

# 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 the uses covered by the certified applicator's certification.



# Bifenture<sup>®</sup> EC

## AGRICULTURAL INSECTICIDE

BIFENTHRIN GROUP 3A INSECTICIDE

### Active Ingredient:

Bifenthrin* (2 methyl[1,1'-biphenyl]-3-yl) methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate .....	25.1%
Other Ingredients** .....	74.9%
<b>TOTAL</b> .....	<b>100.0%</b>

\*Cis isomers 97% minimum, trans isomers 3% maximum.

\*\*Contain xylene range aromatic solvents

This product contains 2 pounds active ingredient per gallon.

By Mt.

EPA Reg. No. 70506-57 EPA Est. No. 041876-IND-004



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Made in India  
UPL NA Inc. • PO Box 12219, Research Triangle Park,  
NC 27709 U.S.A. • 1-800-438-6071

# 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.)

See inside booklet for additional Precautionary Statements and complete Directions for Use.

### FIRST AID

**If swallowed** • Call a poison control center or doctor immediately for treatment advice. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give any liquid to the person. • 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.

**If inhaled** • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.

**If on skin or clothing** • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice.

### NOTE TO PHYSICIAN

This product is a pyrethroid. If large amounts have been ingested, the stomach and intestine should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided. Contains petroleum distillates. Vomiting may cause aspiration pneumonia.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR EMERGENCY MEDICAL ASSISTANCE, CALL THE ROCKY MOUNTAIN POISON DRUG SAFETY 1-866-673-6671.

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

## **PRECAUTIONARY STATEMENTS**

### **Hazards to Humans and Domestic Animals**

### **Warning**

May be fatal if swallowed. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eye-wear (goggles, face shield or safety glasses). Harmful if absorbed through skin or inhaled. Avoid breathing spray mist. Avoid contact with skin. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

#### **Personal Protective Equipment (PPE):**

**Handlers who may be exposed to the dilute through application or other tasks must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, Nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, or Viton  $\geq 14$  mils.
- Shoes plus socks

**Handlers who may be exposed to the concentrate through mixing, loading, application or other tasks must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, Nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, or Viton  $\geq 14$  mils.
- Shoes plus socks
- Protective eyewear

**Mixers and loaders supporting aerial applications to cotton must wear at a minimum:**

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves such as barrier laminate, Nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, or Viton  $\geq 14$  mils,
- Shoes plus socks

**Mixers, loaders, and applicators using mechanically pressurized handguns for applications to tuberous and corn vegetables must wear at a minimum:**

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves such as barrier laminate, Nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, or Viton  $\geq 14$  mils,
- Shoes plus socks

**Mixers, loaders, and applicators using mechanically pressurized handguns for applications to tobacco must wear at a minimum:**

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves such as barrier laminate, Nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, or Viton  $\geq 14$  mils,
- Shoes plus socks

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

### **USER SAFETY RECOMMENDATIONS**

Users should:

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

### **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 run-off 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. **Protect pollinating insects by following label directions intended to minimize drift and to reduce risk to these organisms.**

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.

## **Physical/Chemical Hazards**

Do not use or store near heat or open flame.

## **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.

## **RESISTANCE**

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

To delay insecticide resistance, take the following steps:

- Rotate the use of BIFENTURE EC or other Group 3A insecticides within a growing season, or among growing seasons, with different groups that control the same pest.
- 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.
- o Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
- o When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
- o Mixtures become less effective if resistance is already developing to one or both active ingredients, but they still may 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 that specific site and pest problems in your area.

For further information or to report suspected resistance, contact UPL at 1-800-438-6071.

## 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 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  $\geq 14$  mils, or neoprene rubber  $\geq 14$  mils, or Viton  $\geq 14$  mils.
- Shoes plus socks.

## STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store above 40°F.

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

**Container Disposal: Refillable container.** 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.

*(continued)*

## **STORAGE AND DISPOSAL *(continued)***

**Container Handling: Nonrefillable container. Do not reuse or refill this container.**

Clean container promptly after emptying.

*[For containers smaller than 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 3/4 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.

*[For containers larger than 5 gallons]* Triple rinse or pressure rinse as follows:

Triple rinse: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. 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: 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 flow begins to drip.

Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

## **Chemigation Use Directions**

Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation 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.

Use a minimum of 0.75 inch of water per acre for LEPA irrigation. Use 1 to 2 pints per acre of non-emulsified oils when used as the diluent.

The set up and calibration of chemigation equipment are important to achieve control of target insect pests. 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 advice on the suitability of the equipment set up for optimum control of the target insect pests.

A person knowledgeable of the chemigation system and responsible for its operations, 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 distribution is adversely affected.

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

Do not apply when wind speed favors drift beyond the area intended for treatment.

Apply BIFENTURE EC Agricultural Insecticide continuously for the duration of the water application. Dilute BIFENTURE EC Agricultural Insecticide in sufficient volume to ensure accurate application over the area to be treated. Use a minimum of 0.5 inch per acre of irrigation water for application by chemigation. No agitation is required if a suitable diluent is used. Conduct a diluent test to check that phase separation will not occur during dilution and application. If uniform dilution is not achieved during the entire period of application, undesirable residues or less than desirable control may occur.

## Rotation Crop Restrictions

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

## Tank-Mixes

Apply BIFENTHRE EC Agricultural Insecticide with other products registered for the same crops. Read and follow all applicable directions, restrictions, and precautions on the EPA-registered labels for other tank mix partners.

### **MANDATORY SPRAY DRIFT MANAGEMENT**

#### Aerial Applications:

- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to select nozzle and pressure that deliver medium or coarser droplets (ASABE S641).
- Do not apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- If the windspeed is 10 miles per hour or less, applicators must use 1/2 swath displacement upwind at the downwind edge of the field. When the windspeed is between 11 - 15 miles per hour, applicators must use 3/4 swath displacement upwind at the downwind edge of the field.
- Do not apply during temperature inversions.

#### Airblast Applications:

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

*(continued)*

## **MANDATORY SPRAY DRIFT MANAGEMENT *(continued)***

Ground Boom Applications:

- User must only apply with the nozzle height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to select nozzle and pressure that deliver medium or coarser droplets (ASABE S572).
- Do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

### **SPRAY DRIFT ADVISORIES**

**THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.**

**BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.**

### **IMPORTANCE OF DROPLET SIZE**

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

#### **Controlling Droplet Size – Ground Boom**

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

#### **Controlling Droplet Size – Aircraft**

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

#### **BOOM HEIGHT – Ground Boom**

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

### **RELEASE HEIGHT – Aircraft**

- Higher release heights increase the potential for spray drift.

### **SHIELDED SPRAYERS**

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

### **TEMPERATURE AND HUMIDITY**

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

### **TEMPERATURE INVERSIONS**

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

### **WIND**

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

### **NON-TARGET ORGANISM ADVISORY STATEMENT (Environmental Hazards):**

- This product is highly toxic to bees and other pollinating insects exposed to direct treatment or to residues in/on blooming crops or weeds. Protect pollinating insects by following label directions intended to minimize drift and reduce pesticide risk to these organisms.

### **Handheld Technology Applications:**

- Take precautions to minimize spray drift.

## **Buffer Zones**

### **VEGETATIVE FILTER STRIPS**

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

Only apply products containing (name of pyrethroid) onto fields where a maintained vegetative filter strip of at least 25 feet exists between the field edge and where a down gradient aquatic habitat exists. This minimum required width of 25 feet may be reduced or removed under the following conditions:

- For Western irrigated agriculture, a maintained vegetative filter strip of at least 10 feet wide is required. Western irrigated agriculture is defined as irrigated farmland in the following states: WA, OR, CA, ID, NV, UT, AZ, MT, WY, CO, NM, and TX (west of I-35).
  - o For Western irrigated agriculture, if a sediment control basin is present, a vegetative filter strip is not required.
- In all other areas, a vegetative filter strip with a minimum width of 25 feet is required, unless the following conditions are met. The vegetative filter strip requirement may be reduced from 25 feet to 15 feet if at least one of the following applies:
  - o The area of application is considered prime farmland (as defined in 7 CFR § 657.5).
  - o Conservation tillage is being implemented on the area of application. Conservation tillage is defined as any system that leaves at least 30% of the soil surface covered by residue after planting. Conservation tillage practices can include mulch-till, no-till, or strip-till.
  - o A functional terrace system is maintained on the area of application.
  - o Water and sediment control basins for the area of application are functional and maintained.
  - o The area of application is less than or equal to 10 acres.

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

#### **Buffer Zone for Ground Application (ground boom, overhead chemigation, or airblast)**

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

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

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

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

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

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

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

### **How to Report Bee Kills**

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

### **Instructions for Application**

The following Directions for Use tables provide, in some cases, rate ranges. Use the lower labeled rates when insect pressure is light to moderate. Use the higher labeled rates when insect populations are high, when treating mites and when climate is arid.

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 non-ULV aerial equipment) or 450 (using ULV aerial equipment) of coastal marshes or permanent streams that drain into coastal marshes.

## **INDEX TO CROPS LISTED ON THIS LABEL**

Artichokes

Beans and Peas (Dry)

Beans and Peas (Succulent)

Beets, Garden (see Root Crops)

Brassica

Bushberries

Caneberries

Canola, Crambe, Rapeseed

Christmas Trees

Cilantro, Coriander

Citrus

Conifer Seed Orchards (AL, AR, FL, GA, LA, MS, OK, SC, TN, TX, VA only)

Cotton

Field Corn (Grain and Silage), Popcorn, Field Corn Grown for Seed (At Planting Use)

Field Corn (Grain and Silage), Popcorn, Field Corn Grown for Seed (PRE & PPI)

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

Sweet Corn, Sweet Corn Grown for Seed (At Planting Use)

Sweet Corn, Sweet Corn Grown for Seed (Foliar Use)

Cucurbits

Fruiting Vegetables

Grapes

Hops

Leafy Brassica Greens (Crop Subgroup 5-B)

Lettuce, Head

Mayhaw

Okra

Peach Subgroup 12-12B (Peaches, Nectarines)

Peanut

Pome Fruit (Crop Group 10-11) (except Mayhaw) (Pears, Apples, Azarole, Crabapple, Loquat, Medlar, Quince, Tejocote)

Root Crops (except Sugarbeets)

Soybean

Spinach

Tobacco

Tomatoes, Tomatillos (see under Fruiting Vegetable instructions)

Tree Nuts

Tuberous and Corm Vegetables (Crop Subgroup 1-C)

Grass Forage, Fodder, and Hay Group and Grass Grown for Seed

Sod Farms

## ARTICHOKES

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Artichoke Plume Moth Cribrate Weevil	0.10 lb. a.i. (6.4 fl. oz. product)	Begin applications when pest population reaches damaging levels and repeat as necessary to maintain control.  Apply in water in a minimum of 75 gallons of spray/A by ground or in a minimum of 10 gallons/A by air.	5
Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		3
<p><b>RESTRICTIONS</b></p> <p>DO NOT make applications less than 15 days apart (Minimum re-treatment interval (RTI) is 15 days).</p> <p>DO NOT apply more than 0.5 lb. a.i. (32.0 fl. oz. product) per acre per year.</p> <p>DO NOT exceed (0.1 lb. a.i./A or 6.4 fl. oz. product/A) between bud formation and harvest of an individual fruit.</p> <p>DO NOT make more than 5 applications per year.</p>			

## SUCCULENT PEAS AND BEANS

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Pea ( <i>Pisum</i> spp.) Dwarf Pea Edible-pod Pea English Pea Garden Pea Green Pea Snow Pea Sugar Snap Pea Pigeon Pea Bean ( <i>Phaseolus</i> spp.): Broadbean (succulent) Lima Bean (green) Runner Bean Snap Bean Wax Bean Bean ( <i>Vigna</i> spp.): Asparagus Bean Blackeyed Pea Chinese Longbean Cowpeas Moth Bean Southern Pea Yardlong Bean Jackbean Soybean (immature seed) Sword Bean	Flea Beetle Aster Leafhopper Leafhoppers	0.025 - 0.10 lb. a.i. (1.6 - 6.4 fl. oz. product)	Apply in a minimum of 10 gallons/A by ground or in a minimum of 2 gallons/A by air. When applying by air, substitute 1 - 2 quarts of emulsified oil for 1 - 2 quarts water if desired.  For best control thorough coverage is necessary.	3
	Aphids Armyworms Beet Fall Southern Yellowstriped Beetles Bean Leaf Cucumber Japanese (Adult) Mexican Bean Sap Bugs Plant Bugs Stink Bugs Tarnished Plant Bugs Alfalfa Caterpillar Cloverworm European Corn Borer Cutworms Western Bean Cutworm (continued)	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)		



## SUCCULENT BEANS AND PEAS *(continued)*

### **RESTRICTIONS**

DO NOT apply more than 0.2 lb. a.i. (12.8 fl. oz. product) per acre per year.

DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.

DO NOT make more than 2 applications per year.

DO NOT make applications less than 3 days apart.

## DRIED BEANS AND PEAS

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Dried cultivars of: Bean (Lupinus) Bean (Phaseolus) Field Bean Kidney Bean Lima Bean (dry) Navy Bean Pinto Bean Tepary Bean Bean (Vigna) Adzuki Bean Blackeyed Pea Catjang Cowpea Crowder Pea Moth Bean Mung Bean Rice Bean Southern Pea Urd Bean Broad Bean (dry) Chickpea Guar Lablab Bean Lentil (continued)	Flea Beetle Aster Leafhopper Leafhoppers	0.025 - 0.10 lb. a.i. (1.6 - 6.4 fl. oz. product)	Apply in a minimum of 10 gallons/A by ground or a minimum of 2 gallons/A by air. When applying by air, substitute 1 - 2 quarts of emulsified oil for 1 - 2 quarts water if desired.  For best control thorough coverage is necessary.	14
	Alfalfa Caterpillar Aphids Armyworms Beet Fall Southern Yellowstriped Beetles Bean Leaf Cucumber Japanese (Adult) Mexican Bean Sap Bugs Plant Bugs Stink Bugs Tarnished Plant Bugs Cloverworm Corn Earworm Corn Rootworm (Adult) Cutworms European Corn Borer Grasshoppers (continued)	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)		

## DRIED BEANS AND PEAS *(continued)*

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Dried cultivars of: Bean (Lupinus) Bean (Phaseolus) Field Bean Kidney Bean Lima Bean (dry) Navy Bean Pinto Bean Tepary Bean Bean (Vigna) Adzuki Bean Blackeyed Pea Catjang Cowpea Crowder Pea Moth Bean Mung Bean Rice Bean Southern Pea Urd Bean Broad Bean (dry) Chickpea Guar Lablab Bean Lentil  <i>(continued)</i>	<i>(continued)</i> Imported Cabbageworm Leafminers Loopers Pea Leaf Weevil Pea Weevil Saltmarsh Caterpillar Thrips Tobacco Budworm Webworms Western Bean Cutworm Whitefly	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	Apply in a minimum of 10 gallons/A by ground or a minimum of 2 gallons/A by air. When applying by air, substitute 1 - 2 quarts of emulsified oil for 1 - 2 quarts water if desired.  For best control thorough coverage is necessary.	14
	Banks Grass Mite Carmine Mite Lygus spp. Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)		
	Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		

*(continued)*

## DRIED BEANS AND PEAS *(continued)*

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
<i>(continued)</i> Pea ( <i>Pisum</i> ) Field Pea Pigeon Pea	Flea Beetle Aster Leafhopper Leafhoppers	0.025 - 0.10 lb. a.i. (1.6 - 6.4 fl. oz. product)	Apply in a minimum of 10 gallons/A by ground or a minimum of 2 gallons/A by air. When applying by air, substitute 1 - 2 quarts of emulsified oil for 1 - 2 quarts water if desired.  For best control thorough coverage is necessary.	14
	Alfalfa Caterpillar Aphids Armyworms Beet Fall Southern Yellowstriped Beetles Bean Leaf Cucumber Japanese (Adult) Mexican Bean Sap Bugs Plant Bugs Stink Bugs Tarnished Plant Bugs Cloverworm Corn Earworm Corn Rootworm (Adult) Cutworms European Corn Borer Grasshoppers <i>(continued)</i>	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)		

## DRIED BEANS AND PEAS *(continued)*

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
<i>(continued)</i> Pea ( <i>Pisum</i> ) Field Pea Pigeon Pea	<i>(continued)</i> Imported Cabbageworm Leafminers Loopers Pea Leaf Weevil Pea Weevil Saltmarsh Caterpillar Thrips Tobacco Budworm Webworms Western Bean Cutworm Whitefly	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	Apply in a minimum of 10 gallons/A by ground or a minimum of 2 gallons/A by air. When applying by air, substitute 1 - 2 quarts of emulsified oil for 1 - 2 quarts water if desired.  For best control thorough coverage is necessary.	14
	Banks Grass Mite Carmine Mite Lygus spp. Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)		
	Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		

### RESTRICTIONS

- DO NOT apply more than 0.2 lb. a.i. (12.8 fl. oz. product) per acre per year to peas.
- DO NOT apply more than 0.3 lb. a.i. (19.2 fl. oz. product) per acre per year to beans.
- DO NOT make applications less than 7 days apart.
- DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.
- DO NOT make more than 2 applications to peas and 3 applications to beans per year.

## BRASSICA

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Head and Stem Brassica Vegetables including: Broccoli Brussels Sprouts Cabbage Cauliflower Cavalo Broccolo Chinese Broccoli (gai lon, white flowering broccoli) Chinese Cabbage (napa) Chinese Mustard Cabbage (gai choy) Kohlrabi	Aphids Armyworms Corn Earworm Crickets Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Ground Beetles Imported Cabbageworm Leafhoppers Loopers Saltmarsh Caterpillar Stink Bugs Thrips Tobacco Budworm Whitefly Wireworm (Adults)	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	Apply in water in a minimum of 10 gallons spray/A by ground or in a minimum of 2 gallons/A by air. Substitute 1 - 2 quarts of emulsi- fied oil for 1 - 2 quarts water if desired when applying by air. For best control thorough coverage is necessary.	7

*(continued)*

## BRASSICA (continued)

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Head and Stem Brassica Vegetables including: Broccoli Brussels Sprouts Cabbage Cauliflower Cavalo Broccolo Chinese Broccoli (gai lon, white flowering broccoli) Chinese Cabbage (napa) Chinese Mustard Cabbage (gai choy) Kohlrabi	Banks Grass Mite Carmine Mite Lygus spp. Pacific Spider Mite Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)	Apply in water in a minimum of 10 gallons spray/A by ground or in a minimum of 2 gallons/A by air. Substitute 1 - 2 quarts of emulsi- fied oil for 1 - 2 quarts water if desired when applying by air.  For best control thorough coverage is necessary.	7
	Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		
<p><b>RESTRICTIONS</b></p> <p>Do not apply more than 0.5 lb. a.i. (32 fl. oz. of product) per acre per year.</p> <p>DO NOT make more than 5 applications after bloom.</p> <p>DO NOT make applications less than 7 days apart.</p> <p>DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.</p>				

## BUSHBERRIES

Blueberry, highbush and lowbush, Currant, Elderberry, Gooseberry, Huckleberry

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Blueberry Maggot Fruitworms Plum Curculio Leafrollers Spanworm Leafhoppers Japanese Beetle Aphids	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment.  Thorough coverage is essential to achieve control.	1
Twospotted Spider Mite Carmine Mite Pacific Spider Mite Lygus spp.	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)		
<p><b>RESTRICTIONS</b></p> <p>DO NOT apply more than 0.5 lb. a.i. (32 fl. oz. of product) per acre per year.</p> <p>DO NOT make applications less than 7 days apart.</p> <p>DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.</p> <p>DO NOT make more than 5 applications per year.</p>			

## CANEBERRIES

Including Bingleberries, Blackberries, Dewberries, Loganberries, Lowberries,  
Marionberries, Olallieberries, Raspberries, Youngberries

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Leafrollers Orange Tortrix Root Weevils	0.05 - 0.10 lb. a.i. (3.2 - 6.4 fl. oz. product)	Apply in water in a minimum of 50 gallons/A by ground or in a minimum of 10 gallons/A by air. For best control thorough coverage of foliage is necessary.	3
Raspberry Crown Borer Spider Mites	0.10 lb. a.i. (6.4 fl. oz. product)	Make one pre-bloom application and if necessary one post-bloom application. For Crown Borer apply as a drench either post-harvest (fall) or pre-bloom (spring), using 0.1 lb. a.i./A in at least 200 gallons of water/A. Direct the spray at the crown of the plant. For best results, apply at higher water gallonages (up to 400 gal/A) or prior to a significant rainfall.	
Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		
<p><b>RESTRICTIONS</b></p> <p>DO NOT apply both pre-bloom foliar and pre-bloom drench applications.</p> <p>DO NOT apply more than 0.2 lb. a.i. (12.8 fl. oz. of product) per acre per year.</p> <p>DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.</p> <p>DO NOT make more than 2 applications per year.</p>			

## CANOLA, CRAMBE, RAPESEED

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids Armyworms Cutworms Diamondback Moth Flea Beetle Flea Hopper Grasshopper Loopers Other Lepidopterous Larvae Plant Bug Seedpod Weevil Stink Bugs Thrips Whitefly	0.033 - 0.04 lb. a.i. (2.1 - 2.6 fl. oz. product)	Apply in water in a minimum of 10 gallons/A by ground or in a minimum of 2 gallons/A by air. Substitute 1 - 2 quarts of emulsified oil for 1 - 2 quarts water if desired when applying by air.  For best control thorough coverage is necessary.	35
<p><b>RESTRICTIONS</b></p> <p>DO NOT apply more than 0.08 lb. a.i. (5.12 fl. oz. product) per acre per year.</p> <p>DO NOT make applications less than 14 days apart.</p> <p>DO NOT apply more than 0.04 lb. a.i./A (2.6 fl. oz./A) per application.</p> <p>DO NOT make more than 2 applications per year.</p>			

## CHRISTMAS TREES

PESTS CONTROLLED	RATE BIFENTHRE EC/ACRE	APPLICATION INSTRUCTIONS
Root Weevil Spruce Spider Mite Balsam Twig Aphid Balsam Woolly Adelgid Cinara Aphid	0.06 - 0.2 lb. a.i. (3.9 - 12.8 fl. oz. product)	Apply in water in a minimum of 20 gallons/A by ground, or in a minimum of 5 gallons/A by air.  Although this product is not expected to be phytotoxic to Christmas trees, it is recommended that application be made to a small representative group of plants to ensure that a particular variety is not unusually sensitive.
Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)	
<p><b>RESTRICTIONS</b></p> <p>DO NOT apply more than 2 times in a crop year.</p> <p>DO NOT apply more than 0.2 lb. a.i. (12.8 fl. oz. product) per acre per year.</p> <p>DO NOT apply through any type of irrigation system.</p> <p>DO NOT make applications less than 21 days apart.</p> <p>DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.</p> <p>DO NOT make more than 2 foliar applications of bifenthrin (all products) per year.</p>		

## CILANTRO, CORIANDER

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids Beet Armyworm Cabbage Looper Cutworms Flea Beetles Grasshoppers Leafminers Saltmarsh Caterpillar Spotted Cucumber Beetle Thrips Whitefly	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	For best control, thorough coverage is necessary. Apply as needed.  Apply in water in a minimum of 10 gallons of spray/A by ground or in a minimum of 2 gallons/A by air.	3
Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)		
Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		
<p><b>RESTRICTIONS</b></p> <p>DO NOT make applications less than 7 days apart.</p> <p>DO NOT apply more than 0.50 lb. a.i. (32.0 fl. oz. of product) per acre per year.</p> <p>DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.</p> <p>DO NOT make more than 5 applications per year.</p>			

## CITRUS

PESTS	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Blue Green Citrus Root Weevil <i>(Pachnaeus opalus)</i> Brown Leaf Notcher <i>(Epicaerus mexicanus)</i> Diaprepes Root Weevil <i>(Diaprepes abbreviatus)</i> Little Leaf Notcher <i>(Artipus floridanus)</i> Southern Blue Green Citrus Root Weevil <i>(Pachnaeus litus)</i>	0.25 - 0.50 lb. a.i. (16 - 32 fl. oz. product)	Apply by ground in a minimum of 40 gallons of dilute spray per acre. Make uniform application to bare soil beneath the tree from the trunk to the drip line of the tree. Use a higher spray volume to insure uniformity of coverage. Pre- and post-application irrigation may also aid in uniform coverage. Bifenture protects tree roots from root weevils by forming a barrier of pesticide through which they must burrow when the neonates fall from the tree after hatching. After application minimize disturbance of the soil beneath the trees to maintain this barrier.	1
Asian Cockroach <i>(Blattella asahinae)</i> Fire Ants <i>(Solenopsis spp.)</i>	0.1 - 0.25 lb. a.i. (6.4 - 16 fl. oz. product)	It is important to time applications correctly. Peak emergence of adult Diaprepes Weevil varies by citrus growing region and is also dramatically affected by environmental factors such as soil moisture. Typically, two peaks are observed for Diaprepes, first in spring and then in late summer or early fall. For Southern Blue-Green and Blue-Green Citrus Weevils and Fuller Rose Beetle, a single emergence peak in the spring is typical. Brown and Little Leaf Notchers typically have three emergence peaks in spring, summer and fall.	(continued)

(continued)

### CITRUS *(continued)*

PESTS	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Blue Green Citrus Root Weevil <i>(Pachnaeus opalus)</i> Brown Leaf Notcher <i>(Epicaerus mexicanus)</i> Diaprepes Root Weevil <i>(Diaprepes abbreviatus)</i> Little Leaf Notcher <i>(Artipus floridanus)</i> Southern Blue Green Citrus Root Weevil <i>(Pachnaeus litus)</i>	0.25 - 0.50 lb. a.i. (16 - 32 fl. oz. product)	<p>Since emergence varies seasonally and by location, observation of adults is the most accurate way to forecast timing of applications. Numbers of adults can be estimated by trapping during spring and summer during the active early morning and later afternoon periods. Egg laying occurs for 8 - 10 weeks following emergence from the soil, and larval invasion of the soil begins 2 - 3 weeks following adult emergence. It is critical to have the BIFENTURE EC soil barrier in place before the neonates drop.</p> <p>Use BIFENTURE EC in conjunction with other tools in an integrated pest management program for citrus Root Weevils. Good cultural practices, biological control of larvae and foliar control of adults are all important. Local university extension personnel can provide the most current information to protect citrus trees.</p> <p style="text-align: right;"><i>(continued)</i></p>	1
Asian Cockroach <i>(Blattella asahinae)</i> Fire Ants <i>(Solenopsis spp.)</i>	0.1 - 0.25 lb. a.i. (6.4 - 16 fl. oz. product)		

*(continued)*

### CITRUS *(continued)*

PESTS	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Blue Green Citrus Root Weevil <i>(Pachnaeus opalus)</i> Brown Leaf Notcher <i>(Epicaerus mexicanus)</i> Diaprepes Root Weevil <i>(Diaprepes abbreviatus)</i> Little Leaf Notcher <i>(Artipus floridanus)</i> Southern Blue Green Citrus Root Weevil <i>(Pachnaeus litus)</i>	0.25 - 0.50 lb. a.i. (16 - 32 fl. oz. product)	<i>(continued)</i>  <b>Additional Information:</b> Apply to individual citrus resets, when not in solid planted rows, using a hand-gun or shielded sprayer.  Note that although peak emergence of Diaprepes occurs in the spring, weather conditions can cause a minor emergence of this pest in the fall.  Use the highest labeled rate if the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence in the spring. This will provide the longest residual management of Diaprepes Root Weevil. Use the lower labeled rate if the citrus grove is in an area where weather conditions will promote more than one peak of pest emergence, and make a second application later in the year.	1
Asian Cockroach <i>(Blattella asahinae)</i> Fire Ants <i>(Solenopsis spp.)</i>	0.1 - 0.25 lb. a.i. (6.4 - 16 fl. oz. product)		

*(continued)*

## **CITRUS (continued)**

### **RESTRICTIONS**

DO NOT apply through irrigation systems.

DO NOT allow BIFENTURE EC to contact fruit or foliage.

DO NOT apply more than 0.50 lb. a.i. (32 fl. oz. of product) per acre per year.

DO NOT apply by air.

DO NOT apply more than 0.5 lb. a.i./A (32 fl. oz./A) per application and do not apply more than 0.25 lb. a.i./A (16 fl. oz./A) per application for control of Fire ants and Asian Cockroach.

DO NOT make more than 1 application per year.

Apply the specified dosage in a minimum of 40 gallons of finished spray per acre.

Ground application only.

## CONIFER SEED ORCHARDS

For use only in the states of Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, South Carolina, Tennessee, Texas, and Virginia

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS
Brown Marmorated Stink-bug Cone Worms Seed Bugs Seed Worms	0.1 - 0.2 lb. a.i. (6.4 - 12.8 fl. oz.)	Apply in water in a minimum of 100 - 500 gallons/A by ground. Apply in water in a minimum of 10 gallons/A or in refined vegetable oil in a minimum of 0.5 gallons/A by air. Begin application 7 days following peak pollen flight and repeat at 30 day intervals to a maximum of 0.6 lb. a.i./A per year. For best control thorough coverage is necessary.
<b>RESTRICTIONS</b> DO NOT make more than 6 applications per year, or apply more than 0.60 lb. a.i. (38.4 fl. oz. product) per acre per year. DO NOT apply more than 0.2 lb. a.i./A (12.8 fl. oz./A) per application (DO NOT make more than 3 applications per year). DO NOT make applications less than 30 days apart.		

## COTTON

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
European Corn Borer Soybean (Banded) Thrips Tobacco Thrips	0.02 - 0.10 lb. a.i. (1.3 - 6.4 fl. oz. product)	Apply BIFENTURE EC in water or refined soybean/ cottonseed oil.	14
Boll Weevil Bollworm Cabbage Looper Cotton Aphid Cotton Fleahopper Cotton Leafperforator Cutworms Fall Armyworm Plant Bugs Saltmarsh Caterpillar Southern Garden Leafhopper Stink Bugs Tobacco Budworm Whitefly Yellow Striped Armyworm	0.04 - 0.10 lb. a.i. (2.6 - 6.4 fl. oz. product)	Apply in water in a minimum of 5 gallons/A by ground or a minimum of 1 gallon/A by air. Substitute 1 quart of emul- sified oil for 1 quart water if desired when applying by air. <b>ULV Application:</b> Apply in refined vegetable oil in a mini- mum of 1 quart/A with aircraft calibrated to give adequate coverage. <b>Boll Weevil:</b> Apply BIFENTURE EC every 3 to 4 days until control is acceptable. <b>Mites and Aphids:</b> Apply when pests first appear. Repeat as necessary to maintain control. Use the higher labeled rates once a damaging threshold is established.	
Beet Armyworm Carmine Spider Mite Lygus spp. Pink Bollworm Twospotted Spider Mite	0.06 - 0.10 lb. a.i. (3.8 - 6.4 fl. oz. product)		

*(continued)*

## COTTON (continued)

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Kudzu Bug Brown Marmorated Stink-bug	0.10 lb. a.i. 0.2 (6.4 fl. oz. product)	Apply BIFENTURE EC in a minimum of 5 gallons/A of water by ground or 1 gallon/A by air. Do not apply more than 0.5 lb. a.i. (32 fl. oz. of product) per acre per year. Use an intensive scouting program for appropriate application timing. Repeat applications may be necessary for control. Do not graze livestock in treated areas or cut treated crops for feed.	14
<p><b>RESTRICTIONS</b></p> <p>Apply no more than 0.5 lb. a.i. (32 fl. oz. of product) per acre per year in all states except California. In California, apply no more than 0.3 lb. a.i. (19.2 fl. oz. of product) per acre per year.</p> <p>No more than 10 synthetic pyrethroid applications (of one product or combination of products, including Ambush®, Ammo®, Asana® XL, Baythroid®, Capture®, Danitol®, Karate®, and Mustang) may be made to a cotton crop in one growing season.</p> <p>DO NOT graze livestock in treated areas or cut treated crops for feed.</p> <p>For control of brown marmorated stinkbugs, DO NOT make more than 6 applications per year, or apply more than 38.4 fl. oz. product per acre per year.</p> <p>DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.</p> <p>DO NOT make more than 5 applications per year in all states except in California. For California, do not make more than 3 applications per year.</p> <p>Minimum re-treatment interval (RTI) is 3 days.</p> <p>DO NOT graze livestock in treated areas or cut treated crops for feed.</p>			

**FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED  
(AT PLANTING USE)**

<b>PESTS CONTROLLED</b>	<b>RATE BIFENTURE EC</b>	<b>APPLICATION INSTRUCTIONS</b>	<b>PHI (days)</b>
Corn Rootworm Larvae Northern Mexican Southern Western	0.0046 lb. a.i. (0.30 fl. oz. product) per 1,000 linear feet of row	Apply as a 5 to 7 inch T-band at planting over the open seed furrow. Position the spray nozzle behind the planter shoe, in front of the press wheel centered over the row. The table below describes the amount of BIFENTURE EC needed per acre. Apply in water in a minimum of 3 gallons/A.	30
Army Cutworm Cutworm Species Grubs Seed Corn Beetle Seed Corn Maggot True Armyworm or Armyworm Species Wireworm	0.0023 - 0.0046 lb. a.i. (0.15 - 0.30 fl. oz. product) per 1,000 linear feet of row	When using BIFENTURE EC with fertilizers, check to be sure all components are compatible. For mixture with water or fertilizer, use the following procedure.  Fill the spray tank approximately one-half full with water or liquid fertilizer; add the proper amount of BIFENTURE EC; then add the rest of the water or fertilizer. Sufficient agitation during mixing and application is required to ensure a uniform mixture.	
<p><b>RESTRICTIONS</b></p> <p>DO NOT graze livestock in treated area or cut treated crops for feed within 30 days of treatment.</p> <p>DO NOT apply more than 0.1 lb. a.i. (6.4 fl. oz. of product) per acre per year as an at plant application.</p> <p>DO NOT apply to soil where there is greater than 30% cover of crop residue remaining.</p>			

*(continued)*

**FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED (continued)**  
**(AT PLANTING USE)**

Row spacings	40 in.	38 in.	36 in.	30 in.
BIFENTURE EC (lb. a.i. per acre)	0.060	0.064	0.069	0.080
BIFENTURE EC (formulated product, ounces per acre)	3.9	4.1	4.4	5.12

**FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED**  
**Pre-Plant Incorporated (PPI) and Pre-Emergence (PRE)**

<b>PESTS CONTROLLED</b>	<b>RATE BIFENTURE EC/ACRE</b>	<b>APPLICATION INSTRUCTIONS</b>
Armyworm spp. Black Cutworm Seedcorn Maggot Stalkborer White Grub Wireworm	0.047 - 0.062 lb. a.i./A (3 - 4 fl. oz./A product) Pre-Plant Incorporated (PPI)	Incorporate BIFENTURE EC close to the expected depth of the seed, but no deeper than 3 inches. PPI: Use the 3 - 4 oz./A rate only. Apply alone or with PPI herbicides as a tank mix. PRE: Use the 2.56 oz./A rate when tank-mixing and applying with PRE herbicides.
Armyworm spp. Black Cutworm Stalkborer	0.040 lb. a.i./A (2.56 fl. oz./A product) Pre-emergence (PRE)	DO NOT apply more than 0.3 lb. a.i./A per year including, at-plant, PRE, PPI, and foliar applications. DO NOT apply within 30 days of harvest. DO NOT graze livestock in treated areas or cut treated crops for feed within 30 days of the last application. 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.

**FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED  
(FOLIAR USE)**

PESTS CONTROLLED		RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids Army Cutworm Beet Armyworm Cereal Leaf Beetle Chinch Bug Common Stalk Borer Corn Earworm Corn Rootworm (Adults) Cucumber Beetle (Adults) Cutworm Species European Corn Borer Fall Armyworm Flea Beetle Grasshoppers Greenbug Japanese Beetle (Adults)	Leafhoppers Sap Beetle Southern Armyworm Southern Corn Leaf Beetle Southwestern Corn Borer Stink Bugs Tarnished Plant Bug Thrips True Armyworm or Armyworm Species Webworms Western Bean Cutworm Yellowstriped Armyworm	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	Apply in water in a minimum of 10 gal- lons/A by ground or in a minimum of 2 - 5 gallons/A by air. For heavy infes- tations, use 5 gallons of finished spray per acre by aircraft. Substitute 1 - 2 quarts of emulsified oil for 1 - 2 quarts water if desired.  For best control thorough coverage is necessary.  <b>Ear-Attacking Pests:</b> Apply BIFENTURE EC just before silking. <b>Southwestern Corn Borer, European Corn Borer:</b> Apply at or shortly before egg hatch. <b>Other Insect Pests:</b> Apply when insects first appear. Repeat as needed. <b>Banks Grass Mites:</b> Apply when col- onies first form before leaf damage or discoloration and prior to movement above the bottom third of the plant.	30
Banks Grass Mite Carmine Mite	Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)	<i>(continued)</i>	
Brown Marmorated Stink-bug		0.10 lb. a.i. (6.4 fl. oz. product)		

*(continued)*

**FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED (*continued*)**  
(FOLIAR USE)

PESTS CONTROLLED		RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids Army Cutworm Beet Armyworm Cereal Leaf Beetle Chinch Bug Common Stalk Borer Corn Earworm Corn Rootworm (Adults) Cucumber Beetle (Adults) Cutworm Species European Corn Borer Fall Armyworm Flea Beetle Grasshoppers Greenbug Japanese Beetle (Adults)	Leafhoppers Sap Beetle Southern Armyworm Southern Corn Leaf Beetle Southwestern Corn Borer Stink Bugs Tarnished Plant Bug Thrips True Armyworm or Armyworm Species Webworms Western Bean Cutworm Yellowstriped Armyworm	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	<i>(continued)</i> <b>Twospotted Spider Mite and Carmine Mite:</b> Apply when colonies first form before leaf damage or discoloration and before wide-spread mite movement throughout the canopy. Use the higher labeled rates if heavier insect pressure is noted and corn is under heat or drought stress. Tank mixtures with dimethoate at 0.5 lb. a.i. per acre are effective under these conditions. <b>Mite Control in Texas, New Mexico, Oklahoma, and Arizona:</b> Apply in water in a minimum of 10 gallons/A ground or in a minimum of 5 gallons/A by air. Repeat applications as necessary to maintain control.	30
Banks Grass Mite Carmine Mite	Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)		
Brown Marmorated Stink-bug		0.10 lb. a.i. (6.4 fl. oz. product)		

*(continued)*

**FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED (*continued*)  
(FOLIAR USE)**

**RESTRICTIONS**

DO NOT graze livestock in treated areas or cut treated crops for feed within 30 days of the last application.

DO NOT apply by ultra low volume (ULV) application on corn.

DO NOT make aerial or ground applications to corn if heavy rainfall is imminent.

**For Mite Control in Texas, New Mexico, Oklahoma, and Arizona:**

DO NOT apply more than 0.3 lb. a.i. (19.2 fl. oz. of product) per acre per year including PRE & PPI, at plant plus foliar applications.

DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.

DO NOT apply more than 0.3 lb. a.i./A (19.2 fl. oz./A) per year including at-plant, PRE, PPI, and foliar applications.

DO NOT make more than 3 foliar applications per year.

**Brown Marmorated Stink-bug:**

DO NOT apply more than 0.3 lb. a.i. (19.2 fl. oz product) per acre per season, including all methods of application.

DO NOT apply within 30 days of harvest.

DO NOT graze livestock in treated areas or cut treated crops for feed within 30 days of the last application.

**SWEET CORN**  
**SWEET CORN GROWN FOR SEED**  
**(AT PLANTING USE)**

<b>PESTS CONTROLLED</b>	<b>RATE BIFENTURE EC</b>	<b>APPLICATION INSTRUCTIONS</b>	<b>PHI (days)</b>
Corn Rootworm, Larvae Mexican Northern Southern Western	0.0046 lb. a.i. (0.30 fl. oz. product) per 1,000 linear feet of row	Apply at planting over the open seed furrow. Position the spray nozzle behind the planter shoe, in front of the press wheel centered over the row. The table below describes the amount of BIFENTURE EC needed per acre. Apply in a minimum of 3 gallons of finished spray per acre.	30
Army Cutworm Cutworm Species Grubs Seed Corn Beetle Seed Corn Maggot True Armyworm or Armyworm Species Wireworm	0.0023 - 0.0046 lb. a.i. (0.15 - 0.30 fl. oz. product) per 1,000 linear feet of row	When using BIFENTURE EC with fertilizers, check to be sure all components are compatible. For mixture with water or fertilizer, use the following procedure. Fill the spray tank approximately one-half full with water or liquid fertilizer; add the proper amount of BIFENTURE EC; then add the rest of the water or fertilizer. Sufficient agitation during mixing and application is required to ensure a uniform mixture.	

**RESTRICTIONS**

DO NOT graze livestock in treated area or cut treated crops for feed within 30 days of treatment.

DO NOT apply more than 0.1 lb. a.i. (6.4 fl. oz. of product) per acre per year.

DO NOT apply more than 0.1 lb. a.i./A per year as an at-plant application.

DO NOT apply to soil where there is greater than 30% cover of crop residue remaining

Row spacings	40 in.	38 in.	36 in.	30 in.
BIFENTURE EC (lb. a.i. per acre)	0.060	0.064	0.069	0.080
BIFENTURE EC (formulated product, ounces per acre)	3.9	4.1	4.4	5.12

**SWEET CORN**  
**SWEET CORN GROWN FOR SEED**  
**(FOLIAR USE)**

PESTS CONTROLLED		RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids Army Cutworm Aster Leafhopper Beet Armyworm Cereal Leaf Beetle Chinch Bug Common Stalk Borer Corn Earworm Corn Rootworm Adults Corn Silkfly Cucumber Beetle Adults Cutworm Species European Corn Borer Fall Armyworm Flea Beetle Grasshoppers Greenbug	Japanese Beetle Adults Leafhoppers Sap Beetle Southern Armyworm Southern Corn Leaf Beetle Southwestern Corn Borer Stink Bugs Tarnished Plant Bug Thrips True Armyworm or Armyworm Species Webworms Western Bean Cutworm Yellowstriped Armyworm	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	Apply in water in a minimum of 10 gallons/A by ground or in a minimum of 2 gallons/A by air. For heavy infestations by aircraft, use 5 gallons of finished spray per acre. Substitute 1 - 2 quarts of emulsified oil for 1 - 2 quarts water if desired.  For best control, thorough coverage is necessary. <b>Ear-Attacking Pests:</b> Apply BIFENTURE EC just before silking. <b>Southwestern Corn Borer, European Corn Borer:</b> Apply twice, with the first application at or shortly before egg hatch. <b>Other Insect Pests:</b> Apply when insects first appear. Repeat as needed.	1
Banks Grass Mite Carmine Mite	Pacific Spider Mite Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)	<i>(continued)</i>	
Brown Marmorated Stink-bug		0.10 lb. a.i. (6.4 fl. oz. product)		

*(continued)*

**SWEET CORN**  
**SWEET CORN GROWN FOR SEED (*continued*)**  
**(FOLIAR USE)**

PESTS CONTROLLED		RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids Army Cutworm Aster Leafhopper Beet Armyworm Cereal Leaf Beetle Chinch Bug Common Stalk Borer Corn Earworm Corn Rootworm Adults Corn Silkfly Cucumber Beetle Adults Cutworm Species European Corn Borer Fall Armyworm Flea Beetle Grasshoppers Greenbug	Japanese Beetle Adults Leafhoppers Sap Beetle Southern Armyworm Southern Corn Leaf Beetle Southwestern Corn Borer Stink Bugs Tarnished Plant Bug Thrips True Armyworm or Armyworm Species Webworms Western Bean Cutworm Yellowstriped Armyworm	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	<i>(continued)</i> <b>Mite Control:</b> Apply when colonies first form before leaf damage or discoloration and prior to widespread movement throughout the canopy. For Banks Grass Mite, apply prior to movement above the bottom third of the plant. Use the higher labeled rates if heavier insect pressure is noted and corn is under heat or drought stress. Repeat applications as necessary.	1
Banks Grass Mite Carmine Mite	Pacific Spider Mite Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)		
Brown Marmorated Stink-bug		0.10 lb. a.i. (6.4 fl. oz. product)		

*(continued)*

**SWEET CORN**  
**SWEET CORN GROWN FOR SEED (*continued*)**  
**(FOLIAR USE)**

**RESTRICTIONS**

DO NOT apply more than 0.2 lb. a.i. (12.8 fl. oz. product) per acre per year.

DO NOT graze livestock in treated areas or cut treated crops for feed within 1 day of the last application.

DO NOT apply by ultra low volume (ULV) on corn.

DO NOT apply more than 0.1 lb. a.i./A (6.4 fl oz/A) per application.

DO NOT make more than 2 foliar applications per year.

**Brown Marmorated Stink-bug:**

DO NOT apply more than 0.2 lb. a.i. (12.8 fl. oz. product) per acre per year.

DO NOT graze livestock in treated acres or cut treated crops for feed within 1 day of the last application.

## CUCURBITS

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
<p>Chayote (fruit)            Chinese Waxgourd            (Chinese preserving melon)            Citron Melon            Cucumber            Gherkin            Gourd, edible            (includes hyloan, cucuzza), (<i>Luffa</i> spp.)            (includes hechima, Chinese okra),            (Momordica spp.) (includes balsam apple,            balsam pear, bitter melon,            Chinese cucumber)            Muskmelon            (hybrids and/or cultivars of <i>Cucumis melo</i>)            (includes true cantaloupe, cantaloupe,            casaba, crenshaw melon, golden pershaw            melon, honeydew melon, honey balls,            mango melon, Persian melon, pineapple            melon, Santa Claus melon, and snake            melon)            Pumpkin            (<i>Cucurbita</i> spp.)</p> <p style="text-align: right;"><i>(continued)</i></p>	<p>Aphids            Armyworms            Cabbage Looper            Corn Earworm            Cucumber Beetles            Cutworm            Grasshopper            Leafhoppers            Melonworm            Pickleworm            Plant Bug            Rindworm            Squash Bugs            Squash Vine Borer            Stink Bugs            Tobacco Budworm</p>	<p>0.04 - 0.10 lb. a.i.            (2.6 - 6.4 fl. oz. product)</p>	<p>Apply in water in a minimum of 20 gallons/A by ground or in a minimum of 5 gallons/A by air. Substitute 1 - 2 quarts of emulsified oil for 1 - 2 quarts water if desired.            For best control thorough coverage is necessary.</p>	<p>3</p>

*(continued)*

### CUCURBITS *(continued)*

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
<i>(continued)</i> Squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini) Squash, winter (includes butternut squash, calabaza, hubbard squash ( <i>C. mixta</i> ; <i>C. pepo</i> ), includes acorn squash, spaghetti squash) Watermelon (includes hybrids and/or varieties of <i>Citrullus</i> spp.)	Banks Grass Mite Carmine Mite Lygus spp. Twospotted Spider Mite Whitefly	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)	Apply in water in a minimum of 20 gallons/A by ground or in a minimum of 5 gallons/A by air. Substitute 1 - 2 quarts of emulsified oil for 1 - 2 quarts water if desired.  For best control thorough coverage is necessary.	3
	Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		

#### **RESTRICTIONS**

DO NOT apply more than 0.3 lb. a.i. (19.2 fl. oz. product) per acre per year.

DO NOT apply more than twice after bloom.

DO NOT make applications less than 7 days apart.

DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.

DO NOT make more than 3 applications per year and do not make more than 2 applications after bloom.

## FRUITING VEGETABLES

Eggplant, bell and non-bell pepper, pepino, groundcherry, tomato, tomatillo

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Eggplant Pepper (bell and non-bell) Pepino Groundcherry	Armyworms (including: Beet Armyworm, Fall Armyworm, Southern Yellowstriped Armyworm) Cabbage Looper Colorado Potato Beetle Corn Earworm Cucumber Beetle Cutworms European Corn Borer Flea Beetle Leafhoppers Leafminers Loopers Pepper Weevil Plant Bug Stink Bug Thrips Tomato Pinworm Tomato Hornworm Vegetable Leafminer Whitefly	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	Apply in at least 2 gallons finished spray per acre by air or at least 10 gallons per acre by ground. When application is made by air, 1 - 2 qts. emulsified oil may replace 1 - 2 qts. of water in the finished spray. For best control thorough cover- age is necessary.	7

*(continued)*

## FRUITING VEGETABLES *(continued)*

Eggplant, bell and non-bell pepper, pepino, groundcherry, tomato, tomatillo

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Eggplant Pepper (bell and non-bell) Pepino Groundcherry	Banks Grass Mite Broad Mite Carmine Mite Lygus spp. Pacific Spider Mite Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)	Apply in at least 2 gallons finished spray per acre by air or at least 10 gallons per acre by ground. When application is made by air, 1 - 2 qts. emulsified oil may replace 1 - 2 qts. of water in the finished spray.  For best control thorough coverage is necessary.	7
	Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		

### RESTRICTIONS

- DO NOT make applications less than 7 days apart.
- DO NOT apply more than 0.2 lb. ai (12.8 fl. oz. product) per acre per year.
- DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.
- DO NOT make more than 2 applications per year.

*(continued)*

## FRUITING VEGETABLES *(continued)*

Eggplant, bell and non-bell pepper, pepino, groundcherry, tomato, tomatillo

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Tomato Tomatillo	Aphids Armyworms (including: Beet Armyworm, Fall Armyworm, Southern Yellowstriped Armyworm) Bean Leaf Beetle Cabbageworm Carmine Mite Cloverworm Corn Earworm Corn Rootworm Cucumber Beetle Cutworms Diamondback Moth European Corn Borer Flea Beetle Fleahopper Grasshopper	Japanese Beetle (Adult) Leafhoppers Loopers Lygus spp. Melonworm Pea Weevil Pea Leaf Weevil Pickleworm Plant Bug Rindworm Salt Marsh Caterpillar Sap Beetle Seedpod Weevil Squash Bugs Stink Bug spp. Tobacco Budworm Tarnished Plant Bug Thrips Whitefly	Apply in at least 3 gallons finished spray/A by air or at least 15 gallons/A by ground.  For best control thor- ough coverage is necessary.	1
	Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)		
	Brown Marmorated Stink-bug	0.08 lb. a.i. (5.2 fl. oz. product)		

*(continued)*

## **FRUITING VEGETABLES *(continued)***

**Eggplant, bell and non-bell pepper, pepino, groundcherry, tomato, tomatillo**

### **RESTRICTIONS**

DO NOT make more than 4 applications per year.

DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.

DO NOT apply more than 0.4 lb. a.i./A (25.6 fl. oz./A) per year.

DO NOT make applications less than 10 days apart.

## GRAPES

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Cutworms Eastern Grape Lady Beetle ( <i>Scymnus</i> ) Grape Berry Moth Japanese Beetle (Adult) Leafhopper Variegated Leafhopper Western Grape Leafhopper	0.05 - 0.10 lb. a.i. (3.2 - 6.4 fl. oz. product)	Apply in a minimum of 25 gallons/A by ground or in a minimum of 10 gallons/A by air. Substitute 1-2 quarts of emulsified oil for 1 - 2 quarts water if desired. For best control thorough coverage is necessary. Use the higher labeled rate when insect pressure is moderate to severe.	30
Black Vine Weevil Glassywinged Sharpshooter Brown Marmorated Stink-bug Twospotted Spider Mite	0.10 lb. a.i. (6.4 fl. oz. product)		
<p><b>RESTRICTIONS</b></p> DO NOT apply more than 0.10 lb. a.i. (6.4 fl. oz. of product) per acre per year. DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application. DO NOT make more than 1 application per year.			

## HOPS

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids Armyworms Cutworms Leafrollers Loopers	0.06 - 0.10 lb. a.i. (3.8 - 6.4 fl. oz. product)	<p><b>By Ground:</b> Full coverage is necessary for best results. For early season, use 100 - 150 gallons of spray per acre. For late season, use 200 - 250 gallons of spray per acre.</p> <p><b>Root Weevil:</b> Direct the spray to the base of the plant. Spray 3 feet up the vine and the soil surface 1.5 to 2 feet around the plant.</p> <p><b>Twospotted Spider Mites, for late season control:</b> Apply at least 6.4 fl. oz. (0.10 lb. a.i.) per application in a minimum of 10 gallons per acre by air.</p>	14
Root Weevils	0.05 - 0.10 lb. a.i. (3.2 - 6.4 fl. oz. product)		
Brown Marmorated Stink-bug Twospotted Spider Mite	0.10 lb. a.i. (6.4 fl. oz. product)		
<p><b>RESTRICTIONS</b></p> <p>DO NOT apply more than 0.1 lb. a.i. (6.4 fl. oz. of product) per acre per application.</p> <p>DO NOT apply more than 0.3 lb. a.i. (19.2 fl. oz. of product) per acre per year.</p> <p>DO NOT make applications less than 21 days apart.</p> <p>DO NOT apply by ultra low volume (ULV) application to hops.</p> <p>DO NOT make more than 3 applications per year.</p>			

## LEAFY BRASSICAS Crop Subgroup 5-B

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Broccoli Raab Chinese Cabbage (bok choy) Collards Kale Mizuna Mustard Greens Mustard Spinach Rape Greens	Aphids Armyworms Corn Earworm Crickets Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Grasshoppers Ground Beetles Imported Cabbageworm Japanese Beetles (Adults) Leafhoppers Loopers Saltmarsh Caterpillar Stink Bugs Thrips Tobacco Budworm Whitefly Wireworm (Adults)	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	Apply in water in a minimum of 10 gallons/A by ground or in a minimum of 2 gallons/A by air. For best control thorough coverage of foliage is necessary. When applied by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray.	7

*(continued)*

## LEAFY BRASSICAS Crop Subgroup 5-B *(continued)*

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Broccoli Raab Chinese Cabbage (bok choy) Collards Kale Mizuna Mustard Greens Mustard Spinach Rape Greens	Banks Grass Mite Carmine Mite Lygus spp. Pacific Spider Mite Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)	Apply in water in a minimum of 10 gallons/A by ground or in a minimum of 2 gallons/A by air.  When applied by air, 1 - 2 quarts of emulsified oil may be substituted for 1 - 2 quarts of water in the finished spray.  For best control thorough coverage of foliage is necessary.	7
	Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		

### RESTRICTIONS

DO NOT make applications less than 7 days apart.

DO NOT apply more than 0.4 lb. a.i. (25.6 fl. oz. of product) per acre per year.

DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.

DO NOT make more than 4 applications per year.

## LETTUCE, HEAD

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids Armyworms Cabbage Maggot Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Grasshoppers Imported Cabbageworm Leafhoppers Loopers Salt Marsh Caterpillar Stink Bug spp. Thrips Tobacco Budworm Whitefly	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	Apply in water in a minimum of 15 gallons/A by ground or in 5 gallons/A by air. For air application, substitute 1 - 2 quarts of emulsified oil for 1 - 2 quarts water if desired. For best control thorough coverage is necessary.	7
Carmine Mite Lygus spp. Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)		
Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		

*(continued)*

## LETTUCE, HEAD *(continued)*

### RESTRICTIONS

DO NOT make applications less than 7 days apart.  
DO NOT apply more than 0.5 lb. a.i. (32 fl. oz. of product) per acre per year.  
DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.  
DO NOT make more than 5 applications per year.

## MAYHAW

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Plum Curculio	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)	Apply in at least 28 gallons per acre.	30
Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		

### RESTRICTIONS

DO NOT apply more than 0.2 lb. a.i. (12.8 fl. oz. of product) per acre per year.  
DO NOT apply more than once every 7 days.  
DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.  
DO NOT make more than 2 applications per year.

## OKRA

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids Armyworms Corn Earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Japanese Beetles (Adult) Leafminers Loopers Stink Bugs Thrips Whitefly	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	For best control, thorough coverage is necessary. Apply as needed.  Apply in water in a minimum of 10 gallons of spray/A by ground or in a minimum of 2 gallons/A by air.	7
Broad Mite Carmine Mite Lygus spp. Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)		
Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		
<p><b>RESTRICTIONS</b></p> <p>DO NOT make applications less than 7 days apart.</p> <p>DO NOT apply more than 0.20 lb. a.i. (12.8 fl. oz. of product) per acre per year.</p> <p>DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.</p> <p>DO NOT make more than 2 applications per year.</p>			

## PEACH Subgroup 12-12B

Peaches, Nectarines

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids Codling Moth Cutworms Green Fruitworm Leafhoppers Leafminers Leafrollers Lygus spp. Plant Bugs Plum Curculio San Jose Scale (Crawlers) Stink Bugs Tarnished Plant Bugs	0.08 - 0.2 lb. a.i. (5.12 - 12.8 fl. oz. product)	<p><b>By Ground:</b> Apply as a dilute (minimum of 200 gallons of finished spray per acre) or concentrate (minimum of 50 gallons of finished spray per acre) spray. For best control thorough coverage is necessary.</p> <p><b>By Air:</b> Apply in a minimum of 10 gallons per acre. Apply as necessary to maintain control and repeat applications at 30 day intervals.</p>	14
Yellow Spider Mite	0.06 - 0.2 lb. a.i. (3.8 - 12.8 fl. oz. product)		
European Red Mite Twospotted Spider Mite Brown Marmorated Stink-bug* (* not for use in CA)	0.08 - 0.2 lb. a.i. (5.12 - 12.8 fl. oz. product)		

*(continued)*

## PEACH Subgroup 12-12B *(continued)*

### **RESTRICTIONS**

DO NOT apply more than 0.2 lb. a.i./A (12.8 fl. oz./A) per application.

DO NOT make more than 3 applications per year.

DO NOT graze livestock in treated orchards or cut treated cover crops for feed.

DO NOT apply more than 0.5 lb. a.i./A (32 fl. oz./A) per year with no more than 0.45 lb. a.i./A (28.8 fl. oz./A) applied after petal fall.

DO NOT make applications less than 30 days apart.

## PEANUT

PESTS CONTROLLED		RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Beet Armyworm Corn Earworm Cutworm spp. 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	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	Apply in at least 10 gallons of water.	14
Aphids Spider Mites	Thrips Whitefly	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)		
Brown Marmorated Stink-bug		0.10 lb. a.i. (6.4 fl. oz. product)		
<b>RESTRICTIONS</b>				
DO NOT feed green immature plants and peanut hay to livestock.				
DO NOT apply more than 0.5 lb. a.i. (32 fl. oz. of product) per year.				
DO NOT apply more than once every 14 days.				
DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.				
DO NOT make more than 5 applications per year.				

## POME FRUIT Group 11-10 (except Mayhaw)

Pears, Apples, Azarole, Crabapple, Loquat, Medlar, Quince, Tejocote

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids Codling Moth Cutworms Green Fruitworm Leafhoppers Leafminers Leafrollers Lygus spp. Plant Bugs Plum Curculio San Jose Scale (Crawlers) Stink Bugs Tarnished Plant Bugs	0.04 - 0.2 lb. a.i. (2.6 - 12.8 fl. oz. product)	<p><b>By Ground:</b> Apply as a dilute (minimum of 200 gallons of finished spray per acre) or concentrate (minimum of 50 gallons of finished spray per acre) spray. For best control thorough coverage is necessary.</p> <p><b>By Air:</b> Apply in a minimum of 10 gallons per acre. Apply as necessary to maintain control and repeat applications at 30 day intervals.</p>	14
Yellow Spider Mite	0.06 - 0.2 lb. a.i. (3.8 - 12.8 fl. oz. product)		
European Red Mite Twospotted Spider Mite Brown Marmorated Stink-bug* * Not for use in CA	0.08 - 0.2 lb. a.i. (5.12 - 12.8 fl. oz. product)		

*(continued)*

## POME FRUIT Group 11-10 (except Mayhaw) *(continued)*

### RESTRICTIONS

DO NOT apply more than 0.2 lb. a.i./A (12.8 fl. oz./A) per application.

DO NOT apply more than 0.5 lb. a.i./A (32 fl. oz./A) per year with no more than 0.45 lb. a.i./A (28.8 fl. oz./A) applied after petal fall.

DO NOT make more than 3 applications per year.

DO NOT graze livestock in treated orchards or cut treated cover crops for feed.

DO NOT make applications less than 30 days apart.

## POMEGRANATE

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Katydid Navel Orangeworms Omnivorous Leafrollers Leaf Footed Plant Bugs Fuller Rose Beetles Aphids White Scales Ground Beetles Brown Marmorated Stink-Bugs* * Not for use in CA	0.1 - 0.2 lb. a.i. (6.4 - 12.8 fl. oz. product)	Apply foliar treatments in at least 50 gallons of finished spray per acre.	14

### RESTRICTIONS

DO NOT apply more than 0.2 lb. a.i./A (12.8 fl. oz./A) per application.

DO NOT apply more than 0.5 lb. a.i./A (32 fl. oz./A) per year.

DO NOT make more than 3 applications per year.

DO NOT make applications less than 14 days apart.

## ROOT CROPS (except Sugarbeets)

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)																								
Edible Burdock Carrot Celeriac Chervil Chicory Ginseng Horseradish Parsley Parsnip Radish Oriental Radish Rutabaga Salsify Black Salsify Spanish Salsify Skirret Turnip	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Aphids</td> <td style="width: 50%;">Green Cloverworm</td> </tr> <tr> <td>Beet Armyworm</td> <td>Hornworms</td> </tr> <tr> <td>Celery Leaf Tier</td> <td>Imported</td> </tr> <tr> <td>Corn Earworm</td> <td>Cabbageworm</td> </tr> <tr> <td>Cross-striped</td> <td>Loopers</td> </tr> <tr> <td>Cabbageworm</td> <td>Southern Armyworm</td> </tr> <tr> <td>Cutworms</td> <td>Spider Mites</td> </tr> <tr> <td>Diamondback Moth</td> <td>Tobacco Budworm</td> </tr> <tr> <td>European Corn Borer</td> <td>Velvetbean Caterpillar</td> </tr> <tr> <td>Fall Armyworm</td> <td>Whitefly</td> </tr> <tr> <td>Fire Ants</td> <td>Yellowstriped</td> </tr> <tr> <td>Flea Beetles</td> <td>Armyworm</td> </tr> </table>	Aphids	Green Cloverworm	Beet Armyworm	Hornworms	Celery Leaf Tier	Imported	Corn Earworm	Cabbageworm	Cross-striped	Loopers	Cabbageworm	Southern Armyworm	Cutworms	Spider Mites	Diamondback Moth	Tobacco Budworm	European Corn Borer	Velvetbean Caterpillar	Fall Armyworm	Whitefly	Fire Ants	Yellowstriped	Flea Beetles	Armyworm	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)	Apply in at least 25 gallons per acre by ground.	21
Aphids	Green Cloverworm																											
Beet Armyworm	Hornworms																											
Celery Leaf Tier	Imported																											
Corn Earworm	Cabbageworm																											
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	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Brown Marmorated</td> <td style="width: 50%;"></td> </tr> <tr> <td>Stink-bug</td> <td></td> </tr> </table>	Brown Marmorated		Stink-bug		0.10 lb. a.i. (6.4 fl. oz. product)																						
Brown Marmorated																												
Stink-bug																												

### RESTRICTIONS

DO NOT apply more than once every 7 days.

DO NOT apply more than 0.5 lb. a.i. (32 fl. oz. of product) per acre per year.

DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.

DO NOT make more than 5 applications per year.

*(continued)*

## ROOT CROPS (except Sugarbeets) *(continued)*

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Garden Beets	Aphids Fire Ants Flea Beetles Lepidopterous Larvae Spider Mites Whitefly	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)	Make foliar applications in a minimum of 25 gallons/A.	1
<b>RESTRICTIONS</b> DO NOT apply more than 0.40 lb. a.i. (25.6 fl. oz. of product) per acre per year. DO NOT apply more often than every 7 days.				

## SOYBEAN

PESTS CONTROLLED		RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Alfalfa Caterpillar Aphids Aster Leafhopper Bean Leaf Beetle Beet Armyworm* Cloverworm Corn Earworm Corn Rootworm Adult Cucumber Beetles Cutworms European Corn Borer Fall Armyworm Flea Beetle Grasshoppers Imported Cabbageworm Japanese Beetle Adult	Pea Leaf Weevil Pea Weevil Plant Bug Saltmarsh Caterpillar Sap Beetle Southern Armyworm Stink Bugs Tarnished Plant Bug Thrips Tobacco Budworm* Webworms Western Bean Cutworm Whitefly Yellowstriped Armyworm Soybean Aphid	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	Make foliar applications in at least 10 gallons per acre.  *Because pyrethroid resistance is common for Beet Armyworm and Tobacco Budworm, consult your local or state agricultural authorities to find out if resistant pest populations are in the treatment area. If so, refer to the resistance information in the <b>DIRECTIONS FOR USE</b> section of this label.	18
Lygus spp. Whitefly	Twospotted Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)		
Kudzu Bug	Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)		
<b>RESTRICTIONS</b>				
DO NOT apply more than once every 30 days.				
DO NOT apply more than 0.3 lb. a.i. (19.2 fl. oz. of product) per acre per year.				
DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.				
DO NOT make more than 3 applications per year.				

## SPINACH

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Armyworms                  Loopers Colorado Potato Beetle    Pepper Weevil Corn Earworm                Tomato Pinworm Cucumber Beetles          Tomato Hornworm Cutworms                      Thrips European Corn Borer        Whitefly Flea Beetles Leafminers	0.033 - 0.10 lb. a.i. (2.1 - 6.4 fl. oz. product)	Apply in water at 10 - 50 gallons/A by ground or 5 - 50 gallons/A by air. <b>Whiteflies:</b> Make up to 4 foliar treatments of BIFENTURE EC by ground or air at labeled rates of up to 6.4 fl. oz. (0.1 lb. a.i.) per acre. Repeat applications at 7 day intervals.	40
Broad Mite                    Lygus spp. Banks Grass Mite            Twospotted Spider Carmine Mite                Mite Fire Ants                      Pacific Spider Mite	0.08 - 0.10 lb. a.i. (5.12 - 6.4 fl. oz. product)	<b>Fire Ants:</b> Make up to 4 applications of BIFENTURE EC to the soil at planting or as a foliar treatment by ground or air at labeled rates of up to 6.4 fl. oz. (0.1 lb. a.i.) per acre.	
Brown Marmorated Stink-bug	0.10 lb. a.i. (6.4 fl. oz. product)	Repeat application at 7 day intervals.	
<b>RESTRICTIONS</b> DO NOT make applications less than 7 days apart. DO NOT apply more than 0.4 lb. a.i. (25.6 fl. oz. of product) per acre per year. DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application. DO NOT make more than 4 applications per year.			

## TOBACCO

PESTS CONTROLLED		RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS
Armyworm spp. Cutworm spp. Mole Crickets Stalkborers	Tobacco Flea Beetle (Larvae) White Grubs Wireworms	0.0625 - 0.10 lb. a.i. (4.0 - 6.4 fl. oz. product)	<b>Pre-Transplant Soil Application:</b> Apply labeled rate in a minimum of 10 gals/A. To control below-ground pests, use equipment which will incorporate the application into the top 4" of soil. <b>At-Transplant Water Treatment Application:</b> Apply labeled rate in a water treatment volume of 10 - 200 gals/A.
Aphid spp. Armyworm spp. Chinch Bugs Cucumber Beetles Flea Beetle (Adults) Stink Bugs Japanese Beetles Grasshoppers	Cutworm spp. Tarnished Plant Bugs Green Bugs Saltmarsh Caterpillar Thrips Tobacco Budworm* Tobacco Hornworm Whiteflies	0.04 - 0.10 lb. a.i. (2.56 - 6.4 fl. oz. product)	<b>Foliar Application:</b> Apply labeled rate in a minimum of 10 gals/A up to and including layby. May be tank mixed with other herbicides registered for tobacco use. <b>*See Resistance</b> section on this label for more information.
Brown Marmorated Stink-bug	Lygus spp. Spider Mites	0.10 lb. a.i. (6.4 fl. oz. product)	
<b>RESTRICTIONS</b>			
DO NOT make more than 2 foliar applications per year.			
DO NOT apply later than layby.			
DO NOT apply more than 0.2 lb. a.i. (12.8 fl. oz. of product) per acre per year.			

## TREE NUT CROPS

Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut),  
Hickory nut, Macadamia nut (bush nut), Pecan, Pistachio, Walnut (black and English)

PESTS CONTROLLED		RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
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 Aphid	0.05 - 0.20 lb. a.i. (3.2 - 12.8 fl. oz. product)	<b>Ground Application:</b> Apply as a dilute (minimum of 200 gallons per acre) or concentrate (minimum of 50 gallons per acre) spray in sufficient water to provide thorough coverage. <b>Air Application:</b> Apply in a minimum of 10 gallons of finished spray per acre. <b>Minimum Spray Intervals:</b> Apply BIFENTURE EC as needed to maintain control.	Pecans: 21 Others: 7
European Red Mite	Spider Mites	0.08 - 0.20 lb. a.i. (5.1 - 12.8 fl. oz. product)		
Fire Ants	Walnut Husk Fly	0.10 - 0.20 lb. a.i. (6.4 - 12.8 fl. oz. product)		
<b>RESTRICTIONS</b>				
DO NOT apply at intervals sooner than 15 days.				
DO NOT apply more than 0.20 lb. a.i. (12.8 fl. oz. product) per acre per application.				
DO NOT apply more than 0.50 lb. a.i. (32 fl. oz. of product) per acre per year.				
DO NOT graze livestock in treated orchards or cut treated cover crops for feed.				
DO NOT make more than 3 applications per year.				

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

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Potato Sweet Potato Arracacha Arrowroot Artichoke (Chinese and Jerusalem) Edible Canna Cassava (bitter and sweet) Chayote (root) Chufa Dasheen Ginger Leren Tanier Turmeric Yam Bean True Yam	Banded Cucumber Beetle Black Flea Beetle Corn Wireworm Cucumber Beetle Japanese Beetle Grubs June Beetle Rootworms Southern Potato Wireworm Sugarcane Beetle Sweetpotato Flea Beetle Sweetpotato Weevil Tobacco Wireworm Whitefringed Beetle White Grub Brown Marmorated Stink-bug Kudzu Bug	<p style="text-align: center;"><b>At-Plant</b>                      0.30 lb. a.i.                      (19.2 fl. oz. product)</p> <p style="text-align: center;"><b>At Cultivation or Lay-By</b>                      0.05 - 0.15 lb. a.i.                      (3.2 - 9.6 fl. oz. product)</p> <p style="text-align: center;"><b>Foliar</b>                      0.033 - 0.10 lb. a.i.                      (2.1 - 6.4 fl. oz. product)</p> <p style="text-align: center;">0.10 lb. a.i.                      (6.4 fl. oz. product)</p>	<p>BIFENTURE EC may be applied at planting time for the control of wireworms, rootworms and white grubs. Apply at the labeled rate of 0.3 lb. a.i./A as a soil incorporated broadcast, directed bed spray or T-band spray into the planting furrow.</p> <p>BIFENTURE EC may be applied as a cultivation or lay-by treatment for the control of wireworms, rootworms, and white grubs. Apply to the drill area and cover with soil utilizing cultivation equipment set to throw soil to the drill area. Apply as a banded spray over the row at a labeled rate of 0.05 to 0.15 lb. a.i./A (3.2 to 9.5 fl. oz. of product) in 10 gallons of spray per acre.</p> <p>BIFENTURE EC may be applied as a foliar spray for the control of the adult life stages of flea beetles, click beetles (wireworms), cucumber beetles (rootworms), white fringed beetles, and May/June beetles (white grubs). Apply at a labeled rate of 0.033 to 0.1 lb. a.i./A (2.1 to 6.4 fl. oz. of product) in 10 gallons of spray by ground or 3 gallons of spray by air.</p>	21
<p><b>RESTRICTIONS</b></p> <p>DO NOT make more than 2 foliar applications per year.</p> <p>DO NOT make applications less than 21 days apart.</p> <p>DO NOT apply more than 0.5 lb. a.i. (32 fl. oz. of product) per acre per year, including soil application.</p>				

## For use on Grass Forage, Fodder, and Hay Group and Grass Grown for Seed, Pasture and Rangeland

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

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

PESTS CONTROLLED		RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS
Alfalfa Caterpillar	Grass Mealybug	6.4 fl. oz./A (0.10 lb. a.i./A)	Apply as insects appear in sufficient volume of water to ensure thorough coverage of foliage. Use higher labeled rate for increased pest pressure or for increased residual pest control. Do not exceed maximum labeled rate. Apply in a minimum of 2 gallons of finished spray per acre by aerial equipment or 10 gallons per acre by ground equipment. Higher volumes of finished spray may improve insect control under higher temperatures, when foliage is dense and/or when insect pressure is high. Applications may be made up to 30 days prior to harvest for forage and hay. <sup>1</sup> Aphid control may be variable depending on species present and host-plant relationships.
Alfalfa Looper	Grasshoppers		
Alfalfa Weevil	Green Cloverworm		
Ant	Green Peach Aphid <sup>1</sup>		
Armyworm, fall	Hornworms		
Armyworm, southern	Hunting Bill Bug		
Armyworm, true	Meadow Spittlebug		
Armyworm, yellowstriped	Pea Aphid <sup>1</sup>		
Black Grass Bug	Plant Bug spp.		
Blue Alfalfa Aphid <sup>1</sup>	Potato Leafhopper		
Cereal Leaf Beetle	Range Caterpillar		
Chinch Bug	Spotted Alfalfa Aphid <sup>1</sup>		
Cricket	Stink Bugs		
Cutworms	Threecornered Alfalfa		
Egyptian Alfalfa Weevil (Larvae & Adult)	Hopper		
Flea Beetles	Velvetbean Caterpillar		
	Webworms		

*(continued)*

## For use on Grass Forage, Fodder, and Hay Group and Grass Grown for Seed, Pasture and Rangeland *(continued)*

### RESTRICTIONS

DO NOT apply more than 0.2 lb. a.i. per acre per year.

DO NOT make applications less than 14 days.

DO NOT apply more than 0.1 lb. a.i./A (6.4 fl. oz./A) per application.

DO NOT make more than 2 applications per year.

Applications may be made up to 30 days prior to harvest for forage and hay.

### SOD FARMS

**This product must be used in accordance with the directions for use on this label, or exemptions under FIFRA (FIFRA Section 18 exemptions, FIFRA 2(ee) Bulletins).**

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, do 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. Maximum of two applications. Do Not Use This Product on Golf Courses and Sod Farms in Nassau County or Suffolk County, New York.

PEST		RATE BIFENTURE EC/ACRE	RATE BIFENTURE EC FL. OZ./1,000 SQ. FT.
Armyworms <sup>1</sup> Cutworms <sup>1</sup>	Sod Webworm <sup>1</sup>	0.03 - 0.05 lb. a.i. (2.2 - 3.5 fl. oz. product)	0.05 - 0.08 fl. oz. product
Annual Bluegrass Weevil ( <i>Hyperodes</i> ) (Adult) <sup>2</sup> Banks Grass Mite <sup>6</sup> Billbugs (Adult) <sup>3</sup> Black Turfgrass Ataenius (Adult) <sup>4</sup> Crickets	Earwigs Fleas (Adult) Grasshoppers Mealybugs Mites <sup>6</sup>	0.05 - 0.11 lb. a.i. (3.5 - 7.0 fl. oz. product)	0.08 - 0.16 fl. oz. product

## SOD FARMS (continued)

PEST	RATE BIFENTURE EC/ACRE	RATE BIFENTURE EC FL. OZ./1,000 SQ. FT.
Ants Chinch Bugs <sup>5</sup> Fleas (Larvae) <sup>7</sup> Imported Fire Ants <sup>8</sup>	Japanese Beetle (Adult) Mole Cricket (Adult) <sup>9</sup> Mole Cricket (Nymph) <sup>10</sup> Ticks <sup>11</sup>	0.11 - 0.21 lb. a.i. (7.0 - 14.0 fl. oz. product)
		0.16 - 0.32 fl. oz. product

### Footnotes

<sup>1</sup> **Armyworms, Cutworms, and Sod Webworms:** For best control, delay watering (irrigation) or mowing for 24 hours after application. Higher labeled rates (up to 0.32 fl. oz. per 1,000 sq. ft.) may be required if grass is being maintained at a mowing height of greater than 1" in periods of high pest pressure.

<sup>2</sup> **Annual Bluegrass Weevil (*Hyperodes*) Adults:** Time applications to control adult weevils as they leave their overwintering sites and move into grass. Generally, this movement begins when Forsythia is in full bloom and finishes when flowering dogwood is in full bloom. Your State Cooperative Extension Services can give more specific information regarding the timing of applications.

<sup>3</sup> **Billbug Adults:** Apply when adult billbugs are first seen during April and May. Consult degree day models to optimize application timing, and consult your State Cooperative Extension Service for information specific to your region. In temperate regions, apply in spring to also provide control of over-wintered chinch bugs.

<sup>4</sup> **Black Turfgrass Ataenius Adults:** Apply during May and July to control the first and second generations, respectively. Time the May application to coincide with the full bloom stage of Vanhoutte spiraea (*Spiraea vanhouttei*) and horse chestnut (*Aesculus hippocastanum*). Time the July application to coincide with the blooming of Rose of Sharon (*Hibiscus syriacus*).

<sup>5</sup> **Chinch Bugs:** Irrigate the grass area before treatment to optimize penetration of the product to the base of grass plants and the thatch layer, where chinch bugs are found. If the thatch layer is excessive or if a relatively long mowing height is being maintained, use higher volume applications. Chinch Bugs are difficult to control in grasses and the higher labeled application rates may be necessary to control populations containing both nymphs and adults during the middle of the summer.

<sup>6</sup> **Mites:** For best control of eriophyid mites, apply in combination with the labeled application rate of a surfactant. A second application timed five to seven days after the first may be necessary for acceptable control.

(continued)

## SOD FARMS (continued)

- <sup>7</sup> **Flea Larvae:** These pests develop in the soil of shaded areas accessible to pets and other animals. When treating these areas, use a higher application volume to ensure the insecticide penetrates into the soil. Note: if the lawn area is being treated with this product at 0.10 fl. oz./1,000 sq. ft. for adult flea control, then the larval application rate may be achieved by increasing the application volume two- to four-fold.
- <sup>8</sup> **Imported Fire Ants:** For best control, combine broadcast applications (to control foraging workers and newly mated fly-in queens) with mound drenches (to control existing colonies). If the soil is not moist, irrigate before application or use a high volume application. For broadcast treatments, use 0.32 fl. oz./1,000 sq. ft. Treat mounds by diluting 0.05 fl. oz. BIFENTURE EC per gallon of water, and apply 1 to 2 gallons of finished spray per mound. Treat the mounds with enough force to break the apex and allow the solution to flow into the ant tunnels. Also treat a four-foot diameter circle around the mound. For best results, apply in cool weather (65 - 80°F) or in early morning or late evening hours.
- <sup>9</sup> **Mole Cricket Adults:** Adult mole crickets are difficult to control because preferred grass areas are continuously invaded during the early spring. Apply as late in the day as possible, and water in with up to 0.5 inches of water immediately following treatment. If the soil is not moist, irrigate before application to bring the crickets closer to the soil surface and maximize exposure to the insecticide. In grass areas that receive pressure from adult mole crickets, treat at peak egg hatch to ensure control of subsequent nymph populations (see footnote 10).
- <sup>10</sup> **Mole Cricket Nymphs:** In grass areas that receive intense pressure from adult mole crickets, treat immediately before peak egg hatch. Best control is achieved at that time because young nymphs are more susceptible to insecticides and they are located near the soil surface. To control larger, more damaging nymphs later in the year a higher labeled rate and more frequent applications may be necessary. Apply as late in the day as possible and water in with up to 0.5 inches of water immediately following treatment. If the soil is not moist, irrigate before application to bring the crickets closer to the soil surface and maximize exposure to the insecticide.
- <sup>11</sup> **Ticks (including ticks that may transmit Lyme Disease and Rocky Mountain Spotted Fever):** Do not make spot applications, but treat the entire area where exposure to ticks may occur. When treating areas with dense ground cover or heavy leaf litter, use higher spray volumes. Note that ticks may be reintroduced from surrounding areas or on host animals and retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Limit repeat application to no more than once per seven days, and only if there are signs of renewed activity. **Deer Ticks (*Ixodes* sp.):** This pest has a complex life-cycle that ranges over a two-year period and involves four life stages. Apply in the late fall and/or early spring to control adult ticks (usually located on brush or grass above the soil surface), and in mid to late spring to control larvae and nymphs (found in the soil and leaf litter). **American Dog Ticks:** These ticks congregate along paths or roadways where humans are likely to be encountered. Apply as necessary from mid-spring to early fall to control larvae, nymphs, and adults.

**IMPORTANT INFORMATION  
READ BEFORE USING PRODUCT**

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

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

To the extent consistent with applicable law, UPL NA 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, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or UPL NA Inc., and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, UPL NA INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

*(continued)*

**IMPORTANT INFORMATION  
READ BEFORE USING PRODUCT**

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY *(continued)***

To the extent consistent with applicable law, UPL NA Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UPL NA INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UPL NA INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

UPL NA Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of UPL NA Inc.

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2023444-E (0526)

ESL062524-14126-052826

# 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 the uses covered by the certified applicator's certification.



# Bifenture<sup>®</sup> EC

AGRICULTURAL INSECTICIDE

BIFENTHRIN GROUP 3A INSECTICIDE

### Active Ingredient:

Bifenthrin* (2 methyl[1,1'-biphenyl]-3-yl) methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate .....	25.1%
Other Ingredients** .....	74.9%
<b>TOTAL</b> .....	<b>100.0%</b>

\*Cis isomers 97% minimum, trans isomers 3% maximum.

\*\*Contain xylene range aromatic solvents

This product contains 2 pounds active ingredient per gallon.

## 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.)

EPA Reg. No. 70506-57

EPA Est. No. 041876-IND-004

Made in India

UPL NA Inc. • PO Box 12219, Research Triangle Park, NC 27709 U.S.A. • 1-800-438-6071

### FIRST AID

**If swallowed** • Call a poison control center or doctor immediately for treatment advice. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give any liquid to the person. • 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. **If inhaled** • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice. **If on skin or clothing** • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice.

**NOTE TO PHYSICIAN** - This product is a pyrethroid. If large amounts have been ingested, the stomach and intestine should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided. Contains petroleum distillates. Vomiting may cause aspiration pneumonia. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR EMERGENCY MEDICAL ASSISTANCE, CALL THE ROCKY MOUNTAIN POISON DRUG SAFETY 1-866-673-6671.

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

See attached booklet for additional Precautionary Statements and complete Directions for Use.

**PRECAUTIONARY STATEMENTS - Hazards to Humans and Domestic Animals - Warning** - May be fatal if swallowed. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield or safety glasses). Harmful if absorbed through skin or inhaled. Avoid breathing spray mist. Avoid contact with skin. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. **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.

### STORAGE AND DISPOSAL

- Do not contaminate water, food, or feed by storage or disposal. **Pesticide Storage:** Store above 40°F. **Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance. **Container Handling: Nonrefillable container. Do not reuse or refill this container.** Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 3/4 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Net Contents:  1 Gallon     2.5 Gallons\*     250 Gallons

\* unless alternate checked