

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

February 22, 2018

Solito Sumulong Loveland Products, Inc. P.O. Box 1286 Greeley, CO 80632

Subject: Label Amendment – Reformatting Label

Product Name: SNIPER LFR

EPA Registration Number: 34704-1089 Application Date: January 24, 2018

Decision Number: 538288

Dear Mr. Sumulong:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

Page 2 of 2 EPA Reg. No. 34704-1089 Decision No. 538288

with FIFRA section 6. If you have any questions, please contact Maggie Rudick by phone at 703-347-0257, or via email at <a href="mailto:rudick.maggie@epa.gov">rudick.maggie@epa.gov</a>.

Sincerely,

Kable Bo Davis, Product Manager 3 Invertebrate and Vertebrate Branch 1 Registration Division (7505P) Office of Pesticide Programs

Enclosure

#### RESTRICTED USE PESTICIDE

Toxic 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.



**BIFENTHRIN** 

**GROUP** 

**INSECTICIDE** 

# Sniper® LFR®

[For mixing directly with liquid fertilizer to control listed soil insect pests.]

#### **ACTIVE INGREDIENT:**

By Wt. Bifenthrin, 2-Methyl-3-phenylphenyl)methyl (1S,3S)-3-[(Z)-2-chloro-3,3,3-trifluoroprop-1-enyl]- 2,2-dimethylcyclopropane-1-**TOTAL** 100.00%

This product contains 1.5 pounds active ingredient per gallon.

[Editor's Note for Reviewers: [Brackets] indicate optional passages or passages that depend on packaging.]

[Logo placeholder for LFR Technology. Sample at the end of this label.]

### **KEEP OUT OF REACH OF CHILDREN**

## WARNING

## **AVISO**

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

[For Additional Precautionary Statements, Directions for Use, Storage and Disposal and Other Use Information, See Inside this Label Booklet.]

FIRST AID							
If swallowed:	Call a poison control center or doctor immediately for treatment advice.						
	Have person sip a glass of water if able to swallow.						
	Do not induce vomiting unless told to by a poison control center or doctor.						
	Do not give anything by mouth to an unconscious person.						
If in eyes:	Hold eye open and rinse slowly and gently with water for 15-20 minutes.						
	Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.						
	Call a poison control center or doctor for treatment advice.						
Have the product	container or label with you when calling a poison control center or doctor, or going for treatment						

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For general information on product use, etc., call the National Pesticides Information Center at 1-800-858-7378.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.

Note To Physician: This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

EPA Reg. No.: 34704-1089 EPA Est. No.: 34704-MS-001 Net Contents: 1.0 GAL (3.78 L)

[Print code]

ACCEPTED

02/22/2018

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under

EPA Reg. No. 34704-1089

[EPA MASTER LABEL—Label ID 01/18]

Formulated for Loveland Products Inc., P.O. Box 1286, Greeley, CO 80632-1286

<sup>\*</sup> Cis isomers 97% minimum, trans isomers 3% maximum.

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

May be fatal if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

### **Personal Protective Equipment:**

Applicators and other handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants,
- Waterproof gloves, and
- Shoes plus socks.

#### Mixers and Loaders must wear:

- Long-sleeved shirt and long pants,
- Waterproof gloves,
- Shoes plus socks, and
- 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 exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### **USER SAFETY RECOMMENDATIONS**

#### **Users should:**

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

#### **ENVIRONMENTAL HAZARDS**

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters. 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 while bees are foraging the treatment area.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

#### **DIRECTIONS FOR USE**

#### **RESTRICTED USE PESTICIDE**

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

#### **AGRICULTURAL USE REQUIREMENTS**

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

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

- Coveralls,
- Chemical-resistant gloves, such as Barrier Laminate or Nitrile Rubber or Neoprene Rubber or Viton, and
- Shoes plus socks.

#### RESISTANCE MANAGEMENT

For resistance management, this product contains a Group 3A insecticide. Any insect population may contain individuals naturally resistant to this product and other Group 3A insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide/acaricide resistance, take the following steps:

- Rotate the use of this product or other Group 3A insecticides within a growing season, or among growing seasons, with
  different groups that control the same pests. Avoid application of more than the maximum number and consecutive sprays
  of this product or other insecticides in the same group in a season.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
  - o Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - o The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact Loveland Products at 888-574-2878 or at lovelandproducts.com.

#### **CHEMIGATION USE DIRECTIONS**

Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, drip irrigation, or hand move irrigation systems. Do not apply this product through any other type of irrigation system. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

For LEPA irrigation a minimum of 0.75 inch of water per acre is recommended. Where non-emulsified oils are used as the diluents, 1.0 to 2.0 pints per acre is recommended.

Results from utilizing chemigation have been variable and depend upon the set up and calibration of equipment. Crop injury, lack of effectiveness or illegal residues in the crop can result from non-uniform distribution of treated water. Contact your State Agricultural Extension Service specialists, equipment manufacturers or other experts for consultation on the suitability of the equipment set up to obtain effective control of the target insect pests.

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. Failure to cease application during a mechanical stoppage may result in undesirable residues to adjacent areas.

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

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

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

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

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distributions is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment. This product should be applied continuously for the duration of the water application. This product should be diluted in sufficient volume to ensure accurate application over the area to be treated. When using chemigation, a minimum of 0.5 inches per acre of irrigation water is recommended. Agitation generally is not required when a suitable diluent is used. A diluent test should be conducted to ensure that phase separation will not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less then desirable control.

### **APPLICATION AND MIXING INSTRUCTIONS**

This product is an insecticide that contains 1.5 pounds of bifenthrin per gallon. This product can be mixed directly with liquid fertilizer or with water. The rate of application is variable according to pest pressure, timing of treatments and field scouting. Use lower rates under light to moderate pest infestations, and higher rates under heavier pest pressure. In arid climates applications rates are generally higher. Fill the tank one-half full with liquid fertilizer or water and begin spray tank agitation. Add the proper amount of this product, and then add the rest of the fertilizer or water. Maintain agitation until the mixture has been applied.

Shake well before using.

Agitate this product's spray solutions in nurse tanks prior to moving the solution to spray system.

Cultivation within 10 feet of a water body is prohibited to allow for the growth of a vegetated filter strip. In New York State this product may not be applied within 100 feet (using ground equipment) to 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

This product can be applied in-furrow with the seed, as a T-band (band over the open furrow), as a broadcast application, as a band over the row, as a pre-emergent (PRE) application, as a post plant incorporated (PPI) application, as a foliar application (includes chemigation), or as a transplant-water drench during setting.

Use rates in the individual crop sections for at-plant soil applications are listed as Fluid oz/1000 Linear ft, based on 30-inch row spacings. For conversion to application rates applicable to other row spacings see the table below.

The maximum application rate per acre per season (pounds active ingredient /acre/season) as listed under the use directions for each crop must not be exceeded. This seasonal maximum includes at-plant plus foliar applications of this product and other products containing bifenthrin.

For at-plant applications, this product can be mixed with commonly used liquid starter or pop-up fertilizers. Follow liquid fertilizer recommendations regarding seed safety and use guidelines. Conduct a preliminary jar test using the appropriate ratio of fertilizer and this product. Do not allow a tank mixture to set overnight, but if this occurs agitate tank mixture prior to application.

Product Required Per Acre for Various Row Spacings								
Row Spacing	36"	30"	20"	15"	Twin Row 30" centers			
Lin row ft/A	14,520 ft	17,424 ft	26,136 ft	34,848 ft	34,848 ft			
Conversion								
0.2 Fl oz/1,000 Lin ft =	2.9 fl oz/A	3.5 fl oz/A	5.2 fl oz/A	7.0 fl oz/A	7.0 fl oz/A			
0.24 Fl oz/1,000 Lin ft =	3.5 fl oz/A	4.2 fl oz/A	6.3 fl oz/A	8.4 fl oz/A	8.4 fl oz/A			
0.3 Fl oz/1,000 Lin ft =	4.4 fl oz/A	5.2 fl oz/A	7.8 fl oz/A	10.5 fl oz/A	10.5 fl oz/A			
0.39 Fl oz/1,000 Lin ft =	5.7 fl oz/A	6.8 fl oz/A	10.2 fl oz/A	13.6 fl oz/A	13.6 fl oz/A			
0.49 Fl oz/1,000 Lin ft =	7.1 fl oz/A	8.5 fl oz/A	12.8 fl oz/A					
0.73 Fl oz/1,000 Lin ft =	10.6 fl oz/A	12.7 fl oz/A						
0.78 Fl oz/1,000 Lin ft =	11.3 fl oz/A	13.6 fl oz/A						
0.98 Fluid oz/1000 Lin ft =	14.2 fl oz/A	17.1 fl oz/A						
1.47 Fl oz/1,000 Lin ft =	21.3 fl oz/A	25.6 fl oz/A						

#### **CROP ROTATION RESTRICTIONS**

Crops for which bifenthrin tolerances exist may be rotated at any time. All other crops may be rotated 30 days following the final application of bifenthrin.

#### **TANK MIXTURES**

This product may be applied in tank mixtures with other products approved for use on registered crops. Observe all restrictions and precautions which appear on the labels of these products. To insure successful applications, product compatibility tests should be conducted.

#### MAXIMUM ALLOWABLE PRODUCT USE PER ACRE PER SEASON

Refer to the individual crop sections for maximum allowable product usage per acre per season.

The maximum allowable use must include all registered use patterns including at-plant, soil applied and/or foliar applications for the 12-month period. The 12-month period is to begin upon the initial application to the acre.

#### **BUFFER ZONES**

#### **Vegetative Buffer Zones**

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 bifenthrin 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. http://www.nrcs.usda.gov/Internet/FSE\_DOCUMENTS/nrcs143\_023819.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, 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, natural ponds, estuaries, and commercial fish ponds).

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

Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, 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 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 downwind edge of the application area by adjusting the path of the aircraft upwind.

#### **ARTICHOKE**

#### At-Plant

7.6 1 19116							
PEST	USE RATES			DIRECTIONS			
	FI	Fl oz/1,000 lin	Lb				
	oz/A	ft	bifenthrin/A				
Cribrate Weevil	8.5	0.49	0.10	Apply as a 5-to 7-inch band (T-band) over an open furrow, or in-			
(Grubs)				furrow with the seed.			

#### Foliar

PEST	USE RATES		DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
Artichoke Plume Moth	8.5	0.10	Apply when pest population reaches damaging threshold and repeat as necessary to maintain control, but not more often than 15-day intervals.
Cribrate Weevil			<b>Application by ground</b> : Apply a full cover spray in a minimum of 75.0 gal/A of finished spray.
			<b>Application by air</b> : Apply specified dosage in a minimum of 10.0 gal/A of finished spray.

#### Foliar Restrictions:

Do not apply within 5 days of harvest.

#### PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Cribrate Weevil (Grubs)	8.5	0.10	PPI: This product can be tank mixed and applied with PPI herbicides. Incorporation of this product should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth.
	8.5	0.10	PRE: This product can be tank mixed and applied with PRE herbicides.

### **ARTICHOKE RESTRICTIONS:**

• Do not apply more than 0.5 pounds bifenthrin acre per season including at-plant, foliar PPI and PRE applications of this and other bifenthrin-containing products.

## **BEETS (Garden)**

### At-plant

PEST	USE RATES		DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Crown and Root	8.5	0.1	Apply as a 5- to 7-inch band (T-band) over an open furrow, or in-furrow with the
Aphids			seed. May be applied through transplant water at time of transplanting.
Cutworms			
Flea Beetles			
Root and Seedcorn			
Maggots			
Wireworms			

#### **Foliar**

PEST	USE RATES		DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Garden Beet Pests	6.8 to	0.08 to 0.10	Thorough coverage is necessary to attain acceptable control. Make application at
Only:	8.5		the onset of infestation reaching locally determined economic thresholds.
Aphids			
Fire Ants			Apply foliar treatments in at least 25.0 gal/A.
Flea Beetles			
Lepidopterous			
Larvae			
Spider Mites			
Whitefly			

### **Foliar Restrictions:**

- Do not make applications less than 7 days apart.
- Do not apply within 1 day of harvest.

#### PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Crown and Root	8.5	0.1	PRE: This product can be tank mixed and applied with PRE pesticides.
Aphids	8.5	0.1	<b>PPI:</b> This product can be tank mixed and applied with PPI-labeled herbicides.
Cutworms			Incorporation of this product should not be any deeper than the intended planting
Flea Beetles			depth. Incorporation depth should be close to the intended depth.
Root and Seedcorn			
Maggots			
Wireworms			

#### **Garden Beets Restrictions:**

• Do not apply more than 0.4 pounds bifenthrin per acre per season including at-plant, foliar, PPI and PRE applications of this and other bifenthrin-containing products.

## **BRASSICAS, HEAD AND STEM (CROP SUBGROUP 5A)**

Including: Broccoli, Cavalo; Broccoli, Chinese; Broccoli (gai lon, white flowering broccoli); Brussels Sprouts; Cabbage; Cabbage, Chinese (napa); Cabbage, Chinese Mustard (gai choy); Cauliflower; and Kohlrabi

#### At-Plant

PEST	USE RATES			DIRECTIONS
	Fl oz/A	Fl oz/1,000 lin ft	Lb bifenthrin/A	
Army cutworm Armyworm species Cabbage maggot Cutworm species Grubs Root aphids Root maggot Seedcorn maggot Wireworm	3.4 to 6.8	0.20 to 0.39	0.04 to 0.08	Apply as a 5- to 7-inch band (T-band) over the open seed or transplant furrow, or in-furrow with the seed or transplant. Cutworm and armyworm treatments may be applied as broadcast treatments to the soil surface. May be applied through transplant water at time of transplanting.

### **At-Plant Restrictions:**

• Do not apply more than 0.1lb ai/A/season as an at-plant application.

### **Foliar**

PEST	USE RA	TES	DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Aphids	2.8 to	0.033 to	Thorough coverage is necessary to attain acceptable control. Make application at the
Armyworms	8.5	0.100	onset of infestation reaching locally determined economic thresholds.
Black burrowing			
bug			Apply in a minimum of 2.0 gal/A of finished spray by air or in a minimum of 10.0 gal/A
Corn Earworm			with ground equipment. When applying by air, 1.0 to 2.0 qt of emulsified oil may be
Crickets			substituted for 1.0 to 2.0 qt of water in the finished spray.
Cucumber			
Beetles			
Cutworms			
Diamondback			
Moth			
Flea Beetles			
<b>Ground Beetles</b>			
Imported			
Cabbageworm			
Leafhoppers			
Loopers			
Saltmarsh			
Caterpillar			
Stink Bugs			
Thrips			
Tobacco			
Budworm			
Whitefly			
Wireworm			
(adults)			
Banks Grass Mite	6.8 to	0.08 to 0.10	
Carmine Mite	8.5		
Lygus Species			
Pacific Spider			
Mite			
Twospotted			
Spider Mite			

## Foliar Restrictions:

- Do not make more than 5 applications after bloom.
- Do not make applications less than 7 days apart.
- Do not apply within 7 days of harvest.

## PPI & PRE

USE RATES		METHOD and DIRECTIONS		
FI	Lb			
oz/A	bifenthrin/A			
3.4 to	0.04 to 0.08	PPI: This product should not be incorporated any deeper than the intended planting		
6.8		depth and no deeper than 3 in. Incorporation depth should be close to the intended		
		seed planting or transplant depth.		
3.4 to	0.04 to 0.08	PRE: This product can be tank mixed and applied with PRE labeled herbicides and		
6.8		fungicides for pre-transplant application.		
	FI oz/A 3.4 to 6.8 3.4 to	FI		

#### Brassica, Head and Stem (Crop Subgroup 5A) Restrictions:

• Do not apply more than 0.5 pound bifenthrin per acre per season including at-plant, foliar, PPI and PRE applications of this and other bifenthrin-containing products.

## **BUSHBERRIES (CROP SUBGROUP 13-07B)**

Including: Aronia berry; blueberry, highbush; blueberry, lowbush; buffalo currant; Chilean guava; cranberry, highbush; currant, black; currant, red; elderberry; European barberry; gooseberry; honeysuckle, edible; huckleberry; jostaberry; Juneberry (Saskatoon berry); lingonberry; native currant; salal; sea buckthorn; cultivars, varieties, and/or hybrids of these

#### At-Plant

PEST	USE RATES		DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
White	8.5	0.10	Apply as a (T-band) over an open furrow immediately prior to transplanting, or in-furrow with
Grubs			the transplant in sufficient water for planting. May also be applied as a solid drench with
Wireworm			transplant water at time of transplanting.

#### **Foliar**

PEST	USE RATES		DIRECTIONS	
	Fl	Lb		
	oz/A	bifenthrin/A		
Aphids	3.4 to	0.04 to 0.10	Apply in a minimum of 2.0 gal/A finished spray by air or in a minimum of 10.0 gal/A	
Blueberry maggot	8.5		with ground equipment. Thorough coverage is essential to achieve control. Make	
Fruitworms			application at the onset of infestation reaching locally determined economic	
Japanese beetle			thresholds.	
Leaf rollers				
Leafhoppers				
Lecanium scale				
(crawlers)				
Obliquebanded				
leaf roller				
Plum curculio				
Red banded				
leafroller				
Spanworm				
Spotted Winged				
Drosophila				
Variegated				
leafroller				
Carmine Mite	6.8 to	0.08 to 0.10		
Lygus Species	8.5			
Pacific Spider Mite				
Twospotted Spider				
Mite				

#### **Foliar Restrictions:**

- Do not make applications less than 7 days apart.
- Do not apply within 1 day of harvest.

#### **PPI (Site Preparation) & PRE**

PEST	USE RAT	ES	METHOD and DIRECTIONS	
	FI	Lb		
	oz/A	bifenthrin/A		
Blueberry Maggot (larvae) White Grubs	8.5	0.10	<b>PPI:</b> This product can be tank mixed and applied with PPI herbicides, insecticides and fungicides where allowed.  Incorporation of this product should not be any deeper than the intended planting	
Wireworm			depth. Incorporation depth should be close to the intended planting depth.	
	3.4 to	0.04 to 0.10	PRE: This product can be tank mixed and applied with PRE herbicides.	
	8.5			

### **Bushberries (Crop Subgroup 13-07B) Restrictions:**

• Do not apply more than 0.5 pound bifenthrin per acre per season including at-plant, foliar, PPI, and PRE application of this and other bifenthrin-containing products.

## **CANEBERRIES (CROP SUBGROUP 13-07A)**

Including: Bingleberries, Blackberries, Dewberries, Loganberries, Lowberries, Marionberries, Olallieberries, Raspberries, and Youngberries.

#### At-plant

, te piante			
PEST	USE RATES		DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
White	8.5	0.10	Apply as a 5- to 7-inch band (T-band) over an open furrow in sufficient water for planting, or
Grubs			in-furrow with the seed. May be applied through transplant water at time of transplanting.
Wireworm			

#### **Foliar**

PEST	USE RATES		DIRECTIONS	
	Fl	Lb		
	oz/A	bifenthrin/A		
Leafrollers	4.3 to	0.05 to 0.10	Apply by air or ground equipment using sufficient water to obtain full coverage of	
Orange Tortrix	8.5		foliage (minimum of 10.0 gal/A by air and 50.0 gal/A by ground).	
Root Weevils			One application may be made pre-bloom and a second application may be made post-	
Spotted Winged			bloom.	
Drosophila			For Crown Borer, apply 0.1 lb bifenthrin/A post-harvest (fall) or pre-bloom (spring), as	
Raspberry Crown	8.5	0.10	a drench application directed at the crown of plants in a minimum of 200 gal water/A.	
Borer			Greater efficacy is observed at higher gallons (up to 400 gal/A) or in an application	
Spider Mites			prior to a significant rainfall event. Do not make both pre-bloom foliar and pre-bloom	
			drench applications.	

### **Foliar Restrictions:**

- One application may be made pre bloom and a second application may be made post bloom.
- Do not apply within 3 days of harvest.

## **PPI (Site Preparation) & PRE**

(0:100 : 10							
PEST	USE RA	ATES	METHOD and DIRECTIONS				
	Fl	Lb					
	oz/A	bifenthrin/A					
White	8.5	0.10	PPI: This product can be tank mixed and applied with PPI pesticides labeled for site				
Grubs			preparation. Incorporation of this product should not be any deeper than the intended				
Wireworm			planting depth. Incorporation depth should be close to the intended planting depth.				
	8.5	0.10	PRE				

## Caneberries (Crop Subgroup 07A) Restrictions:

• Do not exceed 0.2 pounds bifenthrin per acre per season including at-plant, foliar, PPI, and PRE applications of this and other bifenthrin-containing products.

## CANOLA, CRAMBE, RAPESEED

### At-plant

PEST	USE RAT	ES	DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
Army cutworm	6.8	0.08	Apply as a 5- to 7-inch band (T-band) over an open furrow, or in-furrow with the
Armyworm			seed.
species			
Cutworm species			
Grape colaspis			
Grubs			
Root aphids			
Seed corn beetle			
Seed corn maggot			
Stalkborer			
Sugarcane beetle			
True armyworm			
Wireworm			

### **Foliar**

PEST	USE RA	TES	DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
Aphids	2.8 to	0.033 to	Apply in a minimum of 2.0 gal/A finished spray by air or in a minimum of 10.0 gal/A
Armyworms	3.4	0.040	with ground equipment.
Cutworms			
Diamondback Moth			When applying by air, 1.0 to 2.0 qt of emulsified oil may be substituted for 1.0 to
Loopers			2.0 qt of water in the finished spray. Thorough coverage is essential to achieve
Flea Beetle			control.
Flea Hopper			
Grasshopper			
Other			
Lepidopterous			
Larvae			
Plant Bug			
Stink Bugs			
Seedpod			
Weevil			
Thrips			
Whitefly			

### **Foliar Restrictions:**

- Do not make applications less than 14 days apart.
- Do not apply within 35 days of harvest.

#### PPI & PRE

PEST	USE RA	TES	METHOD and DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
Army cutworm	6.8	0.08	<b>PPI:</b> This product can be tank mixed and applied with PPI herbicides.
Armyworm			Incorporation of this product should not be any deeper than the intended planting
species			depth and no deeper than 3 inches.
Cutworm species			Incorporation depth should be close to the intended seed planting depth.
Grape colaspis	6.8	0.08	PRE: This product can be tank mixed and applied with PRE herbicides.
Grubs			
Root aphids			
Seed corn beetle			
Seed corn			
maggot			
Stalkborer			
Sugarcane beetle			
True armyworm			
Wireworm (PPI			
only)			

## **Canola, Crambe, and Rapeseed Restrictions:**

• Do not apply more than 0.08 lb bifenthrin per acre per season including at-plant, foliar, PPI, and PRE applications of this and other bifenthrin-containing products.

## **CILANTRO, CORIANDER**

#### Δt-Plant

PEST	USE RA	TES		DIRECTIONS
	FI oz/A	Fl oz/1,000 lin ft	Lb bifenthrin/A	
Armyworm species Cutworm species Flea beetle larvae Wireworm	3.4 to 6.8	0.2 to 0.39	0.04 to 0.08	Apply as a 5- to 7-inch band over the row on the soil surface, a 5- to 7-inch band over the open furrow (T-band) in-furrow with the seed, or broadcast to the soil surface.

### **At-plant Restrictions:**

• Do not apply more than 0.1 lb bifenthrin/A per season as an at-plant application.

#### **Foliar**

PEST	USE RAT	ES	DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Aphids	2.8 to	0.033 to 0.100	Apply using sufficient water to obtain uniform coverage.
Beet Armyworm	8.5		Apply with ground equipment using a minimum of 10.0 gal/A finished spray or a
Cabbage Looper			minimum of 2.0 gal/A by aircraft.
Cutworm			
Flea beetle			
Grasshoppers			
Leafminer			
Saltmarsh caterpillar			
Spotted Cucumber			
beetle			
Thrips			
Whitefly			
Two Spotted Spider	6.8 to	0.08 to 0.10	
Mite	8.5		

#### **Foliar Restrictions:**

- Do not make applications less than 7 days apart.
- Do not apply within 3 days of harvest.

#### PPI & PRE

PEST	USE RAT	ES	METHOD and DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Army cutworm	3.4 to	0.04 to 0.08	<b>PPI:</b> This product can be tank mixed and applied with PPI herbicides.
Armyworm	6.8		Incorporation of this product should not be any deeper than the intended planting
species			depth and no deeper than 3 inches.
Cutworm			Incorporation depth should be close to the intended seed planting depth.
species	3.4 to	0.04 to 0.08	<b>PRE:</b> This product can be tank mixed and applied with PRE herbicides.
Grape colaspis	6.8		
Grubs			
Root aphids			
Seed corn			
beetle			
Seed corn			
maggot			
Wireworms (PPI			
Only)			

## **Cilantro and Coriander Restrictions:**

• Do not apply more than 0.5 lb bifenthrin per acre per season including at-plant, foliar, PPI, and PRE applications of this and other bifenthrin-containing products.

## **CITRUS (Crop Group 10-10)**

Including: Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; mount white lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin); tangor; trifoliate orange; uniq fruit; cultivars, varieties, and/or hybrids of these

#### **Use Directions:**

When applied as directed, this product will provide control of the following pests listed in the table below. Apply this product by ground equipment to bare soil beneath citrus trees. This product must be uniformly applied from the trunk to the drip line of tree.

Apply in a minimum of 40.0 gallons of dilute spray per acre. Greater spray volume should insure greater uniformity of coverage. A pre- and post-application irrigation may aid in the uniformity of coverage as well.

This product protects citrus tree roots from *Diaprepes* and other citrus root weevil feeding by forming a barrier which provides contact activity on newly hatched larvae (neonates). As citrus root weevil eggs hatch in new foliage, neonates fall to the soil surface beneath the tree and come in contact with this product as they attempt to burrow into the root zone. Disturbance of the soil beneath trees should be minimized.

Timing of this product's applications is critical. Current information suggests that peak emergence of adult *Diaprepes* Weevil varies by citrus growing region and these emergence peaks can be dramatically affected by environmental factors, such as soil moisture. Typically, two peaks are observed for *Diaprepes*, first in spring then late summer or early fall. Southern Blue-Green and Blue-Green Citrus Weevils and Fuller Rose Beetle typically exhibit a single emergence peak in the spring. Brown and Little Leaf Notchers typically exhibit three emergence peaks, spring, summer and fall. Since emergence varies seasonally and by location, timing of product application can be accurately forecast by observing adults. Adults are most active early morning and late afternoon; numbers can be estimated by trapping throughout spring and summer (emergence periods). Egg laying will occur for 8 to 10 weeks following adult emergence from the soil; larval invasion of the soil will begin 2 to 3 weeks following adult emergence. It is critical to have the product soil barrier in place prior to drop of the neonates.

This product is one of several effective tools in an integrated pest management program for Citrus Root Weevils. Application of this product should be used in conjunction with good cultural practices, biological control of larvae and foliar control of adults. Consult local university extension personnel for current information to protect citrus trees from Citrus Root Weevils and other pests.

Apply to individual citrus resets, when not in solid planted rows, using hand-gun or shielded sprayer.

Peak emergence of *Diaprepes* root weevil generally occurs in the spring. Depending on weather conditions, a minor emergence of *Diaprepes* root weevil may also occur in the fall.

If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, 42.5 fluid ounces formulated product should be used to obtain the longest residual management of *Diaprepes* root weevil. If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 21.25 fluid ounces formulated product can be applied early season and 21.25 fluid ounces formulated product can be applied later in the season.

## Bare soil surface under drip line

PEST	USE RATES		DIRECTIONS		
	Fl oz/A	Lb			
		bifenthrin/A			
Asian cockroach	8.5 to	0.10 to 0.25	Apply the specified dosage in a minimum of 40.0 gal/A of		
Fire ants (Solenopsis species)	21.25		finished spray.		
Blue Green Citrus Root Weevil	21.25 to	0.25 to 0.50			
Brown Leaf Notcher	42.5				
Diaprepes Root Weevil					
Little Leaf Notcher					
Southern Blue-Green Citrus Root					
Weevil					

#### Bare soil surface under drip line Restrictions:

- Do not allow any application of this product to contact fruit or foliage.
- Do not apply more than a total of 42.5 fl oz of formulated product (0.5 pound bifenthrin)/acre/year.
- Do not apply by air.

#### **CORN**

Field Corn (Grain and Silage), Field Corn Grown for Seed, Popcorn, Sweet Corn, Sweet Corn Grown for Seed

#### **Use Directions:**

Heavy Corn Rootworm Pressure Management Program: In areas where large corn rootworm populations are present, a multiapproach system may be needed for optimal pest management. However, if the population level is not known and if a corn rootworm adult scouting program along with threshold adult control measures were not completed during the previous growing season, then utilize a maximum dosage seed treatment program or genetically modified corn rootworm resistant hybrid in addition to this product.

#### At-Plant

PEST	USE RATES			DIRECTIONS
	FI	FI	Lb	
	oz/A	oz/1,000	bifenthrin/A	
		lin ft		
Corn rootworm	6.8 to	0.39 to	0.08 to 0.20	Apply as a 5-to 7-inch band (T-band) over an open furrow, or in-furrow
Larvae (Northern,	17.0	0.98		with the seed.
Southern and				For Army cutworm, Armyworm species, Cutworm species, Stalkborer,
Western)				or True armyworm, apply as a 5- to 7-inch band over the row on the soil
Army cutworm	3.4 to	0.20 to	0.04 to 0.16	surface, a 5- to 7-inch band over the open furrow (T-band), in-furrow
Armyworm	13.6	0.78		with the seed, or broadcast to the soil surface.
species				
Cutworm species				
Grape colaspis				
Grubs				
Root aphids				
Seed corn beetle				
Seed corn maggot				
Stalkborer				
Sugarcane beetle				
True armyworm				
Wireworm				

#### At-Plant Restrictions:

- Do not apply more than 0.2 pound bifenthrin/A/season as an at-plant application.
- For field corn Do not apply more than 0.3 lb bifenthrin/A/season including PPI, at-plant, pre-emergence, and foliar applications of other bifenthrin products (such as Sniper and Sniper Helios®).
- For sweet corn Do not apply more than 0.2 lb bifenthrin/A total per season including PPI, at-plant, pre-emergence, and foliar applications of other bifenthrin products (such as Sniper and Sniper Helios®).

## Foliar

PEST	USE RA	ATES	DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Aphids	2.8	0.033 to	Apply in a minimum of 2.0 to 5.0 gal/A of finished spray by aircraft or in a minimum of
Army Cutworm	to	0.100	10.0 gal/A with ground equipment. To improve control by aircraft, use 5.0 gal/A of
Armyworm	8.5		finished spray particularly when initial populations are heavier than normal.
species			When applying by air, 1.0 to 2.0 qt of emulsified oil may be substituted for 1.0 to 2.0 qt
Beet Armyworm			of water in the finished spray.
Cereal Leaf			Thorough coverage is essential to achieve control.
Beetle			
Chinch Bug			<sup>1</sup> To Control Ear Attacking Pests: Apply this product just before silking and repeat as
Common Stalk			necessary to maintain control.
Borer			
Corn Earworm <sup>1</sup>			<sup>2</sup> European Corn Borer, Southwestern Corn Borer: Make application for corn borer
Corn Rootworm			control with initial application at or shortly before egg hatch.
Adults			, , , , , , , , , , , , , , , , , , , ,
Cucumber			For Control of Other Insect Pests: Apply when pests first appear and repeat as
Beetle Adult			necessary.
Cutworm			, and the second
species			<sup>3</sup> For Control of Mites: Apply for Banks Grass Mite control when colonies first form prior
European Corn			to leaf damage or discoloration and before dispersal above the bottom third of the plant.
Borer <sup>2</sup>			For Carmine Mite and Twospotted Spider Mite control, apply when colonies first form
Fall Armyworm			prior to leaf damage or discoloration and before widespread mite dispersal throughout
Flea Beetle			the canopy. Higher rates will be necessary for heavier initial populations and corn under
Grasshoppers			heat or drought stress. Field experience with dimethoate at 0.5 lb dimethoate ai/A in
Greenbug			tank mixture has demonstrated good control under these conditions.
Japanese Beetle			
Adult			For Mite Control in Texas, New Mexico, Oklahoma, and Arizona: Apply in a minimum of
Sap Beetle			5.0 gal/A of finished spray by aircraft or in a minimum of 10.0 gal/A with ground
Southern			equipment.
Armyworm			
Southern Corn			
Leaf Beetle			
Southwestern			
Corn Borer <sup>2</sup>			
Stinkbugs			
Tarnished Plant			
Bug	[		
True Armyworm	[		
Webworms	[		
Western Bean	[		
Cutworm	[		
Yellowstriped			
Armyworm			
Banks Grass	6.8	0.08 to 0.10	
Mite <sup>3</sup>	to		
Carmine Mite <sup>3</sup>	8.5		
Twospotted	[		
Spider Mite <sup>3</sup>			

#### **Foliar Restrictions:**

- For field corn:
  - o Do not apply within 30 days of harvest for field corn (grain and silage), field corn grown for seed, and popcorn.
  - o Do not graze livestock in treated areas or cut treated crops for feed within 30 days of the last application for field corn (grain and silage), field corn grown for seed, and popcorn.
- For sweet corn
  - o Do not apply within 1 day of harvest for sweet corn or sweet corn grown for seed.
  - Do not graze livestock in treated areas or cut treated crops for feed within 1 day of the last application for sweet corn or sweet corn grown for seed.
- Use of ultra-low volume (ULV) application on corn is prohibited.
- Do not make aerial or ground applications to corn if heavy rainfall is imminent.

#### PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS
(PRE and PPI unless	Fl oz/A	Lb	
noted)		bifenthrin/A	
Armyworm species	4.0 to	0.047 to 0.062	<b>PPI:</b> This product can be tank mixed and applied with PPI herbicides.
Black Cutworm	5.3		Incorporation of this product should not be any deeper than the intended
Grape colaspis (PPI			planting depth and no deeper than 3 inches.
only)			Incorporation depth should be close to the intended seed planting depth.
Seed corn beetle	3.4	0.04	<b>PRE:</b> This product can be tank mixed and applied with PRE herbicides.
Seed corn maggot			
(PPI only)			
Stalkborer (PRE only)			
White Grub (PPI only)			
Wireworm (PPI only)			

### **Corn Restrictions:**

- For field corn: Do not apply more than 0.3 pounds bifenthrin per acre total per season including at-plant, foliar, PPI and PRE applications of this and other bifenthrin products.
- For sweet corn: Do not apply more than 0.2 lb bifenthrin per acre total per season including at-plant, foliar, PPI and PRE applications of this and other bifenthrin products.

### **COTTON**

### At-plant

PEST	USE RATE	:S		DIRECTIONS
	Fl oz/A	Fl oz/1,000 lin	Lb	
		ft	bifenthrin/A	
Cutworm spp	1.7 to	0.1 to 0.5	0.02 to 0.10	Apply as a 5- to 7-inch band (T-band) over an open furrow, or in-
Grape colaspis	8.5			furrow with the seed.
Root Maggot				
Seedcorn				
Maggot				
White Grub				
Wireworm				

#### **Foliar**

PEST	USE RATES		DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
European Corn Borer Soybean (Banded) Thrips Tobacco Thrips Boll Weevil <sup>1</sup> Bollworm Cabbage Looper Cotton Aphid <sup>2</sup> Cotton Fleahopper Cotton Leafperforator Cutworms Fall Armyworm Plant Bugs Saltmarsh Caterpillar Southern Garden Leafhopper Stink Bugs Tobacco Budworm Whitefly	3.4 to 8.5	0.02 to 0.10  0.04 to 0.10	Apply as needed using sufficient water to obtain uniform coverage. Apply with ground equipment using a minimum of 5 gallons of finished spray per acre or a minimum of 1 gallon per acre by aircraft.  This product may be applied in water or refined vegetable oil (soybean/cottonseed).  Application in Water: Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray.  ULV Application: Apply the recommended rate of this product in refined vegetable oil in a minimum of 1 quart of finished spray per acre with aircraft calibrated to give adequate coverage.  Boll Weevil: Apply this product at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels.  Aphids and Mites: Apply when pests first appear. Repeat as necessary to maintain control. Higher rates will be required once a damaging threshold is established.
Yellow Striped			
Armyworm	E 1 +c	0.06 to 0.10	
Beet Armyworm Carmine Spider Mite <sup>2</sup> Lygus species Pink Bollworm Twospotted Spider Mite <sup>2</sup>	5.1 to 8.5	0.06 to 0.10	

#### **Foliar Restrictions:**

- Do not apply within 14 days of harvest.
- Do not graze livestock in treated areas or cut treated crops for feed.

#### PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS
(PPI only unless noted)	Fl oz/A	Lb	
		bifenthrin/A	
Cutworm species (PPI	3.4 to	0.04 to 0.10	<b>PPI:</b> This product can be tank mixed and applied with PPI herbicides.
and PRE)	8.5		Incorporation of this product should not be any deeper than the intended
Grape colaspis			planting depth and no deeper than 3 inches.
Root maggot			Incorporation depth should be close to the intended seed planting depth.
Seedcorn maggot			<b>PRE:</b> This product can be tank mixed and applied with PRE herbicides.
White Grub			
Wireworm			

## **Cotton Restrictions:**

- Do not apply more than 0.5 pounds bifenthrin per acre per season including at-plant, foliar, PRE, and PPI applications of this and other bifenthrin-containing products in all states except in California
  - o For California, do not apply more than 0.3 pounds bifenthrin per acre per season.

• Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season. Synthetic pyrethroid products include but are not limited to Asana® XL, Consero, Danitol®, Declare®, Holster, Karate®, Mustang®, Permethrin, Sniper, Sniper Helios, Tombstone, and Tombstone Helios.

### **CUCURBITS (Crop Group 9)**

Including: Chayote (fruit); Chinese waxgourd (Chinese preserving melon); Citron melon; Cucumber; Gherkin; Gourd; Lagenaria (edible) species (includes hyotan, cucuzza); Luffa species (includes hechima, Chinese okra); Momordica species (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); Muskmelon (hybrids and/or cultivars of Cucumis melo) (includes true cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon); Pumpkin (Cucurbita species); Squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini); Squash, winter (includes acorn squash, butternut squash, calabaza, hubbard squash (C. mixta; C. pepo), spaghetti squash); Watermelon (includes hybrids and/or varieties of Citrullus species)

#### At-Plant

PEST	USE RATES			DIRECTIONS
	FI	FI	Lb	
	oz/A	oz/1,000	bifenthrin/A	
		lin ft		
Cucumber	6.8 to	0.39 to	0.08 to 0.10	Apply as a 5-to 7-inch band (T-band) over an open furrow, or in-furrow with
beetle larvae	8.5	0.49		the seed. May be applied through transplant water at time of transplanting.
Army	3.4 to	0.20 to	0.04 to 0.08	<b>To control cucumber beetle larvae</b> , apply as a 5- to 7-inch band over an open
cutworm	6.8	0.39		furrow (T-band), or in-furrow with the seed.
Armyworm				To control flea beetle larvae, grubs, and wireworm, apply as a 5- to 7-inch
species				band over an open furrow (T-band), or in-furrow with the seed or transplant.
Cutworm				To control army cutworm, armyworm species, cutworm species, and true
species				<b>armyworm,</b> apply as a 5- to 7-inch band over the row on the soil surface, a 5-
Flea beetle				to 7-inch band over the open furrow (T-band), in-furrow with the seed,
larvae				broadcast to the soil surface or banded over the row.
Grubs				
True				
Armyworm				
Wireworm				

### **At-plant Restrictions:**

• Do not apply more than 0.1 lb bifenthrin/A per season as an at-plant application.

#### **Foliar**

PEST	USE RAT	TES	DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
Aphids	3.4 to	0.04 to 0.10	Thorough coverage is necessary to attain acceptable control. Make application at the
Armyworms	8.5		onset of infestation reaching locally determined economic thresholds
Cabbage Looper			
Corn Earworm			Apply in a minimum of 5.0 gal/A of finished spray by air or in a minimum of 20.0
Cucumber beetles			gal/A with ground equipment
Cutworms			
Grasshopper			When applying by air 1.0 to 2.0 qt of emulsified oil may be substituted for 1.0 to 2.0
Leafhoppers			qt of water in the finished spray. Thorough coverage is essential to achieve control
Melonworm			
Pickleworm			
Plant Bug			
Rindworm			
Squash Bugs			
Squash Vine			
Borer			
Stink Bugs			
Tobacco			
Budworm			
Carmine Mite	6.8 to	0.08 to 0.10	
Lygus species	8.5		
Mite			
Twospotted			
Spider Mite			
Whitefly			

## **Foliar Restrictions:**

- Do not make more than two applications after bloom.
- Do not make applications less than 7 days apart.
- Do not apply within 3 days of harvest.

#### PPI & PRE

PEST	T USE RATES		METHOD and DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Army cutworm	6.8 to	0.08 to 0.10	<b>PPI:</b> This product can be tank mixed and applied with PPI labeled pesticides.
Armyworm	8.5		Incorporation of this product should not be any deeper than the intended planting
species			depth. Incorporation depth should be close to the intended depth.
Cutworm			Apply through drip or drip tape.
species			Apply when soil is moist towards the end of the irrigation run.
Flea beetle	6.8 to	0.08 to 0.10	<b>PRE:</b> This product can be tank mixed and applied with PRE pesticides.
larvae	8.5		Apply through drip or drip tape.
Grubs			Apply when soil is moist towards the end of the irrigation run.
Seed Corn			
Maggot			
True			
Armyworm			
Wireworms			

## **Cucurbits (Crop Group 9) Restrictions:**

• Do not apply more than 0.3 pounds bifenthrin per acre per season including at-plant, foliar PPI and PRE applications of this and other bifenthrin-containing products.

## **DRIED BEANS AND PEAS (Crop Subgroup 6C)**

Including: Dried cultivars of: Adzuki bean; Bean (*Lupinus*); Bean (*Phaseolus*); Bean (*Vigna*); Blackeyed pea; Broad bean (dry); Catjang; Chickpea; Cowpea; Crowder pea; Field bean; Field pea; Guar; Kidney bean; Lablab bean; Lentil; Lima bean (dry); Moth bean; Mung bean; Navy bean; Pea (*Piscum*); Pigeon pea; Pinto bean; purple hulled peas; Rice bean; Southern pea; Tepary bean; and Urd bean

#### At-Plant

PEST	USE RA	TES		DIRECTIONS
	FI oz/A	Fl oz/1,000 lin ft	Lb bifenthrin/A	
Corn rootworm larvae	6.8 to 8.5	0.39 to 0.49	0.08 to 0.10	Apply as a 5-to 7- inch band over the row on the soil surface, 5- to 7-inch band (T-band) over an open furrow, or in-furrow with the seed. For control of Army cutworm, Armyworm species, Cutworm species, or True
Army cutworm Armyworm species Cutworm species Grape colaspis Grubs Root maggot True armyworm Wireworm	3.4 to 6.8	0.20 to 0.39	0.04 to 0.08	armyworm, apply broadcast to the soil surface.

## **At-plant Restrictions:**

• Do not apply more than 0.1 lb bifenthrin /A per season as an at-plant application.

## Foliar

PEST	USE RATES		DIRECTIONS		
	Fl Lb				
	oz/A	bifenthrin/A			
Aster Leafhopper	2.1 to	0.025 to	Apply in a minimum of 2.0 gal/A of finished spray by air or in a minimum of 10.0		
Flea Beetle	8.5	0.100	gal/A with ground equipment. Thorough coverage is essential to achieve control.		
Grasshoppers					
Leafhoppers			When applying by air, 1.0 to 2.0 qt of emulsified oil may be substituted for 1.0 to		
Alfalfa Caterpillar	2.8 to	0.033 to	2.0 qt of water in the finished spray.		
Aphids	8.5	0.100			
Bean Leaf Beetle					
Beet Armyworm					
Cloverworm					
Corn Earworm					
Corn Rootworm					
(Adult)					
Cucumber Beetles					
Cutworms					
European Corn					
Borer					
Fall Armyworm					
Grasshoppers					
Imported					
cabbageworm					
Japanese beetle					
(Adult)					
Leafminer					
Loopers					
Mexican Bean					
Beetle					
Pea Leaf Weevil					
Pea Weevil					
Plant Bug					
Saltmarsh					
caterpillar					
Sap Beetle					
Southern					
Armyworm					
Stink Bugs					
Tarnished Plant					
Bug					
Thrips					
Twospotted Spider					
Mite					
Tobacco budworm					
Webworms					
Western Bean					
Cutworm					
Whitefly					
Yellowstriped					
Armyworm					
Banks Grass Mite	6.5 to	0.08 to 0.10			
Carmine Mite	8.5				
Lygus Species					

### Foliar Restrictions:

- Do not apply within 14 days of harvest.
- Do not make applications less than 7 days apart.

#### PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Army cutworm	6.8 to	0.08 to 0.10	PRE: This product can be tank mixed and applied with PRE pesticides. Apply in a
Armyworm	8.5		minimum of 10.0 gal/A.
species	6.8 to	0.08 to 0.10	<b>PPI:</b> This product can be tank mixed and applied with PPI herbicides.
Cutworm species	8.5		Incorporation of this product should not be any deeper than the intended planting
Grape colaspis			depth and no deeper than 3 inches.
Grubs			Incorporation depth should be close to the intended seed planting depth. Apply in a
Root maggot			minimum of 10.0 gal/A.
True armyworm			
Wireworm (PPI			
only)			

## **Dried Beans and Peas (Crop Subgroup 6C) Restrictions:**

• Do not apply more than 0.2 lb bifenthrin per acre to peas, or 0.3lb bifenthrin per acre to beans per season including atplant, foliar, PPI and PRE applications of this and other bifenthrin-containing products.

### **EGGPLANT**

#### At-Plant

PEST	USE RA	TES		DIRECTIONS
	FI	FI	Lb	
	oz/A	oz/1,000	bifenthrin/A	
		lin ft	_	
Army cutworm	3.4 to 6.8	0.2 to 0.39	0.04 to 0.08	Apply as a 5- to 7-inch band over the row on the soil surface, a 5- to 7-inch band over the open furrow (T-band), or in-furrow with the transplant or seed.
Armyworm	0.0			For control of Army Cutworm, Armyworm species, Cutworm species, or True Armyworm, apply broadcast to the soil surface.
species Cutworm				Armyworm, apply broaucast to the son surface.
species Grubs				
Root maggot				
True				
armyworm				
Wireworm				

### **At-plant Restrictions:**

• Do not apply more than 0.1 lb bifenthrin/A per season as an at-plant application.

#### **Foliar**

USE RAT	ES	DIRECTIONS
Fl oz/A	Lb bifenthrin/A	
2.8 to	0.033 to	Thorough coverage is necessary to attain acceptable control. Make application at
8.5	0.100	the onset of infestation reaching locally determined economic thresholds.
		Apply in a minimum of 2.0 gal/A finished spray by air or in a minimum of 10.0 gal/A
		with ground equipment.
		When applying by air, 1.0 to 2.0 qt of emulsified oil may be substituted for 1.0 to
		2.0 qt of water in the finished spray.
6.8 to	0.08 to 0.10	
8.5		
	El oz/A  2.8 to 8.5	8.5 0.033 to 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100

## Foliar Restrictions:

- Do not make applications less than 7 days apart.
- Do not apply within 7 days of harvest.

## PPI & PRE

PEST	USE RAT	ES	METHOD and DIRECTIONS	
	Fl oz/A	Lb		
		bifenthrin/A		
Army cutworm Armyworm species Cutworm species Grubs	3.4 to 8.5	0.04 to 0.10	PPI: This product can be tank mixed and applied with PPI herbicides. Incorporation of this product should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth. Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist towards the end of the irrigation run.	
Root maggot True armyworm Wireworm	8.5	0.1	PRE: This product can be tank mixed and applied with PRE pesticides.  Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist towards the end of the irrigation run.	

## **Eggplant Restrictions:**

• Do not apply more than 0.2 pounds bifenthrin acre per season including at-plant, foliar, PPI and PRE applications of this and other bifenthrin-containing products.

## **GRAPES**

## At-plant

PEST	USE RATES		DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Grape <i>Phylloxera</i> (suppression only) White Grubs Wireworms	8.5	0.1	Apply at time of planting over an open furrow in sufficient water for planting.  May be applied through transplant water at time of transplanting.

#### **Foliar**

FI	1.1.	
	Lb	
oz/A	bifenthrin/A	
4.3 to	0.05 to 0.10	Thorough coverage is necessary to attain acceptable control. Make application at
3.5		the onset of infestation reaching locally determined economic thresholds.
		Apply in a minimum of 10.0 gal/A of finished spray by air or in a minimum of 25.0
		gal/A of finished spray with ground equipment.
		When applying by air, 1.0 to 2.0 qt of emulsified oil may be substituted for 1.0 to
		2.0 qt of water in the finished spray.
		When pest pressure is moderate to severe, use higher rate.
3.5	0.1	
3	3.5	3.5

#### Foliar Restrictions:

• Do not apply within 30 days of harvest.

## **PPI (Site Preparation) & PRE**

PEST	USE RATES		METHOD and DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Grape <i>Phylloxera</i> (suppression only) Vine Mealybug	8.5	0.10	Post Plant Soil Applied: Apply through drip or Drop Tape. Apply when soil is moist towards the end of the irrigations run.  PPI: This product can be tank mixed and applied with PPI pesticide labeled for site preparation. Incorporation of this product should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth.  PRE: This product can be tank mixed and applied with PRE pesticides.

## **Grape Restrictions:**

• Do not apply more than 0.1 pounds bifenthrin per acre per season including at-plant, foliar, PPI and PRE applications of this and other bifenthrin-containing products.

## GRASS FORAGE, FODDER, AND HAY GROUP AND GRASS GROWN FOR SEED, PASTURE AND RANGELAND

Including: bahiagrass; barnyardgrass; bentgrass; Bermudagrass; bluegrass, Kentucky; bluestem, big; bromegrass, smooth; buffalograss; canarygrass, reed; centipedegrass; crabgrass; cupgrass; dallisgrass; dropseed, sand; fescue, Kentucky; foxtail, meadow; gramagrass, eastern; grama, side-oats; grass, guinea; grass, Indian; Johnsongrass; lovegrass; napiergrass; oatgrass; orchardgrass; pangolagrass; paspalum; redtop; ryegrass, Italian; St. Augustine grass; sprangletop; squirreltailgrass; stargrass; sudangrass; switchgrass; timothy; wheatgrass, crested; wildrye grass and zoysia grass. Also included are sorghum forages and their hybrids.

NOTE: Use on grasses is limited to the States of Idaho, Oregon, and Washington.

#### At-Plant

PEST	USE RATES			DIRECTIONS
	Fl	Fl oz/1,000	Lb	
	oz/A	lin ft	bifenthrin/A	
Army cutworm Armyworm species Cutworm species Grape colaspis Grubs Root maggot True armyworm Wireworm	8.5	0.39	0.10	Apply as a 5- to 7-inch band over the row on the soil surface, a 5- to 7-inch band over the open furrow (T-band), or in-furrow with the seed.  Apply in a minimum of 5.0 gal/A when applied as in in-furrow or T-band application.  For control of Army cutworm, Cutworm species, True armyworm, or Armyworm species, apply broadcast over the soil surface.

### **Foliar**

PEST	USE RA	ATES	DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
Alfalfa Caterpillar	8.5	0.1	Apply as insects appear in sufficient volume of water to ensure thorough
Alfalfa Looper			coverage of foliage.
Alfalfa Weevil			
Ant spp.			Use higher recommended dosage for increased pest pressure or for increased
Armyworm, fall			residual pest control. Do not exceed maximum allowable rate.
Armyworm, southern			
Armyworm, true			Apply in a minimum of 2.0 gal/A of finished spray by air or in a minimum of
Armyworm, yellowstriped			10.0 gal/A with ground equipment.
Banks Grass Mite			
Black Grass Bug			Higher volumes of finished spray may improve insect control under high
Blue Alfalfa Aphid <sup>1</sup>			temperatures, when foliage is dense and/or when insect pressure is high.
Carmine Mite			
Cereal Leaf Beetle			
Chinch Bug			
Cricket			
Cutworms			
Egyptian Alfalfa Weevil			
(larvae & adult)			
Flea Beetles			
Grass Mealybug			
Grasshoppers			
Green Cloverworm			
Green Peach Aphid <sup>1</sup>			
Hornworms			
Hunting Bill Bug			
Lygus species			
Meadow Spittlebug			
Pea Aphid <sup>1</sup>			
Plant Bug species			
Potato Leafhopper			
Range caterpillar			
Spotted Alfalfa Aphid <sup>1</sup>			
Stink Bugs			
Threecornered Alfalfa			
Hopper			
Velvetbean Caterpillar			
Webworms			

<sup>&</sup>lt;sup>1</sup> Aphid control may be variable depending on species present and host-plant relationships

## **Foliar Restrictions:**

- Do not apply within 30 days of harvest for forage and hay.
- Do not make applications less than 14 days apart.

#### PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
Army cutworm	8.5	0.1	<b>PPI:</b> This product can be tank mixed and applied with PPI-labeled herbicides.
Armyworm			Incorporation of this product should not be any deeper than the intended planting
species			depth and no deeper than 3 inches.
Cutworm species			Incorporation depth should be close to the intended seed planting depth.
Grape colaspis			Apply in a minimum of 10.0 gal/A.
Grubs	8.5	0.1	<b>PRE:</b> This product can be tank mixed and applied with PRE pesticides.
Root maggot			Apply in a minimum of 10.0 gal/A.
True armyworm			
Wireworm (PPI			
only)			

## Grass Forage, Fodder, Hay Group and Grass Grown for Seed, Pasture, and Rangeland Restrictions:

• Do not apply more than 0.2 pounds bifenthrin to Grass Forage, Fodder, Hay Group and Grass Grown for Seed, Pasture, and Rangeland including at-plant, foliar, PPI, and PRE applications of this and other bifenthrin-containing products.

## **GROUNDCHERRIES, TOMATILLOS, & TOMATOES**

#### At-Plant

PEST	USE RA	TES		DIRECTIONS
	FI	Fl oz/1,000	Lb	
	oz/A	lin ft	bifenthrin/A	
Army	3.4 to	0.2 to 0.39	0.04 to 0.08	Apply as a 5- to 7-inch band over the row on the soil surface, a 5- to 7-inch
cutworm	6.8			band over the open furrow (T-band), or in-furrow with the transport or seed.
Armyworm				May be applied through transplant water at time of transplanting.
species				For control of Army cutworm, Armyworm species, Cutworm species,
Cutworm species				<b>Stalkborer, or True armyworm</b> , apply broadcast to the soil surface.
Flea beetle				
larvae				
Grubs				
Root maggot				
Stalkborer				
True				
armyworm				
Wireworm				

### **At-plant Restrictions:**

• Do not apply more than 0.1 lb bifenthrin/A per season as an at-plant application.

## Foliar

PEST	USE RAT	ES	DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Aphids	2.8 to	0.033 to 0.08	Thorough coverage is essential to attain acceptable control. Make application at
Armyworms	6.8		the onset of infestation reaching locally determined economic levels.
(including Beet)			
Bean Leaf Beetle			Apply in water. Apply the specified dosage in 5.0 to 50.0 gal/A of finished spray
Cabbageworm			by air or 10.0 to 50.0 gal/A of finished spray by ground.
Carmine Mite			
Cloverworm			
Corn earworm			
Corn Rootworm			
Cucumber Beetles			
Cutworms			
Diamondback Moth			
European Corn Borer			
Flea Beetles			
Flea Hopper			
Grasshopper			
Japanese Beetle			
(Adult)			
Leafhoppers			
Loopers			
Lygus species			
Melonworm			
Pea Weevil			
Pea Leaf Weevil			
Pickleworm			
Plant Bug			
Rindworm			
Salt Marsh			
Caterpillar			
Sap Beetle			
Seedpod Weevil			
Squash Bugs			
Stink bug species			
Tobacco Budworm			
Tarnished Plant Bug			
Thrips			
Whitefly			
Yellowstriped			
Armyworm			
Twospotted Spider	6.8 to	0.08 to 0.10	
Mite	8.5		

### **Foliar Restrictions**:

- Do not make applications less than 10 days apart.
- Do not apply within 1 day of harvest.

#### PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Army cutworm Armyworm species Cutworm species Flea beetle	3.4 to 6.8	0.04 to 0.08	PPI: This product can be tank mixed and applied with PPI herbicides. Incorporation of this product should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth. Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist
larvae Garden symphylans	6.8	0.08	towards the end of the irrigation run.  PRE: This product can be tank mixed and applied with PRE herbicides.
Grubs True Armyworm Wireworm			<b>Post Plant Soil Applied</b> : Apply through drip or drip tape. Apply when soil is moist towards the end of the irrigation run.

## **Groundcherry, Tomatillo, and Tomato Restrictions:**

• Do not apply more than 0.4 pounds bifenthrin per acre per season including at-plant, foliar, PPI, and PRE applications of this and other bifenthrin-containing products.

## **HOPS**

#### At-plant

PEST	USE RATES		DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
Grape colaspis	5.1 to	0.06 to 0.10	Apply in a T-band that ensures coverage of the entire furrow, immediately prior to
Rootworms	8.5		planting, or at planting. May also be applied as a soil drench with transplant water at
Sweet potato			time of transplanting.
flea beetle			Apply in a minimum of 10.0 gal/A of spray.
White grub			
Wireworms			

### **Foliar**

PEST USE RATES		TES	DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Aphids	5.1 to	0.06 to 0.10	Application by ground: For best results, full coverage is essential. Early season
Armyworms	8.5		recommend 100 to 150 gal of spray/A. Late season recommend 200 to 250 gal of
Cutworms			spray/A.
Leafrollers			
Loopers			For Root Weevil control, make a directed spray to the base of the plant. Spray up the
Root Weevils	4.3 to	0.05 to 0.10	vine 3 feet and the soil surface 1.5 to 2.0 ft on either side of the plant.
	8.5		
			Application by air for late season control of twospotted spider mites: Apply no less
Twospotted	8.5	0.1	than 6.4 oz (0.1 lb bifenthrin)/application in a minimum of 10.0 gal/A.
Spider Mite			

#### **Foliar Restrictions:**

- Do not exceed 0.1 lb bifenthrin/A/foliar application.
- Do not make applications less than 21 days apart.
- Do not apply within 14 days of harvest

#### Lay-By

PEST	USE RATES		DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Grape	5.1 to	0.06 to 0.10	Apply this product to the transplant area and incorporate with cultivation equipment
colaspis	8.5		set to throw soil towards the hill.
Rootworms			Apply in a minimum of 10.0 gal/A of spray.
White grub			
Wireworms			

#### PPI

PEST	USE RATES		DIRECTIONS
	Fl oz/A	Lb bifenthrin/A	
Grape colaspis	5.1 to 8.5	0.06 to 0.10	Apply this product to the transplant area and incorporate to planting depth.
Rootworms			Apply in a minimum of 10.0 gal/A of spray.
White grub			May be applied as a broadcast application or an incorporated band application.
Wireworms			

## **PRE & Post-Plant Soil Applied**

PEST	USE RATES		DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Grape	5.1 to	0.06 to 0.10	Apply through drip or drip tape. Apply when soil is moist towards the end of the
colaspis	8.5		irrigation run.
Rootworms			
White grub			
Wireworms			

### **Hops Restrictions:**

- Do not exceed 0.3 pounds bifenthrin per acre per season including at-plant, foliar, lay-by, PPI and PRE applications of this and other bifenthrin-containing products.
- Use of ultra-low volume (ULV) application on hops is prohibited.

## **LEAFY BRASSICAS (Crop Subgroup 5B), TURNIP GREENS**

Including: Bok Choy, Broccoli Raab, Collards, Kale, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens, Turnip Greens

## At-Plant

PEST	PEST USE RATES			DIRECTIONS
	Fl	Fl oz/1,000	Lb	
	oz/A	lin ft	bifenthrin/A	
Army	3.4 to	0.20 to	0.04 to 0.08	Apply as a 5-to 7- inch band over the row on the soil surface, 5- to 7-inch
cutworm	6.8	0.39		band (T-band) over an open furrow, or in-furrow with the seed or transplant.
Armyworm				May be applied through transplant water at time of transplanting
species				
Cutworm				For control of Army cutworm, Armyworm species, Cutworm species, or
species				True armyworm, apply broadcast to the soil surface.
Grubs				
Lettuce root				
aphid				
Root maggot				
True				
armyworm				
Wireworm				
Rootworm	6.8 to	0.39 to	0.08 to 0.10	
larvae	8.5	0.49		

## **At-plant Restrictions:**

• Do not apply more than 0.1 lb bifenthrin/A per season as an at-plant application.

## Foliar

PEST	USE RATES		DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Aphids	2.8 to	0.033 to	Thorough coverage is essential to attain acceptable control. Make application at the
Armyworms	8.5	0.100	onset of infestation reaching locally determined economic thresholds.
Corn Earworm			Apply in a minimum of 2.0 gal/A of finished spray by air or in a minimum of 10.0 gal/A
Crickets			with ground equipment. When applying by air, 1.0 to 2.0 qt of emulsified oil may be
Cutworms			substituted for 1.0 to 2.0 qt of water in the finished spray.
Cucumber			
Beetles			
Diamondback			
Moth			
Flea Beetles			
Grasshoppers			
Ground Beetles			
Imported			
Cabbageworm			
Japanese Beetle			
(adult)			
Leafhoppers			
Loopers			
Saltmarsh			
Caterpillar			
Stink Bugs			
Thrips			
Tobacco			
Budworm			
Whitefly			
Wireworm			
(adults)			
Banks Grass Mite	6.8 to	0.08 to 0.10	
Carmine Mite	8.5		
Lygus Species			
Pacific Spider			
Mite			
Twospotted			
Spider Mite			

## Foliar Restrictions:

- Do not make applications less than 7 days apart.
- Do not apply within 7 days of harvest.

#### PPI & PRE

PEST	USE RAT	ES	METHOD and DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Army cutworm Armyworm species Cutworm species Flea beetle	3.4 to 6.8	0.04 to 0.08	PPI: This product can be tank mixed and applied with PPI-labeled herbicides. Incorporation of this product should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth. Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist towards the end of the irrigation run.
larvae Grubs Lettuce root aphid Root Maggots True Armyworm Wireworms	3.4 to 6.8	0.04 to 0.08	PRE: This product can be tank mixed and applied with PRE pesticides.  Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist towards the end of the irrigation run.

### Leafy Brassica (Crop Subgroup 5B) and Turnip Greens Restrictions:

• Do not apply more than 0.4 pounds bifenthrin per acre per season including at-plant, foliar, PRE and PPI applications of this and other bifenthrin-containing products.

# **LEAFY PETIOLE VEGETABLES (Crop Subgroup 4B)**

Including: Cardoon, Celery, Celtuce, Chinese celery, Florence fennel, Rhubarb, Swiss chard

#### At-plant

PEST	USE RATES		DIRECTIONS
	Fl oz/A Lb		
		bifenthrin/A	
Cutworm spp.	3.4 to	0.04 to 0.10	Apply as a 5- to 7-inch band (T-band) over an open furrow, or in-furrow with the seed.
Garden	8.5		May be applied through transplant water at time of transplanting.
Symphlans			
Lettuce Root			
Aphid			

### Foliar

PEST			DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
Aphids	3.4 to	0.04 to 0.10	Thorough coverage is essential to attain acceptable control. Make application at the
Armyworms	8.5		onset of infestation reaching locally determined economic thresholds. Apply in a
Corn Earworm			minimum of 2.0 gal/A of finished spray by air or in a minimum of 10.0 gal/A of finished
Crickets			spray with ground equipment. When applying by air, 1.0 to 2.0 qt of emulsified oil may
Cucumber			be substituted for 1.0 to 2.0 qt of water in the finished spray.
Beetles			
Cutworms			
Diamondback			
Moth			
Flea Beetles			
<b>Ground Beetles</b>			
Imported			
Cabbageworm			
Leafhoppers			
Loopers			
Saltmarsh			
Caterpillar			
Stink Bugs			
Thrips			
Tobacco			
Budworm			
Whitefly			
Wireworm			
(adults)			
Banks Grass	6.8 to	0.08 to 0.10	
Mite	8.5		
Carmine Mite			
Lygus species			
Pacific Spider			
Mite			
Twospotted			
Spider Mite			

## Foliar Restrictions:

- Do not make applications less than 7 days apart.
- Do not apply within 7 days of harvest.

## PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS	
	Fl oz/A	Lb		
		bifenthrin/A		
Army cutworm	8.5	0.1	<b>PPI:</b> This product can be tank mixed and applied with PPI-labeled herbicides.	
Armyworm			Incorporation of this product should not be any deeper than the intended planting	
species			depth. Incorporation depth should be close to the intended depth.	
Cutworm	3.4 to	0.04 to 0.10	PRE: This product can be tank mixed and applied with PRE pesticides.	
species	8.5			
Flea beetle				
larvae				
Grubs				
True				
Armyworm				
Wireworm				

### **Leafy Petiole Restrictions:**

• Do not apply more than 0.5 pounds bifenthrin per acre per season including at-plant, foliar, PRE and PPI applications of this and other bifenthrin-containing products.

# **LETTUCE (HEAD)**

#### At-Plant

PEST	USE RA	USE RATES		DIRECTIONS
	FI oz/A	Fl oz/1,000 lin ft	Lb bifenthrin/A	
Army	3.4 to	0.20 to	0.04 to 0.08	Apply as a 5-to 7- inch band over the row on the soil surface, 5- to 7-inch
cutworm	6.8	0.39		band (T-band) over an open furrow, or in-furrow with the seed or transplant.
Armyworm species				May be applied through transplant water at time of transplanting
Bulb mites				For control of Army cutworm, Armyworm species, Bulb mites, Cutworm
Cutworm species				<b>species, or True armyworm,</b> apply broadcast to the soil surface.
Grubs				
Lettuce root aphid				
Root maggot				
True				
armyworm				
Wireworm				
Rootworm	6.8 to	0.39 to	0.08 to 0.10	
larvae	8.5	0.49		

### **At-plant Restrictions:**

• Do not apply more than 0.1 lb bifenthrin/A per season as an at-plant application.

#### **Foliar**

PEST	USE RATES		DIRECTIONS	
	Fl oz/A	Lb bifenthrin/A		
Aphids	2.8 to	0.033 to	Apply in water as necessary for insect control using a minimum of 15.0 gal/A of	
Armyworms	8.5	0.100	finished spray with ground equipment and 5.0 gal/A by air. When applying by air, 1.0	
Corn earworm			to 2.0 qt of emulsified oil may be substituted for 1.0 to 2.0 qt of water in the finished	
Cucumber			spray.	
Beetles			Thorough coverage is essential to achieve control.	
Cutworms				
Diamondback				
Moth				
Flea Beetles				
Imported				
Cabbageworm				
Leafhoppers				
Loopers				
Salt Marsh				
Caterpillar				
Stink Bug species				
Tobacco				
Budworm				
Whitefly				
Carmine Mite	6.8 to	0.08 to 0.10		
Lygus Species	8.5			
Twospotted				
Spider Mite				

### Foliar Restrictions:

- Do not make applications less than 7 days apart.
- Do not apply within 7 days of harvest.

#### PPI

PEST	USE RATES		
	Fl oz/A	Lb bifenthrin/A	
Garden Symphians	6.8 to 8.5	0.08 to 0.10	
Lettuce Root Aphid			

#### **Head Lettuce Restrictions:**

• Do not apply more than 0.5 pounds bifenthrin per acre per season including at-plant, foliar, PRE and PPI applications of this and other bifenthrin-containing products.

### **MAYHAW**

#### **Foliar**

PEST	USE RATES	3	DIRECTIONS			
	Fl oz/A Lb bifenthrin/A					
Plum Curculio	6.8 to 8.5 0.08 to 0.10		Apply foliar treatments in at least 28.0 gal/A.			

#### **Foliar Restrictions:**

- Apply no more than once every 7 days.
- Do not apply within 30 days of harvest.

#### PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
White	8.5	0.1	<b>PPI:</b> This product can be tank mixed and applied with PPI-labeled herbicides.
Grub			Incorporation of this product should not be any deeper than the intended planting depth.
Wireworm			Incorporation depth should be close to the intended depth.
			PRE: This product can be tank mixed and applied with PRE pesticides.

#### **Mayhaw Restrictions:**

• Do not apply more than 0.2 pounds bifenthrin per acre per season including at-plant, foliar, PPI, and PRE applications of this and other bifenthrin-containing products.

### **OKRA**

#### At-Plant

PEST	USE RATES			DIRECTIONS
	FI	Fl oz/1,000	Lb	
	oz/A	lin ft	bifenthrin/A	
Armyworm	3.4 to	0.2 to 0.39	0.04 to 0.08	Apply as a 5- to 7-inch band over the row on the soil surface, a 5- to 7-inch
Cutworm spp	6.8			band over the open furrow (T-band), in-furrow with the seed, or broadcast
Flea beetle				to the soil surface.
larvae				
Grape				
colaspis				
Root maggot				
White Grub				
Wireworm				

## **At-plant Restrictions:**

• Do not apply more than 0.1 lb bifenthrin/A per season as an at-plant application.

#### **Foliar**

PEST	USE RAT	ES	DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Aphids	2.8 to	0.033 to 0.100	Apply as needed using sufficient water to obtain uniform coverage.
Armyworms	8.5		Apply with ground equipment using a minimum of 10.0 gal/A of finished spray or
Corn earworm			a minimum of 2.0 gal/A by aircraft.
Cucumber Beetles			
Cutworms			
European Corn			
Borer			
Flea Beetles			
Japanese Beetle			
(Adult)			
Leafminers			
Loopers			
Stink bugs			
Thrips			
Whitefly			
Broad Mite	6.8 to	0.08 to 0.10	
Carmine Mite	8.5		
Lygus species			
Twospotted Spider			
Mite			

#### **Foliar Restrictions:**

- Do not make applications less than 7 days apart.
- Do not apply within 7 days of harvest.

#### PPI & PRE

PEST	USE RATES		DIRECTIONS
(PPI only unless	Fl oz/A	Lb	
noted)		bifenthrin/A	
Cutworm species (PPI	3.4 to	0.04 to 0.1	This product can be tank mixed and applied with PPI or PRE herbicides.
& PRE)	8.5		Incorporation of this product should not be any deeper than the intended
Flea beetle larvae			planting depth and no deeper than 3 inches.
Grape colaspis			Incorporation depth should be close to the intended seed planting depth.
Root maggot			
White Grub			
Wireworm			

#### **Okra Restrictions:**

• Do not apply more than 0.2 pounds bifenthrin per acre per season including at-plant, foliar, PPI, and PRE applications of this and other bifenthrin-containing products.

### **PEANUT**

### At-Plant

Attiunt				
PEST	USE RATI	ES		DIRECTIONS
	Fl oz/A Fl oz/1,000 lin Lb		Lb	
		ft	bifenthrin/A	
Aphids	6.8 to	0.39 to 0.49	0.08 to 0.10	Apply as a 5- to 7-inch band (T-band) over an open furrow, or in-
Leafhoppers	8.5			furrow with the seed.
Thrips				
Wireworms				

#### **Foliar**

PEST	USE RATE	S	DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Beet Armyworm	2.8 to	0.033 to 0.100	Apply in a minimum of 10.0 gal/A with ground equipment or 2.0 gal/A by
Corn Earworm	8.5		aircraft.
Cutworm species			
Fall Armyworm			
Grasshoppers			
Green Cloverworm			
Leafhoppers			
Lesser Cornstalk borer			
Loopers			
Rednecked peanut worm			
Southern Armyworm			
Southern Corn Rootworm			
Stink Bugs			
Threecornered alfalfa			
hopper			
Velvetbean caterpillar			
Yellowstriped armyworm			
Aphids	6.8 to	0.08 to 0.10	
Spider Mites	8.5		
Thrips			
Whitefly			
Folion Doctrictions		•	

#### **Foliar Restrictions:**

- Do not make applications less than 14 days apart.
- Do not apply within 14 days of harvest.
- Do not feed green immature plants and peanut hay to livestock.

#### **Peanut Restrictions:**

• Do not apply more than 0.5 pounds bifenthrin per acre per season including at-plant, foliar PPI, or PRE applications of this and other bifenthrin-containing products.

#### **PEAR**

#### **Foliar**

PEST	USE RAT	ES	DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Aphids	3.4 to	0.04 to 0.20	Application by ground: Apply as a dilute (minimum of 200 gal/A of finished spray) or
Codling Moth	17.1		concentrate spray in sufficient water (minimum of 50.0 gal/A of finished spray) to
Cutworms			provide thorough coverage.
Green Fruitworm			<b>Application by air:</b> Apply the specified dosage in a minimum of 10.0 gal/A by air.
Leafhoppers			
Leafminers			
Leafrollers			
Lygus species			
Plant Bugs			
Plum Curculio			
San Jose Scale			
(Crawlers)			
Stink Bugs			
Tarnished Plant			
Bugs			
Twospotted	5.1 to	0.06 to 0.20	1
Spider mite	17.1		
Yellow Mite			
European Red	6.8 to	0.08 to 0.20	
Mite	17.1		
Falian Bastuistians			

#### **Foliar Restrictions:**

- Do not make applications less than 30 days apart.
- Apply up to 14 days prior to harvest.
- Do not graze livestock in treated orchards or cut treated cover crops for feed.

#### **Pear Restrictions:**

• Do not apply more than 0.5 pound bifenthrin per acre per season including at-plant, PRE, PPI and foliar applications of this and other bifenthrin-containing products with no more than 0.45 pound bifenthrin per acre applied after petal fall.

# PEPPERS (BELL and NON-BELL) & PEPINO

#### At-Plant

PEST	USE RA	USE RATES		DIRECTIONS
	Fl	Fl oz/1,000	Lb	
	oz/A	lin ft	bifenthrin/A	
Army	3.4 to	0.2 to 0.39	0.04 to 0.08	Apply as a 5- to 7-inch band over the row on the soil surface, a 5- to 7-inch
Cutworm	6.8			band over the open furrow (T-band), or in-furrow with the transplant or
Armyworm				seed. May be applied through transplant water at time of transplanting.
species				
Cutworm				For control of Army cutworm, Armyworm species, Cutworm species, Stalk
species				borer, or True armyworm: Apply broadcast over the soil surface.
Flea beetle				
larvae				
Grubs				
Pepper				
maggot				
Root aphid				
Root maggot				
Stalk borer				
True				
armyworm				
Wireworm				

## **At-plant Restrictions:**

• Do not apply more than 0.1 lb bifenthrin/A per season as an at-plant application.

#### **Foliar**

PEST	USE RAT	ES	DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Armyworms	2.8 to	0.033 to	Thorough coverage is essential to attain acceptable control. Make application at
(Including Beet)	8.5	0.100	the onset of infestation reaching locally determined economic thresholds.
Armyworm, Fall			
Armyworm,			Apply in a minimum of 2.0 gal/A of finished spray by air or in a minimum of 10.0
Southern			gal/A with ground equipment.
Cabbage Looper			
Colorado Potato			When applying by air, 1.0 to 2.0 qt of emulsified oil may be substituted for 1.0 to
Beetle			2.0 qt of water in the finished spray.
Corn Earworm			
Cucumber Beetle			
Cutworms			
European Corn			
Borer			
Flea Beetle			
Leafminers			
Loopers			
Pepper weevil			
Plant Bug			
Stink Bug			
Thrips			
Tomato Hornworm			
Tomato Pinworm			
Vegetable Leafminer			
Whitefly			
Yellowstriped			
Armyworm			
Broad Mite	6.8 to	0.08 to 0.10	
Carmine Mite	8.5		
Lygus species			
Pacific Spider Mite			
Twospotted Spider			
Mite			

## Foliar Restrictions:

- Do not make applications less than 7 days apart.
- Do not apply within 7 days of harvest.

### PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS	
	Fl oz/A	Lb		
		bifenthrin/A		
Army cutworm	3.4 to	0.04 to 0.10	<b>PPI:</b> This product can be tank mixed and applied with PPI-labeled herbicides.	
Armyworm	8.5		Incorporation of this product should not be any deeper than the intended planting	
species			depth. Incorporation depth should be close to the intended depth.	
Cutworm			Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist	
species			towards the end of the irrigation run.	
Flea beetle	8.5	0.1	PRE: This product can be tank mixed and applied with PRE pesticides.	
larvae			Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist	
Grubs			towards the end of the irrigation run.	
True				
Armyworm				
Wireworm				

#### Pepper (Bell and Non-Bell) Restrictions:

• Do not apply more than 0.2 pounds bifenthrin per acre per season including at-plant, foliar PPI, and PRE applications of this and other bifenthrin-containing products.

### ROOT CROPS (Except Sugar Beets and Garden Beets) (Crop Subgroup 1B)

Including: Burdock Edible; Carrot; Celeriac; Chervil, Turnip Rooted; Chicory; Garden Beet; Ginseng; Horseradish; Parsley, Turnip Rooted; Parsnip; Radish; Radish, Oriental; Rutabaga; Salsify; Salsify, Black; Salsify, Spanish; Skirret; and Turnip.

#### At-plant

PEST	USE RATES		DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
Crown and Root Aphids	8.5	0.1	Apply as a 5- to 7-inch band (T-band) over an open furrow, or in-furrow with the seed. May be applied through transplant water at time of transplanting.
Cutworms			seed. May be applied through transplant water at time of transplanting.
Flea Beetles			
Root and Seedcorn			
Maggots			
Wireworms			

#### **Foliar**

PEST	USE RAT	TES	DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
Aphids	6.8 to	0.08 to 0.10	Thorough coverage is necessary to attain acceptable control. Make application
Beet Armyworm	8.5		at the onset of infestation reaching locally determined economic thresholds.
Celery Leaf Tier			
Corn Earworm			Apply foliar treatments in at least 25.0 gal/A.
Cross Striped			
Cabbageworm			
Cutworms			
Diamondback Moth			
European Corn Borer			
Fall Armyworm			
Fire Ants			
Flea Beetles			
Green Cloverworm			
Hornworms			
Imported			
Cabbageworm			
Loopers			
Southern Armyworm			
Spider Mites			
Tobacco Budworm			
Velvetbean Caterpillar			
Whitefly			
Yellowstriped			
Armyworm			

#### **Foliar Restrictions:**

- Apply no more than once every 7 days.
- Do not apply within 21 days of harvest.

#### PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Crown and Root Aphids Cutworms Flea Beetles	8.5	0.1	<b>PPI:</b> This product can be tank mixed and applied with PPI-labeled herbicides. Incorporation of this product should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth.
Root and Seedcorn Maggots Wireworms	8.5	0.1	PRE: This product can be tank mixed and applied with PRE pesticides.

#### **Root Crops Restrictions:**

• Do not apply more than 0.5 pounds bifenthrin per acre per season including at-plant, foliar PPI and PRE applications of this and other bifenthrin-containing products.

### **SOD FARMS**

#### At-plant

PEST	USE RATES		DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Ants	8.5	0.1	Apply as a 5- to 7-inch band (T-band) over an open furrow, or in-furrow with the
Chinch Bugs <sup>1</sup>			seed.
Crickets			
Cutworms <sup>2</sup>			
Imported Fire			
Ants <sup>3</sup>			
Earwigs			
White Grub			
Wireworm			

#### **Foliar**

PEST	USE RAT	ES		DIRECTIONS
	Fl oz/A	FI oz/1000 lin ft	Lb bifenthrin/A	
Armyworms <sup>2</sup> Cutworms <sup>2</sup> Sod Webworm <sup>2</sup>	2.8 to 4.35	0.066 to 0.100	0.033 to 0.050	Apply as a broadcast treatment. Use higher volumes up to 10.0 gal of carrier/1000 sq ft to get uniform coverage when treating dense grass foliage.
Annual Bluegrass Weevil (Hyperodes) (Adult) <sup>4</sup> Banks Grass Mite <sup>5</sup> Billbugs (Adult) <sup>6</sup> Black Turfgrass Ataenius (Adult) <sup>7</sup> Crickets Earwigs Fleas (Adult) Grasshoppers Mealybugs Mites <sup>5</sup>	4.35 to 8.7	0.1 to 0.2	0.05 to 0.10	Irrigation to treated area within a few hours following application can improve efficacy to sub-surface pests including mole crickets.  The application rates listed in the following table will provide excellent control of the respective pests under typical conditions. However, at the discretion of the applicator, this product may be applied at up to 0.4 fl oz/1000 sq ft to control each of the pests listed in this table. The higher application rates should be used when maximum residual control is desired or heavy pest populations occur.
Ants Chinch Bugs <sup>1</sup> Fleas (Larvae) <sup>8</sup> Imported Fire Ants <sup>3</sup> Japanese Beetle (Adult) Mole Cricket (Adult) <sup>9</sup> Mole Cricket (Nymph) <sup>10</sup> Ticks <sup>11</sup>	8.70 to 17.42	0.2 to 0.4	0.1 to 0.2	

#### PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS	
	FI	Lb		
	oz/A	bifenthrin/A		
Ants	8.5	0.1	<b>PPI:</b> This product can be tank mixed and applied with PPI-labeled herbicides.	
Chinch Bugs <sup>1</sup>			Incorporation of this product should not be any deeper than the intended planting	
Crickets			depth and no deeper than 3 inches.	
Cutworms <sup>2</sup>			Incorporation depth should be close to the intended seed planting depth.	
Earwigs	8.5	0.1	<b>PRE:</b> This product can be tank mixed and applied with PRE pesticides.	
Imported Fire				
Ants <sup>3</sup>				
White Grub				
Wireworm				

<sup>&</sup>lt;sup>1</sup>Chinch Bugs: Chinch Bugs infest the base of grass plants and are often found in the thatch layer. Irrigation of the grass area before treatment will optimize the penetration of the insecticide to the area where the chinch bugs are located. Use higher volume applications if the thatch layer is excessive or if a relatively long mowing height is being maintained. Chinch Bugs can be one of the most difficult pests to control in grasses and the higher application rates (up to 0.4 fl oz/1000 sq feet) may be required to control populations that contain both nymphs and adults during the middle of the summer.

<sup>2</sup>Armyworms, Cutworms and Sod Webworms: To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. If the grass area is being maintained at a mowing height of greater than 1 inch, then higher application rates (up to 0.4 fl oz./1000 sq ft) may be required during periods of high pest pressure.

Imported Fire Ants: Control will be optimized by combining broadcast applications that will control foraging workers and newly mated fly-in queens with mound drenches that will control existing colonies. If the soil is not moist, then it is important to irrigate before application or use a high volume application. Broadcast treatments should apply 0.4 fl oz/1000 square feet. Mounds should be treated by diluting 0.05 fl oz product/gal of water and applying 1 to 2 gal of finished spray/mound. The mounds should be treated with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. A 4-ft-diameter circle around the mound should also be treated. For best results, apply in cool weather (65 - 80°F) or in early morning or late evening hours.

Annual Bluegrass Weevil (Hyperodes) adults: Applications should be timed to control adult weevils as they leave their overwintering sites and move into grass areas. This movement generally begins when Forsythia is in full bloom and concludes when

overwintering sites and move into grass areas. This movement generally begins when Forsythia is in full bloom and concludes when flowering dogwood (*Cornus florida*) is in full bloom. Consult your State Cooperative Extension Service for more specific information regarding application timing.

Mites: To ensure optimal control of eriophyid mites, apply in combination with the labeled application rate of a surfactant. A second application, 5 to 7 days after the first, may be necessary to achieve acceptable control.

<sup>6</sup>Billbug adults: Applications should be made when adult billbugs are first observed during April and May. Degree day models have been developed to optimize application timing. Consult your State Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide control of over-wintered chinch bugs.

<sup>7</sup>Black Turfgrass Ataenius adults: Applications should be made during May and July to control the 1<sup>st</sup> and 2<sup>nd</sup> generation of black turfgrass ataenius adults, respectively. The May application should be timed to coincide with the full bloom stage of Vanhoutte spiraea (*Spiraea vanhouttei*) and horse chestnut (*Aesculus hippocastanum*). The July application should be timed to coincide with the blooming of Rose of Sharon (*Hibiscus syriacus*).

<sup>8</sup>Flea larvae: Flea larvae develop in the soil of shaded areas that are accessible to pets or other animals. Use a higher-volume application when treating these areas to ensure penetration of the insecticide into the soil. Note: if the lawn area is being treated with this product at 0.1 fl oz/1000 sq ft for adult flea control, then the larval application rate may be achieved by increasing the application volume 2- to 4-fold.

<sup>9</sup> Mole Cricket adults: Achieving acceptable control of adult mole crickets is difficult because preferred grass areas are subject to continuous invasion during the early spring by this extremely active stage. Applications should be made as late in the day as possible and should be watered in with up to 0.5 in water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized. Grass areas that receive pressure from adult mole crickets should be treated at peak egg hatch to ensure optimum control of subsequent nymph populations (see note 10).

<sup>10</sup>Mole Cricket nymphs: Grass areas that received intense adult mole cricket pressure in the spring should be treated immediately prior to peak egg hatch. Optimal control is achieved at this time because young nymphs are more susceptible to insecticides and they are located near the soil surface where the insecticide is most concentrated. Control of larger, more damaging, nymphs later in the year may require both higher application rates and more frequent applications to maintain acceptable control. Applications should be made as late in the day as possible and should be watered in with up to 0.5 in water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized.

<sup>11</sup>Ticks (Including ticks that may transmit Lyme Disease and Rocky Mountain Spotted Fever): Do not make spot applications. Treat the entire area where exposure to ticks may occur. Use higher spray volumes when treating areas with dense ground cover or heavy leaf litter. Ticks may be reintroduced from surrounding areas on host animals.

Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed activity. Repeat application must be limited to no more than once per 7 days.

**Deer ticks** (*Ixodes* sp.) have a complicated life cycle that ranges over a 2-year period and involves 4 life stages. Applications should be made in the late fall and/or early spring to control adult ticks that are usually located on brush or grass above the soil surface and in mid to late spring to control larvae and nymphs that reside in the soil and leaf litter.

American dog ticks may be a considerable nuisance in suburban settings, particularly where homes are built on land that was previously field or forest. These ticks commonly congregate along paths or roadways where humans are likely to be encountered. Applications should be made as necessary from mid-spring to early fall to control American dog tick larvae, nymphs and adults.

### **Sod Farm Restrictions:**

- In New York State, this product may NOT be applied to any grass or turf area within 100 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).
- In New York State, make a single repeat application of this product if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

## **SOYBEANS**

#### At-Plant

PEST	USE RAT	TES		DIRECTIONS
	Fl	Fl oz/1,000	Lb	
	oz/A	lin ft	bifenthrin/A	
Rootworm	6.8 to	0.39 to 0.49	0.08 to 0.10	Apply as a 5-to 7- inch band over the row on the soil surface, 5- to 7-
larvae	8.5			inch band (T-band) over an open furrow, or in-furrow with the seed.
Army cutworm	3.4 to	0.20 to 0.39	0.04 to 0.08	For control of Army cutworm, Armyworm species, Cutworm species,
Armyworm	6.8			or True armyworm, apply broadcast over the soil surface.
species				
Bean Leaf Beetle				
Larvae				
Cutworm species				
Grape colaspis				
Grubs				
Root maggot				
Seed corn beetle				
Seedcorn				
maggot				
True armyworm				
Wireworm				

### **At-plant Restrictions:**

• Do not apply more than 0.1 lb bifenthrin/A per season as an at-plant application.

### Foliar

PEST	USE RATES		DIRECTIONS	
	FI	Lb		
	oz/A	bifenthrin/A		
Alfalfa Caterpillar	2.8 to	0.033 to	Apply in a minimum of 10.0 gal/A with ground equipment or 2.0 gal/A by aircraft.	
Aphids	8.5	0.100		
Armyworms			Pyrethroid resistance is common for <b>Beet Armyworm and Tobacco Budworm</b> . Please	
Bean Leaf Beetle			consult your local or state agricultural authority to determine if resistant pest	
Blister Beetle			populations are in your area. If so, refer to the resistance management statement in	
species			the DIRECTIONS FOR USE section of this label.	
Corn Earworm				
Corn Rootworm				
Adult				
Cowpea Curculio				
Cucumber Beetle				
Adult				
Cutworms				
Dectes Stem Borer				
European Corn				
Borer				
False Cinch Bug				
Flea Beetle				
Grasshoppers				
Green cloverworm				
Hornworms				
Imported				
Cabbageworm				
Japanese Beetle				
Adult				
Leaf Skeletonizer				
species				
Leafhoppers				
Leafminers Adults				
Lesser Cornstalk				
Borer				
Loopers				
Kudzu Bug				
Mexican Bean				
Beetle				
Painted Lady				
(Thistle)				
Caterpillar				
Pea Leaf Weevil				
Saltmarsh				
Caterpillar				
Seedcorn Maggot				
Adult				
Silverspotted				
Skipper				
Spittlebug				
Stink Bug				
Three Cornered				
Alfalfa Hopper				
Thrips				
Tobacco Budworm				

Velvetbean		
Caterpillar		
Webworm		
Woollybear		
Caterpillar		
Lygus species	6.8 to	0.08 to 0.10
Twospotted Spider	8.5	
Mite		
Whitefly		

#### **Foliar Restrictions:**

- Do not make applications less than 30 days apart.
- Do not apply within 18 days of harvest.

#### PPI & PRE

PEST USE RATES		ES	METHOD and DIRECTIONS
(PPI only unless noted)	Fl oz/A	Lb	
		bifenthrin/A	
Armyworm species (PRE	4.0 to	0.047 to 0.062	<b>PPI:</b> This product can be tank mixed and applied with PPI herbicides.
and PPI)	5.3		Incorporation of this product should not be any deeper than the intended
Bean leaf beetle larvae			planting depth and no deeper than 3 inches.
Black Cutworm (PRE and			Incorporation depth should be close to the intended seed planting depth.
PPI)	3.4	0.04	<b>PRE:</b> This product can be tank mixed and applied with PRE herbicides.
Seed corn beetle			
Seed corn maggot			
Stalkborer larvae			
White grub			
Wireworm			

### **Soybean Restrictions:**

• Do not apply more than 0.3 lb bifenthrin/A per season including at-plant, foliar, PPI, and PRE applications of this and other bifenthrin-containing products.

### **SPINACH**

#### At-Plant

PEST	USE RA	TES		DIRECTIONS
	FI	Fl oz/1,000	Lb	
	oz/A	lin ft	bifenthrin/A	
Garden	6.8 to	0.39 to 0.49	0.08 to 0.10	Apply as a 5-to 7- inch band over the row on the soil surface, 5- to 7-
Symphylans	8.5			inch band (T-band) over an open furrow, or in-furrow with the seed.
Rootworm				
larvae				For control of Army cutworm, Armyworm species, Cutworm species, or
Army cutworm	3.4 to	0.20 to 0.39	0.04 to 0.08	True armyworm, apply broadcast to the soil surface.
Armyworm	6.8			
species				
Cutworm				
species				
Grubs				
Root maggot				
Seedcorn				
maggot				
True				
armyworm				
Wireworm				

#### **At-plant Restrictions:**

• Do not apply more than 0.1 lb bifenthrin/A per season as an at-plant application.

#### **Foliar**

PEST	USE RATES		DIRECTIONS		
	Fl Lb				
	oz/A	bifenthrin/A			
Armyworms	2.8 to	0.033 to	Apply the specified dosage in 5.0 to 50.0 gal/A of finished spray by air or 10.0 to 50.0		
Colorado Potato	8.5	0.100	gal/A of finished spray by ground.		
Beetle					
Corn earworm			For control of fire ants, apply this product to the soil (at planting) or as a foliar		
Cucumber			treatment by ground or air at rates of up to 0.1 lb bifenthrin/A at minimum 7-day		
Beetles			intervals up to a maximum of 4 applications.		
Cutworms					
European Corn			For control of whiteflies, apply foliar treatments of this product by ground or air at		
Borer			rates of up to 0.1 lb bifenthrin/A at minimum 7-day intervals up to a maximum of 4		
Flea Beetles			applications. Do not apply within 40 days of harvest.		
Leafminers					
Loopers					
Pepper Weevil					
Tomato					
Hornworm					
Tomato					
Pinworm					
Thrips					
Whitefly					
Banks Grass	6.8 to	0.08 to 0.10			
Mite	8.5				
Broad Mite					
Carmine Mite					
Fire Ants					
Lygus species					
Pacific Spider					
Mite					
Twospotted					
Spider Mite					

#### **Foliar Restrictions:**

- Do not make applications less than 7 days apart.
- Do not apply within 40 days of harvest.

#### PPI

PEST	USE RATES		
	Fl oz/A	Lb bifenthrin/A	
Garden Symphians	3.4 to 6.8	0.04 to 0.08	
Seed Corn Maggot			
Wireworms			

# **Spinach Restrictions:**

• Do not apply more than 0.4 pounds bifenthrin per acre per season including at-plant, foliar, PPI, and PRE applications of this and other bifenthrin-containing products.

### **SUCCULENT PEAS AND BEANS (Crop Subgroups 6A and 6B)**

Includes: Bean (*Phaseolus* spp.): Broadbean (succulent), Lima bean (green), Runner bean, Snap bean, Wax bean; Bean, (*Vigna* spp.): Asparagus bean, Blackeyed pea, Chinese longbean, Cowpea, Moth bean, Purple hull pea, Southern pea, Yardlong bean; Jackbean; Pea (*Pisum* spp.): Dwarf pea, Edible-pod pea, English pea, Garden pea, Green pea, Pigeon pea, Snow pea, Sugar snap pea; Soybean (immature seed); and Sword bean.

#### At-Plant

PEST	USE RATES			DIRECTIONS
	Fl	Fl oz/1,000	Lb	
	oz/A	lin ft	bifenthrin/A	
Army cutworm	3.4 to	0.20 to 0.39	0.04 to 0.08	Apply as a 5-to 7- inch band over the row on the soil surface, 5- to 7-inch
Armyworm	6.8			band (T-band) over an open furrow, or in-furrow with the seed.
species				
Cutworm				For control of Army cutworm, Armyworm species, Cutworm species, or
species				True armyworm, apply broadcast to the soil surface.
Grape colaspis				
Grubs				
Root maggot				
Seedcorn				
maggot				
True				
armyworm				
Wireworm				
Rootworm	6.8 to	0.39 to 0.49	0.08 to 0.10	
larvae	8.5			

#### **At-plant Restrictions:**

• Do not apply more than 0.1 lb bifenthrin/A per season as an at-plant application.

#### **Foliar**

PEST	USE RATES		DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Aster Flea Beetle	2.1 to	0.025 to 0.100	Apply in a minimum of 2.0 gal/A finished spray by air or in a minimum of 10.0
Leafhopper	8.5		gal/A with ground equipment.
Adult Sap Beetle	2.8 to	0.033 to 0.100	When applying by air, 1.0 to 2.0 qt emulsified oil may be substituted for 1.0 to
Alfalfa Caterpillar	8.5		2.0 qt water in the finished spray.
Aphids			Thorough coverage is essential to achieve control.
Armyworm, Beet			Make application at the onset of infestation reaching locally determined
Armyworm, Fall			economic threshold.
Armyworm, Southern			
Armyworm,			
Yellowstriped			
Bean Leaf Beetle			
Cloverworm			
Corn earworm			
Corn Rootworm Adult			
Cucumber Beetle			
Cutworms			
European Corn Borer			
Grasshoppers			
Japanese Beetle			
Loopers			
Pea Leaf Weevil			
Pea Weevil			

Plant Bug		
Stink Bugs		
Tarnished Plant Bug		
Thrips		
Webworms		
Western Bean		
Cutworm		
Whitefly		
Banks Grass Mite	6.8 to	0.08 to 0.10
Carmine Mite	8.5	
Lygus species		
Twospotted spider		
mite		

### **Foliar Restrictions:**

- Do not apply within 3 days of harvest.
- Do not make applications less than 3 days apart.

#### PPI & PRE

PEST	USE RATES		METHOD and DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Army cutworm Armyworm species Cutworm species Grape colaspis Grubs	6.8 to 8.5	0.08 to 0.10	PPI: This product can be tank mixed and applied with PPI herbicides. Incorporation of this product should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth. Apply in a minimum of 10.0 gal/A.  Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist
Root maggot True armyworm Wireworm (PPI	6.9+0	0.09 to 0.10	towards the end of the irrigation run.
only)	6.8 to 8.5	0.08 to 0.10	PRE: This product can be tank mixed and applied with PRE herbicides.  Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist towards the end of the irrigation run.

## Succulent Peas and Beans (Crop Subgroups 6A and 6B) Restrictions:

• Do not apply more than 0.2 pounds bifenthrin per acre per season including at-plant, PRE, PPI and foliar applications of this and other bifenthrin-containing products.

#### **TOBACCO**

#### **At-Transplant & Pre-Transplant**

PEST	USE RATES			DIRECTIONS
	FI	Fl oz/1,000	Lb	
	oz/A	lin ft	bifenthrin/A	
Armyworm	3.4 to	0.2 to 0.49	0.04 to 0.10	At-transplant water treatment application:
species	8.5			Apply 0.0625 to 0.1000 lb bifenthrin/A in a water treatment application
Cutworm				volume of 10.0 to 200 gal/A.
species				Pre-transplant soil applications: Use of suitable equipment to
Flea beetle				incorporate into top 4 in of the soil is required to control below-ground
larvae				pests.
Mole cricket				May be tank mixed with Command, Spartan, and other herbicides
Stalkborer				approved for tobacco use.
White grubs				
Wireworm				

#### **Pre-Transplant & At-Transplant Restrictions:**

Do not apply later than lay-by.

#### **Foliar**

PEST	USE RATES		DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Aphid spp.* Armyworm spp. Chinch Bugs Cutworm spp. Flea Beetle (Adults) Grasshoppers Green Bugs Japanese Beetles Stink Bugs Tarnished plant bugs Thrips Whiteflies	3.4 to 8.5	0.04 to 0.10	Apply 0.04 to 0.10 lb bifenthrin/A/foliar application up to, and including, lay-by in a minimum of 10.0 gal/A.  May be tank mixed with Command, Spartan and other herbicides approved for tobacco use.
Hornworm Tobacco Budworm	6.8 to 8.5	0.08 to 0.10	
Lygus species Spider mites	8.5	0.1	

<sup>\*</sup>See resistance statement under "Directions for Use" section.

#### **Foliar Restrictions:**

- Do not make more than 2 foliar applications per season.
- Do not apply later than layby.

#### **Tobacco Restrictions:**

• Do not apply more than 0.2 pounds bifenthrin per acre per season including at-plant, foliar, PRE, and PPI applications of this and other bifenthrin-containing products.

#### TREE NUTS

Including: African nut-tree; almond; almond, tropical; beechnut; Brazil nut; Brazilian pine; bunya; bur oak; butternut; Cajou nut; candlenut; cashew; chestnut; chinquapin; coconut; coquito nut; dika nut; ginkgo; Guiana chestnut; hazelnut (filbert); heartnut; hickory nut; Japanese horse-chestnut; macadamia nut; mongongo nut; monkey-pot; monkey puzzle nut; Okari nut; Pachira nut; peach palm nut; pecan; pequi; Pili nut; pine nut; pistachio; Sapucaia nut; walnut, black; walnut, English; yellowhorn; cultivars, varieties, and/or hybrids of these

#### **Foliar**

PEST	USE RATES		DIRECTIONS
	FI	Lb	
	oz/A	bifenthrin/A	
Black Pecan Aphid Codling Moth Filbert Worm Hickory Shuckworm Leaffooted Bugs Navel Orangeworm Oblique Banded Leafroller Peach Twig Borer Pecan Leaf Casebearer Pecan Nut Casebearer Pecan Phylloxera Plant Bugs Stink Bugs Walnut Aphid Yellow Pecan	4.3 to 17.1	0.05 to 0.20	Apply by ground or air equipment using sufficient water to obtain full coverage of foliage. Apply as a dilute (minimum of 200 gal /A of finished spray) or concentrate (minimum of 50.0 gal/A of finished spray) by ground or apply the specified amount in a minimum of 10.0 gal/A of finished spray by air.
Aphid	C 0 to	0.00 +- 0.30	
European Red Mite Pecan Weevil Spider Mite species	6.8 to 17.1	0.08 to 0.20	
Fire ants Walnut Husk Fly	8.5 to 17.1	0.1 to 0.2	

#### **Foliar Restrictions:**

- Do not make applications less than 15 days apart.
- Do not apply within 21 days of harvest for pecans and 7 days for all other registered tree nut crops.
- Do not graze livestock in treated orchards or cut treated cover crops for feed.

#### **Tree Nuts Restrictions:**

• Do not apply more than 0.5 pound bifenthrin (1 qt product) per acre per season including at-plant, PRE, PPI and foliar applications of this and other bifenthrin-containing products.

### **TUBEROUS AND CORM VEGETABLES (Crop Subgroup 1C)**

Including: Arracacha; Arrowroot; Artichoke (Chinese and Jerusalem); Canna, edible; Cassava (bitter and sweet); Chayote (root); Chufa; Dasheen (taro); Ginger; Leren; Potato; Potato (sweet); Tanier; Turmeric; Yam bean; Yam, true.

#### At-Plant

PEST	USE RATES		DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Grape colaspis	12.75 to	0.15 to 0.30	For the control of sweet potato flea beetle, white grubs, and wireworms, this
Rootworms	25.5		product may be applied as a soil-incorporated broadcast, directed bed spray or a T-
Sweet potato			band spray into the planting furrow.
flea beetle			
White grub			Apply this product at the rate of 0.15 to 0.30 lb bifenthrin (12.75 to 25.50 fl oz
Wireworms			product)/A in a minimum of 10.0 gal/A of spray.
At-Plant Restrictions:			

Do not apply more than 0.3 lb bifenthrin/A/season as an at-plant application.

### **Foliar**

PEST	PEST USE RATES		DIRECTIONS
	Fl	Lb	
	oz/A	bifenthrin/A	
Banded	2.8 to	0.033 to	Apply in a minimum of 3.0 gal/A of finished spray by air or in a minimum of 10.0 gal/A
cucumber	8.5	0.100	with ground equipment.
beetle			For the control of the click beetles (wireworms), cucumber beetles (rootworms), flea
Black flea beetle			beetles (adult life stages), May/June beetles (white grubs), and whitefringed beetles,
Corn wireworm			this product may be applied as a foliar spray.
Cucumber beetle			
Japanese beetle			
grubs			
May/June beetle			
Rootworms			
Southern potato			
wireworm			
Sugarcane beetle			
Sweetpotato flea			
beetle			
Sweetpotato			
weevil			
Tobacco			
wireworm			
White grub			
Whitefringed			
beetle			

#### **Foliar Restrictions:**

- Do not make more than 2 foliar applications per season.
- Do not make applications less than 21 days apart.
- Do not apply within 21 days of harvest.

#### Lay-By

PEST	USE RATES		DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Grape	12.75	0.15 to 0.30	This product may be applied as one or more soil directed and incorporated treatments at
colaspis	to		cultivation or lay-by for the control of wireworms and white grubs. Apply this product to
Rootworms	25.50		the drill area and incorporate by cultivation equipment set to throw soil towards the drill
White grub			area. Apply in a minimum of 10.0 gal/A of spray.
Wireworms			

#### PPI

PEST	PEST USE RATES		DIRECTIONS
	Fl oz/A	Lb	
		bifenthrin/A	
Grape colaspis Rootworms White Grub Wireworm	12.75 to 25.50	0.15 to 0.30	Apply this product to the transplant area and incorporate to planting depth. Apply this product in a minimum of 10.0 gal/A of spray. May be applied as a broadcast application or an incorporated band application.

#### **Tuberous and Corm Vegetables (Crop Subgroup 1C) Restrictions:**

• Do not apply more than 0.5 pounds bifenthrin per acre per season including at-plant, foliar, lay-by, PPI, and soil applications of this and other bifenthrin-containing products.

#### STORAGE AND DISPOSAL

**PESTICIDE STORAGE:** Keep out of reach of children and animals. Keep pesticide in original container. Store in a cool, dry place and avoid excess heat. Do not put concentrate or dilute into food or drink containers.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER HANDLING: Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org. If not recycled, then puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

[For packages up to 5 gallons: 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 1/4 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.]

[For packages greater than 5 gallons and less than 56 gallons: 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.]

[For packages greater than 56 gallons: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. For refillable containers: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling or reconditioning, if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.]

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

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

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

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

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

Asana® XL is a registered trademark of E.I. DuPont de Nemours and Company.

Danitol® is a registered trademark of Sumitomo Chemical Company, Ltd.

Declare and Mustang are trademarks and LFR is a registered trademark of FMC Corporation or an affiliate.

Karate® Is a registered trademark of Syngenta.

Helios, Holster, Sniper and Tombstone are registered trademarks of Loveland Products, Inc.



[Sample of LFR technology logo: