apply more than 0.2 lb. a.i (1.6 pt. or 25.6 fl. oz. of product)/A 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.
Use scouting to determine need for application, usually at intervals of 5-7 days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Apply ground or air using enough water to obtain full coverage of foliage. Applications may also be made with equipment adapted and calibrated for ULV sprays. LAMBDA-CY EC INSECTICIDE-RUP may be mixed with once-refined vegetable oil and applied in a minimum of at least one qt. of finished spray/A. When bollworm/budworm infestation levels are light, 0.02 lb. a.i. (2.56 fl. oz. of product)/A may be applied in conjunction with intense field monitoring. For boll weevil, spray on a 3-5 day schedule. When applied according to the directions above for control of cotton bollworm and tobacco budworm, LAMBDA-CY EC INSECTICIDE-RUP also provides ovicidal control of unhatched <i>Heliothis</i> species eggs.		

CUCURBIT VEGETABLES – CHAYOTE (fruit), CHINESE WAXGOURD, CITRON MELON, CUCUMBER, GHERKIN, GOURD (edible), MOMORDICA spp., MUSKMELON, PUMPKIN, SQUASH (summer and winter), WATERMELON

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Armyworm spp. ¹ Blister Beetle spp. Cabbage Looper Corn Earworm Cricket spp. Cucumber Beetle species (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 species 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 lb. a.i. (2.56-3.84 fl. oz.)	See additional instructions below. ¹ See resistance statement under General Directions for Use. ² Western Flower Thrips are not included. ³ Suppression only. Do not apply within 1 day of harvest. Do not apply more than 0.18 lb. a.i (1.44 pt. or 23 fl. oz.)/A per season.
Aphid spp. ¹ Leafminer spp. ^{1,3} Spider Mite spp. ³ Whitefly spp. ^{1,3}	0.03 lb. a.i. (3.84 fl. oz.)	
Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of solution per acre. When applying by ground, apply in a minimum of 10 gals. of solution per acre. Use higher application volumes and/or application rates when foliage is dense, larvae are large, pest populations are high, size of plants increases, or weather conditions are adverse. Use higher rates for longer residual. Insects that tunnel or bore into leaves, stems, vines, or fruit must be controlled before penetration. Only insects (larvae and adults) exposed to the product can be controlled with foliar applications of Lambda-Cy EC Insecticide - RUP.		

FRUITING VEGETABLES – TOMATO, TOMATILLO, PEPPERS (BELL AND NONBELL), EGGPLANT, GROUND CHERRY, PEPINO

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Cabbage Looper Cutworm spp. Hornworm spp.	0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. ¹ For control of first and second instars only. ² Suppression only.
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} Yellowstriped Armyworm ¹	0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)	³ See resistance statement under General Directions for Use. ⁴ For control before the larva bores into the plant stalk or fruit. ⁵ Does not include Western Flower thrips. Do not apply within 5 days of harvest. Do not apply more than 0.36 lb. a.i. (2.88 pt. or 46.08 fl. oz. of product)/A per season.
Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on the timing when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gal. of water/A.		

GRASS FORAGE, FODDER, AND HAY – PASTURE AND RANGELAND GRASS, GRASS GROWN FOR HAY OR SILAGE, AND GRASS GROWN FOR SEED

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Army Cutworm Cutworm spp. Essex Skipper Range Caterpillar Striped Grass Looper	0.015-0.025 lb. a.i. (1.92-3.2 fl. oz.)	See additional instructions below. ¹ Best control is obtained before insects begin to roll leaves. ² See resistance statement under General Directions for Use. ³ Suppression only. ⁴ Greenbug is known to have many biotypes. Lambda-Cy EC Insecticide - RUP may provide suppression only. A second application using alternative chemistry may be needed.

		<p>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.</p> <p>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.</p> <p>Do not apply more than 0.03 lb. a.i (0.24 pt. or 3.84 fl. oz.)/A per cutting for pastures, rangeland, and grasses grown for seed. A minimum re-treatment interval (RTI) of 30 days is required for pastures and rangeland receiving 0.03 lb. a.i./A which have not been cut between applications.</p>
<p>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 Aphid¹ Fall Armyworm Flea Beetle spp. Grass Mealybug Grass Sawfly (adult) Grasshopper spp. Green June Beetle (adult) Greenbug^{1,2,4} Japanese Beetle (adult) Katydid spp. Leafhopper spp. Mite spp.³ Russian Wheat Aphid¹ Southern Armyworm Spittlebug spp. Stink Bug spp. Sugarcane Aphid Thrips spp. Tick spp. True Armyworm Webworm spp. Yellowstriped Armyworm</p>	<p>0.02 - 0.03 lb. a.i. (2.56 - 3.84 fl. oz.)</p>	<p>Do not apply more than 0.09 lb. a.i. (0.72 pt. or 11.52 fl. oz. of product) per acre per season.</p>
<p>Use scouting to determine application requirements. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water per acre. When applying by ground, apply in a minimum of 7 gals. of water per acre. Use higher application volumes and/or application rates when foliage is dense, larvae are large, pest populations are high, or weather conditions are adverse. Use higher rates for longer residual. For chinch bug control, Lambda-Cy EC Insecticide - RUP may only suppress heavy infestations and/or migrations. In these situations, a second application using alternative chemistry may be needed.</p>		

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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 yardlong beans, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, and Southern pea; *Pisum* spp. – includes dwarf, edible-pod, English, field, garden, green, snow, and sugar peas; *Cajanus cajan* – Pigeon pea.

SUCCULENT SHELLED OR DRIED SHELLED: *Vicia faba* – broadbean (fava bean).

DRIED SHELLED (ONLY): *Lupinus* spp. – includes grain, sweet, white and sweet white lupines; *Cicer arietinum* – chickpea (garbanzo bean), *Cyamopsis tetraganloba* – guar, *Lablab purpureus* – Lablab bean (hyacinth bean), *Lens esculata* – lentils.

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Cutworm spp. Green Cloverworm Imported Cabbageworm Mexican Bean Beetle Saltmarsh Caterpillar Velvetleaf Caterpillar	0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. ¹ For control before the larva bores into the plant stalk or pods. ² Use higher rates for large larvae. ³ For suppression only. ⁴ See resistance statement under General
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. Leaf-tier spp. Looper spp. Meadow Spittlebug Painted Lady Butterfly (Larva) Plant Bug spp. including Lygus spp. ⁴ Stalk Borer ¹ Stink Bug spp. Threecornered Alfalfa Hopper Thrips spp. ^{4,5} Tobacco Budworm ⁴ Webworm spp. Western Bean Cutworm Western Yellowstriped Armyworm ² Yellowstriped Armyworm ²	0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)	Directions for Use. ⁵ Does not include Western Flower Thrips 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. or 15.36 fl. oz. of product)/A per season. For succulent and dried shelled peas and beans, do not graze livestock in treated areas or harvest vines for forage or hay.
Beet Armyworm ^{3,4} Leafminer spp. ^{3,4} Lesser Cornstalk Borer ³	0.03 lb. a.i. (3.84 fl. oz.)	

Soybean Looper ^{3,4} Spider Mite spp. ³ Whitefly spp. ^{3,4}	
Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gal. of water/A.	

LEGUME VEGETABLES: SOYBEANS

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Bean Leaf Beetle Cabbage Looper Corn Earworm Corn Rootworm Beetle (Adult beetles including Mexican, Northern, Southern, Western) Cutworm spp. Green Cloverworm Mexican Bean Beetle Painted Lady (Thistle) Caterpillar Potato Leafhopper Saltmarsh Caterpillar Soybean Aphid ⁴ Threecornered Alfalfa Hopper Thrips spp. ⁵ Velvetbean Caterpillar Woollybear Caterpillar	0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. ¹ Use higher rates for large larvae. ² Suppression only. ³ See resistance statement under General Directions for Use. ⁴ Use lower rates for early season applications and/or lighter populations. ⁵ Does not include Western Flower Thrips. Do not apply within 30 days of harvest. Do not apply more than 0.06 lb. a.i. (0.48 pt.)/A per season.
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. Yellowstriped Armyworm ¹	0.025-0.03 lb. a.i. (3.20-3.84 fl. oz.)	
Beet Armyworm ^{2,3} Lesser Cornstalk Borer ² Soybean Looper ^{2,3} Spider Mite spp. ²	0.03 lb. a.i. (3.84 fl. oz.)	
Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Do not graze or harvest treated soybean forage, straw or hay for livestock feed. Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gal. of water/A. For control of adult corn rootworm beetles (<i>Diabrotica</i> spp.) as part of an aerial applied to corn rootworm control program use at least 2.56 fl. oz./A of product (0.02 lb. a.i./A).		

LETTUCE (HEAD AND LEAF)

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Alfalfa Cabbage Looper Cutworm spp. Green Cloverworm Imported Cabbageworm Saltmarsh Caterpillar	0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. ¹ For control of first and second instars only. ² Suppression only. ³ See resistance statement under General Directions for Use.
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 lb. a.i. (2.56-3.84 fl. oz.)	Do not apply within 1 day of harvest. Do not apply more than 0.3 lb. a.i. (2.4 pt. or 38.4 fl. oz. of product)/A per season.
Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gal. of water/A.		

ONION (BULB) AND GARLIC

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Cutworm spp. Leafminer spp. (Adult) Onion Maggot (Adult) Seedcorn Maggot (Adult)	0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. ¹ For control of first and second instars only. ² Suppression only. ³ See resistance statement under General Directions for Use.
Aphid spp. ² Armyworm spp. ¹ Flower Thrips ^{2,3} Onion Thrips ³ Plant Bug spp. Stink Bug spp. Tobacco Thrips ³ Western Flower Thrips ^{2,3}	0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)	Do not apply within 14 days of harvest. Do not apply more than 0.24 lb. a.i. (1.92 pt. or 30.72 fl. oz. of product)/A per season.
Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Use the higher label rates as thrips population increases and avoid rescue situations. Apply by ground or air using enough water and application methods to obtain full coverage of foliage. When applying by air, apply in at least 2 gal. of water/A. To control thrips by aerial application, the addition of 1% COC v/v, ¼% NIS v/v or a silicone adjuvant (follow manufacturer's use directions) may improve the deposition of the spray and increase plant coverage.		

PEANUT

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Cutworm spp. Green Cloverworm Potato Leafhopper Rednecked Peanut Worm Threecornered Alfalfa Leafhopper Velvetbean Caterpillar	0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. ¹ Use higher rates for large larvae. ² Suppression only. ³ See resistance statement under General Directions for Use.
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 lb. a.i. (2.56-3.84 fl. oz.)	Do not apply within 14 days of harvest. Do not apply more than 0.12 lb. a.i. (0.96 pt. or 15.36 fl. oz. of product)/A per season.
Aphid spp. ² Beet Armyworm ^{2,3} Lesser Cornstalk Borer ² Soybean Looper ^{2,3} Spider Mite spp. ²	0.03 lb. a.i. (3.84 fl. oz.)	
Use scouting to determine need for application, usually at intervals of 7 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gal. of water/A.		

POME FRUITS – APPLE, CRABAPPLE, LOQUAT, MAYHAW, ORIENTAL PEAR, PEAR, QUINCE

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Apple Aphid Apple Maggot (Adult) Cherry Fruit Fly spp. (Adult) Coding 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.	0.02-0.04 lb. a.i. (2.56-5.12 fl. oz.)	See additional instructions below. ¹ Suppression only. Do not apply within 21 days of harvest. Do not apply more than 0.2 lb. a.i. (1.6 pt. or 25.6 fl. oz. of product)/A per year. Do not apply more than 0.16 lb. a.i. (1.28 pt. or 20.48 fl. oz. of product)/A per year post bloom.

Tufted Apple Budworm Webworm spp.		
<p>Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds and IPM recommendations.</p> <p>Apply by ground or air using enough water to obtain full coverage of the foliage or target area. When applying by air, apply in at least 5 gal. of water per acre, but use higher volumes as appropriate for thorough coverage.</p>		

STONE FRUITS – APRICOT, SWEET CHERRY, TART CHERRY, NECTARINE, PEACH, PLUM, CHICKASAW PLUM, DAMSON PLUM, JAPANESE PLUM, PLUMCOT, PRUNE

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
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 Peachtree Borer spp. Peach Twig Borer Pear Sawfly Periodical Cicada Plant Bug spp. Plum Curculio Rose Chafer Stink Bug spp. Tent Caterpillar spp. Thrips spp.	0.02-0.04 lb. a.i. (2.56-5.12 fl. oz.)	<p>See additional instructions below.</p> <p>Do not apply within 14 days of harvest.</p> <p>Do not apply more than 0.2 lb. a.i. (1.6 pt. or 25.6 fl. oz. of product)/A per year. Do not apply more than 0.16 lb. a.i. (1.28 pt. or 20.48 fl. oz. of product)/A per year post bloom.</p>

Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds and IPM recommendations.

Apply by ground or air using enough water to obtain full coverage of the foliage or target area. When applying by air, apply at least 5 gal. of water per acre, but use higher volumes as appropriate for thorough coverage.

SUGARCANE

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Mexican Rice Borer ¹ Pygmy Mole Cricket Rice Stalk Borer ¹ Sugarcane Aphid ³ Sugarcane Beetle (Adult) ² Sugarcane Borer ¹ West Indian Crane fly Yellow Sugarcane Aphid ³	0.025-0.04 lb. a.i. (3.20-5.12 fl. oz.)	<p>See additional instructions below.</p> <p>¹For control before the larva bores into the plant stalk.</p> <p>²Suppression only of beetles active above ground.</p> <p>³See resistance statement under General Directions for Use.</p> <p>Do not apply within 21 days of harvest.</p> <p>Do not apply more than 0.16 lb. a.i. (1.28 pt. or 20.48 fl. oz. of product)/A per season.</p>

Use scouting to determine need for application, usually at intervals of 7 or more days. Base the timing and frequency of applications on when insect populations reach local economic threshold.

Apply by ground or air using enough water to obtain full coverage of the foliage or target area. When applying by air, apply at least 2 gal. of water/A.

SUNFLOWER

Target Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Cutworm spp. Sunflower Beetle	0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. ¹ Use higher rates for large larvae. ² Suppression only. ³ See resistance statement under General Directions for Use.
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 lb. a.i. (2.56-3.84 fl. oz.)	Do not apply within 45 days of harvest. Do not apply more than 0.12 lb. a.i. (0.96 pt. or 15.36 fl. oz. of product)/A per season. Do not apply more than 0.09 lb. a.i. (0.72 pt. or 11.52 fl. oz. of product)/A per season after bloom initiation. Do not apply as an Ultra Low Volume (ULV) spray.
Beet Armyworm ^{2,3} Spider Mite spp. ²	0.03 lb. a.i. (3.84 fl. oz.)	
Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of sunflower heads and/or foliage. When applying by air, apply in at least 2 gal. of water/A.		

TOBACCO

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
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 Saltmarsh Caterpillar Stinkbug spp. Tobacco Aphid spp. ^{2,3} Tobacco Budworm ³ Tobacco Flea Beetle (Adult) Tobacco Hornworm Tobacco Thrips spp. ² Tomato Hornworm Tree Cricket spp. Vegetable Weevil (Adult) Webworm spp.	0.015-0.03 lb. a.i. (1.92-3.84 fl. oz.)	See additional instructions below. ¹ For control of first and second instars only. ² Suppression only. ³ See resistance statement under General Directions for Use. Do not apply within 40 days of harvest. Do not apply more than 0.09 lb. a.i. (0.72 pt. or 11.52 fl. oz. of product)/A per year.
Use scouting to determine need for application, usually at intervals of 7 or more days. Base the timing and frequency of		

applications on when insect populations reach local economic thresholds.

Apply by ground or air using enough water to obtain full coverage of the foliage. When applying by air, apply in at least 2 gal. of water/A.

TREE NUTS – ALMOND, BEECH NUT, BRAZIL NUT, BUTTERNUT, CASHEW, CHESTNUT, CHINQUAPIN, FILBERT (HAZELNUT), HICKORY NUT, MACADAMIA NUT (BUSH NUT), PISTACHIO, WALNUT-BLACK, WALNUT-ENGLISH (PERSIAN), PECAN

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Ants Chinch Bug Coddling Moth Filbertworm Leaffooted Bug Leafroller spp. Navel Orangeworm Peach Twig Borer Plant Bug spp. Stink Bug spp. Walnut Aphid Walnut Husk Fly spp. (Adult)	0.02-0.04 lb. a.i. (2.56-5.12 fl. oz.)	See additional instructions below. Do not apply within 14 days of harvest. Do not apply more than 0.16 lb. a.i. (1.28 pt. or 20.48 fl. oz. of product)/A per year. Do not apply more than 0.12 lb. a.i. (0.96 pt. or 15.36 fl. oz. of product)/A per year post bloom.
Hickory Shuckworm Pecan Aphid spp. Pecan Casebearer spp. Pecan Phylloxera spp. Pecan Spittlebug Pecan Weevil Stink Bug spp.		
Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of the foliage or target area. When applying by air, apply in at least 5 gal. of water per acre, but use higher rates as appropriate for thorough coverage.		

TUBEROUS AND CORM VEGETABLES – 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)

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Cutworm spp. Leafhopper spp. Saltmarsh Caterpillar Sweet Potato Hornworm Woollybear Caterpillar spp.	0.015-0.025 lb. a.i. (1.92-3.2 fl. oz.)	See additional instructions below. ¹ See resistance statement under General Directions for Use. ² Does not include Western Flower Thrips. ³ Suppression only.
Aphid spp. ¹ Armyworm spp. ¹ Blister Beetle spp. Colorado Potato Beetle ¹ Corn Earworm	0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)	Do not apply within 7 days of harvest. Do not apply more than 0.12 lb. a.i. (0.96 pt. or 15.36 fl. oz. of product) per acre per season.

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)	
Leafminer spp. ^{1,3} Whitefly spp. ^{1,3} Spider Mite spp. ³	0.03 lb. a.i. (3.84 fl. oz.)
<p>Use scouting to determine need for application, usually at intervals of 7 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.</p> <p>Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water per acre. When applying by ground, apply in a minimum of 10 gals. of water per acre.</p> <p>Use higher application volumes and/or application rates when foliage is dense, larvae are large, pest populations are high, plant size increases, or weather conditions are adverse. Use higher rates for longer residual.</p> <p>Insects that tunnel or bore into leaves, vines, stems, tubers, or corms must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of Lambda-Cy EC Insecticide - RUP.</p>	

CONIFER AND DECIDUOUS TREES – PLANTATIONS AND NURSERIES

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Bagworm Balsam Twig Aphid Balsam Woolly Aphid Birch Leafminer Black Pine Weevil Elm Leaf Beetle European Elm Leaf 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.	0.02-0.04 lb. a.i. (2.56-5.12 fl. oz.)	See additional instructions below. ¹ Suppression only. Do not apply more than 0.24 lb. a.i. (1.92 pt. or 30.72 fl. oz. of product)/A per year.

Poplar Aphid spp. Sawfly spp. Spittlebug spp. Spruce Budworm Tent Caterpillar spp. Tussock Moth spp. Webworm spp.	
Use scouting to determine timing for control of exposed foliage, flower, cone, seed, and bark feeding insects. Base the timing and frequency of applications on when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of target site. When applying by air, apply in at least 2 gal. of water/A.	

CONIFER AND DECIDUOUS TREES – SEED ORCHARDS

Pests	Rate Lambda-Cy EC Insecticide-RUP per Acre	Remarks
Coneworm spp. Seed Bug spp. Thrips spp.	See Remarks	For high volume sprayers, dilute 5.12 fl. oz. of product per 100 gal. of water and apply 5-10 gal. of finished spray per tree. For low volume sprayers, dilute 20 fl. oz. of product per 100 gal. of water and apply 100 gal. of finished spray per acre. For aerial applications, apply 15 fl. oz. of product per acre in a minimum of 10 gal. of finished spray per acre. Do not apply more than 0.5 lb. a.i. (4 pt. or 64 fl. oz. of product)/A per year.

NON-CROPLAND (EXCLUDING PUBLIC LAND)

Pests	Instructions
See 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 adjacent crop outlet and target pests. 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 0.2 lb. a.i. (1.6 pt. or 25.6 fl. oz. of product)/A per year. Do not graze livestock in treated areas.

Rate Conversion Chart

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

TURF AND ORNAMENTALS

LAMBDA-CY EC INSECTICIDE-RUP may be used for applications to ornamentals grown in commercial greenhouses, shade houses, and nurseries, and turf grown on sod farms or for commercial seed production.

LAMBDA-CY EC INSECTICIDE-RUP may be used for applications to maintain indoor or outdoor areas where turf and ornamentals are grown, such as residential landscape areas and non-residential landscapes around institutional, public, commercial, and industrial buildings, parks, recreational areas, golf courses, and athletic fields.

LAMBDA-CY EC INSECTICIDE-RUP may also be used for applications to golf course fairways, greens, greens aprons, and tee areas.

IMPORTANT: Time application to flowering plants during periods when pollinating insects are not present, such as early morning or late evening.

Do not apply this product through any type of irrigation system for turf and ornamental uses.
Do not apply this product to edible crops or crops grown for food/feed when applied to turf or ornamentals.
Do not apply this product by aerial application for turf and ornamental uses.

SPRAY DRIFT PRECAUTIONS

Observe restrictions found elsewhere on this label. Do not make applications when wind speed is 15 miles per hour or greater. Low humidity and high temperatures increase the likelihood of spray drift to sensitive areas. Avoid spraying during conditions of low humidity and/or high temperature. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when the wind direction is toward the aquatic area. Do not make outdoor applications during temperature inversions. Inversions are characterized by stable air and increasing temperature with height above ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

APPLICATION

LAMBDA-CY EC INSECTICIDE-RUP mixes easily with water and may be used in all types of application equipment. Mix product with the required amount of water and apply as a dilute application to the point of runoff. Apply product using spray nozzles which produce a coarse droplet size. Formation of very small droplets may be minimized by appropriate nozzle selection and by avoiding excessive spray pressure. For application to plants like holly, pine, or ivy which have hard-to-wet foliage, add a spreader-sticker to enhance knockdown and increase residual activity. If application is made as a concentrate or mist-type application, use the same amount of product as would be used in a dilute application.

MIXING

LAMBDA-CY EC INSECTICIDE-RUP is to be diluted with water for spray application and may be used in all types of application equipment. First fill application tank with 1/2 - 3/4 volume of water. It is suggested that the pH of the water be between 5 and 7; use a buffering agent if necessary to adjust the pH. Next slowly add LAMBDA-CY EC INSECTICIDE-RUP to the applicator tank water with maximum agitation. Finally, fill tank to desired volume and continue to agitate while making applications. If application is interrupted, agitate or re-suspend spray solution before resuming sprays. Always add LAMBDA-CY EC INSECTICIDE-RUP last if other chemicals are to be added to the applicator tank. If mixed with EC formulations or oils, use within 24 hours. Make up only amount of application volume as required. See mixing charts below.

**LAMBDA-CY EC INSECTICIDE-RUP Mixing Chart for Ornamental Insect Pest Control
(LAMBDA-CY EC INSECTICIDE-RUP to add per spray tank)**

Desired Rate of LAMBDA-CY EC INSECTICIDE-RUP per 100 gal.	25 gallons spray tank	50 gallons spray tank	100 gallon spray tank	200 gallon. spray tank	300 gallon spray tank
1.3 oz.	0.33 oz.	0.65 oz.	1.3 oz.	2.6 oz.	4.0 oz.
2.6 oz.	0.65 oz.	1.3 oz.	2.6 oz.	5.2 oz.	7.9 oz.
4.4 oz.	1.1 oz.	2.2 oz.	4.4 oz.	8.8 oz.	13.3 oz.

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**LAMBDA-CY EC INSECTICIDE-RUP Mixing Chart for Turf Insect Pest Control
(LAMBDA-CY EC INSECTICIDE-RUP to add per 100 gallon spray tank)**

Rate of LAMBDA-CY EC INSECTICIDE-RUP	2 gals.	4 gals.	6 gals.	8 gals.	10 gals.
4.4 oz./A	5.0 oz.	2.5 oz.	1.7 oz.	1.2 oz.	1.0 oz.
8.8 oz./A	10.0 oz.	5.0 oz.	3.3 oz.	2.5 oz.	2.0 oz.
17.6 oz./A	20.0 oz.	10.0 oz.	6.7 oz.	5.0 oz.	4.0 oz.

Conversion Rate: 1 Fluid ounce (fl. oz.) equals 29 milliliters (mL).

COMPATIBILITY

LAMBDA-CY EC INSECTICIDE-RUP has been found to be compatible with most commonly used fungicides, miticides, liquid fertilizers, and other insecticides. Use a jar test to check physical compatibility using the correct proportion of products if local experience is unavailable.

Note: While phytotoxicity testing has been carried out on a wide range of ornamental plants under various environmental conditions, and no phytotoxicity has been observed, certain cultivars may be sensitive to the final spray solution. It is advised to prespray a selection of ornamental plants and observe them for 7-10 days prior to treating large areas if local use experience is unavailable.

USE DIRECTIONS

ORNAMENTALS

Ornamentals in Greenhouses, Shadehouses, and Nurseries

Ornamentals (including Trees, Shrubs, Flowers, Evergreens, Foliage Plants, and Ground Covers) in Residential Landscaped Areas and Landscaped Areas Around Institutional, Public, Commercial, and Industrial Buildings, Parks, Recreational Areas, Golf Courses, and Athletic Fields

Pest	Rate of LAMBDA-CY EC INSECTICIDE-RUP per 100 gallons	Instructions
Ants (Including Imported fire ants) Aphids Armyworms Azalea caterpillars Bagworms ¹ Black vine weevils (adult) Boxelder bugs Budworms California Oakworms Cankerworms Cockroaches Crickets Cutworms Eastern tent caterpillars Elm leaf beetles European sawflies Fall webworms Flea beetles Forest tent caterpillars Gypsy moth larvae Japanese beetles (adult)	1.3-4.4 fl. oz. (38-128 mL)	Begin application to ornamentals before high insect pest populations become established. Reapply as necessary to keep pest populations under control, using higher rates as pest pressure increases. Good spray coverage is necessary to provide the most effective level of control. For ornamentals with waxy, hard-to-wet foliage, add a spreader-sticker at recommended rates to enhance the control of insects. For spot treatments, use 0.44 fl. oz. LAMBDA-CY EC INSECTICIDE-RUP per 1-2.5 gallons of water. Apply at 7- day intervals if retreatment is necessary. Do not apply more than 0.36 lb. of the active ingredient (46 fl. oz. of product) per acre per year. Consult your state university or local Cooperative Extension Service office for specific pest control application timing in your area. ¹ Bagworm: Apply LAMBDA-CY EC

June beetles (adult) Lace bugs Leaf-feeding caterpillars Leafhoppers Leafminers, (adult) Leaf rollers Leaf skeletonizers Midges Mosquitoes Oleander moth larvae Pillbugs Pine sawflies Pine shoot beetles Pinetip moths Plant bugs Root weevils Sawflies Scale insects (crawlers) ² Spiders Spittlebugs Striped beetles Striped oakworms Thrips Tip moths Tussock moth larvae Wasps		INSECTICIDE-RUP when bagworm larvae begin to hatch and spray directly on the larvae. Control will be best if the larvae are young. ² Scale: Cover the plant thoroughly with LAMBDA-CY EC INSECTICIDE-RUP spray, including trunks, stems, twigs, and foliage.
Broadmites Brown softscales California redscales (crawler) Clover mites Mealybugs Pine needlescales (crawler) Spider mites Whiteflies	2.6-4.4 fl. oz. (75-128 mL)	

TURFGRASS

Sod Farms

Lawns around Residential, Institutional, Public, Commercial, and Industrial Buildings, Parks, Recreational Areas, Golf Courses, and Athletic Fields, Golf Course and Athletic Field Turf

Pest	Amount of LAMBDA-CY EC INSECTICIDE-RUP	Instructions
Ants (Including Imported fire ants) Armyworms Centipedes Crickets Cutworms Earwig Fleas (adult) Grasshoppers Japanese beetles (adult) Millipedes Mites	2.9-6 ml/1,000 sq. ft. (4.4-8.8 fl. oz./A)	Begin application to turf before the establishment of high insect pest populations and before significant turf damage has occurred. Reapply as necessary to keep pest populations under control, using higher rates as pest pressure increases. Apply at 7-day intervals if retreatment is necessary. Do not apply more than 0.36 lb. of active ingredient (46 fl. oz. of product) per acre per year.

Pillbugs Sod webworms Sow bugs Ticks (including species which transmit Lyme disease)		For spot treatments, use 0.44 fl. oz. of LAMBDA-CY EC INSECTICIDE-RUP per 1-2.5 gals. of water. Do not apply when turfgrass is waterlogged or when soils are saturated with water (i.e., will not accept irrigation).
Bluegrass billbugs (adult) Black turfgrass ataenius (adult) Chiggers Fleas (adult) Grub (suppression) Hyperodes weevils (adult) Mole crickets (nymphs and young adults)	6 ml/1,000 sq. ft. (8.8 fl. oz./A)	Keep children and pets off treated areas until spray has dried following the application. See additional instructions below for specific pests.
Chinch bugs Mole crickets (mature adults) (Not for use on mature adult mole crickets and chinch bugs in New York State)	12 ml/1,000 sq. ft. (17.6 fl. oz./A)	
<p>Armyworms, cutworms, fleas, and other Surface Insects: For best results, apply LAMBDA-CY EC INSECTICIDE-RUP at recommended rates in 2-5 gals. of water per 1,000 sq. ft. If high rainfall amounts are forecast, a spreader-sticker may be useful; otherwise the addition of adjuvants is not necessary under normal conditions for surface insect control in turf. Delay watering or mowing for 12-24 hours for optimum control of surface-feeding insect pests.</p>		
<p>Chinch bugs, billbugs, and other Thatch Inhabiting Insects: For best results apply LAMBDA-CY EC INSECTICIDE-RUP at recommended rates in 2-10 gals. of water per 1,000 sq. ft. The use of a nonionic wetting agent, penetrant, or similar adjuvant is recommended at label rates. Irrigate lightly after application with up to ½ inch of water to move the LAMBDA-CY EC INSECTICIDE-RUP into the thatch layer. If irrigation is not available, then use high water application rates for optimum results.</p>		
<p>Mole crickets, grubs, and other Subsurface Insects: For best results apply LAMBDA-CY EC INSECTICIDE-RUP at recommended rates in 4-10 gals. of water per 1,000 sq. ft. The use of a nonionic wetting agent, penetrant, or similar adjuvant is strongly recommended following label rates. Use the highest water application rates possible with your sprayer. Apply LAMBDA-CY EC INSECTICIDE-RUP to turf which is wet with dew, rain, or irrigation. Water-in immediately after application with ¼ - ½ inch of water for optimum results.</p>		
<p>Fire Ants: Treat individual mounds with a drench application by means of a watering can. Use 0.32 fl. oz. of LAMBDA-CY EC INSECTICIDE-RUP per 2.5 gals. of water. Thoroughly soak each mound as well as a 3 ft. diameter circle around each mound. Apply the mixture gently to avoid disturbing the mound; disturbing the mound may cause the ants to migrate and reduce the effectiveness of the treatment. For best results, apply in early morning or late evening hours. Make additional treatments if necessary, but not more than every 7 days.</p>		
<p>Mosquitoes: Apply as a general spray around landscape plantings, turf, and building foundations to control mosquitoes. For best results, apply LAMBDA-CY EC INSECTICIDE-RUP at recommended rates in 2-5 gals. of water per 1,000 sq. ft.</p>		

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 Handling:

(Nonrefillable container equal to or less than 5 gallons)

Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(Nonrefillable container greater than 5 gallons)

Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**IMPORTANT INFORMATION
READ BEFORE USING PRODUCT**

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 reflect the opinion of experts based on field use and tests and must be followed carefully. It is impossible to eliminate all risks 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 United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

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