



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

January 21, 2022

Karen Murphy  
Regulatory Manager  
Axion Ag Products, LLC  
1880 Fall River Drive, Suite 100  
Loveland, CO 80538

Subject: Notification per PRN 98-10 – Revise primary brand name to AX BIFEN FC  
Product Name: AX BIFEN LFR  
EPA Registration Number: 89167-97  
Application Date: September 24, 2021  
Decision Number: 580599

Dear Karen Murphy:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records. The primary brand name AX BIFEN FC has been added to the product record.

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

If you have any questions, you may contact please contact Elizabeth Andrews at 202-566-2467 or by email at [Andrews.Elizabeth@epa.gov](mailto:Andrews.Elizabeth@epa.gov).

Sincerely,

A handwritten signature in black ink that reads "J. Herrick".

Jacquelyn Herrick, Product Manager 03  
Invertebrate & Vertebrate Branch 1  
Registration Division (7505P)  
Office of Pesticide Programs

{Note to reviewer: [Text] in brackets denotes optional or explanatory language}

**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.

**BIFENTHRIN** | **GROUP 3A** | **INSECTICIDE**

**AX BIFEN ~~LFR~~ FC**

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

**ACTIVE INGREDIENT: (% by weight)**

Bifenthrin\* .....17.15%

**OTHER INGREDIENTS:** .....82.85%

**TOTAL** .....100.0%

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

This product contains 1.5 pounds active ingredient per gallon.

**NOTIFICATION**

89167-97

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

01/21/2022

**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 label booklet for Precautionary Statements and Directions for Use.

<b>FIRST AID</b>	
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact CHEMTREC at <b>1-800-424-9300</b> for emergency medical treatment information.	
<b>NOTE TO PHYSICIAN</b> - This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.	

**For Chemical Spill, Leak, Fire, Exposure or Medical Emergencies**

**Call CHEMTREC Day or Night**

**Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)**

EPA Reg. No.: 89167-97

EPA Est. No.:

Net Contents: \_\_\_\_\_ Gal

**Manufactured For:**

AXION AG PRODUCTS, LLC  
1880 FALL RIVER DRIVE, SUITE 100  
LOVELAND, CO 80538

041321RD092421

# PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

### WARNING

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

#### PERSONAL PROTECTIVE EQUIPMENT:

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

- Coveralls worn over short-sleeved shirt and short pants
- Waterproof or Chemical-resistant gloves made of Barrier Laminate, Butyl Rubber ≥ 14 mils, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥ 14 mils, Natural Rubber ≥ 14 mils, Polyethylene, Polyvinyl Chloride (PVC) ≥ 14 mils, Viton ≥ 14mils
- Chemical-resistant footwear

Mixers and Loaders must wear:

- Coveralls worn over short-sleeved shirt and short pants
- Waterproof or Chemical-resistant gloves made of Barrier Laminate, Butyl Rubber ≥ 14 mils, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥ 14 mils, Natural Rubber ≥ 14 mils, Polyethylene, Polyvinyl Chloride (PVC) ≥ 14 mils, Viton ≥ 14mils
- Chemical-resistant footwear
- Protective eyewear

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

#### USER SAFETY RECOMMENDATIONS

##### Users should:

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

#### ENVIRONMENTAL HAZARDS

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

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

Do not mix or allow coming in contact with oxidizing agent. Hazardous Chemical reaction may occur.

## DIRECTIONS FOR USE

#### RESTRICTED USE PESTICIDE

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

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

## AGRICULTURAL USE REQUIREMENTS

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

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls, Chemical-resistant gloves, such as Barrier Laminate or Nitrile Rubber or Neoprene Rubber or Viton, and Shoes plus socks.

## Non-Agricultural Use Requirements

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

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

## RESISTANCE MANAGEMENT

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

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

- Rotate the use of **AX BIFEN LFR FC** or other Group 3 insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
  - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide/acaricides use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance, contact Axion Ag Products at 844-425-8488. You can also contact your pesticide distributor or university extension specialist to report resistance

## MANDATORY SPRAY DRIFT MANAGEMENT

### Aerial Applications:

- Do not release spray at a height greater than 10 ft 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 ½ swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 miles per hour, applicators must use ¾ swath displacement upwind at the downwind edge of the field.
- Do not apply during temperature inversions.

### Airblast applications:

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

### Ground Boom Applications:

- User must only apply with the 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 miles per hour at the application site.
- Do not apply during temperature inversions.

## SPRAY DRIFT ADVISORIES

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

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

## IMPORTANCE OF DROPLET SIZE

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

### Controlling Droplet Size – Ground Boom

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

### Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturer's 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.

**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 bifenthrin 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 Directions for Use 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>

## GROUND APPLICATIONS

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

### Ultra Low Volume (ULV) Aerial Application

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

Applications made by mosquito control districts and other public health officials are exempt from this requirement

### 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).

### Maximum Allowable AX BIFFEN LFR FC Use Per Acre Per Season

Refer to the individual crop sections for maximum allowable AX BIFFEN LFR FC usage per acre per season. The maximum allowable use must include all registered use patterns including at-plant, soil applied and/or foliar applications for the 12 month period. The 12 month period is to begin upon the initial application to the acre.

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-bestmanagement-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).

## CHEMIGATION USE DIRECTIONS

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

For LEPA irrigation a minimum of 0.75 inch of water per acre is recommended. Where non-emulsified oils are used as the diluents, 1 to 2 pints per acre is recommended.

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

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. Failure to cease application during a mechanical stoppage may result in undesirable residues to adjacent areas.

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

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

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

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

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

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

#### **Application and Mixing Instructions**

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

#### **SHAKE WELL BEFORE USING**

- Agitate the **AX BIFEN LFR FC** spray solutions in nurse tanks prior to moving the solution to spray system.
- In New York State this product may not be applied within 100 feet (using ground equipment) to 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.
- **AX BIFEN LFR FC** can be applied in-furrow with the seed, as a T-band (band over the open furrow), as a broadcast application, as a band over the row, as a pre-emergent (PRE) application, as a post plant incorporated (PPI) application, as a foliar application (includes chemigation), or as a transplant-water drench during setting.
- Use rates in the individual crop sections for at-plant soil applications are listed as Fluid oz/1000 Linear ft based on 30-inch row spacings. For conversion to application rates applicable to other row spacings see the table below.
- The maximum application rate per acre per year (pounds active ingredient /acre/year) as listed under the use directions for each crop must not be exceeded. This yearly maximum includes at-plant plus foliar applications of **AX BIFEN LFR FC** and other products containing bifenthrin.
- For at-plant applications, **AX BIFEN LFR FC** can be mixed with commonly used liquid starter or pop-up fertilizers. Follow liquid fertilizer recommendations regarding seed safety and use guidelines. Conduct a preliminary jar test using the appropriate ratio of fertilizer and **AX BIFEN LFR FC**. Do not allow a tank mixture to set overnight, but if this occurs agitate tank mixture prior to application.



**AX BIFEN LFR FC Required Per Acre for Various Row Spacings**

Row Spacing	36"	30"	20"	15"	Twin Row 30" centers
Linear row ft/acre	14,520 ft	17,424 ft	26,136 ft	34,848 ft	34,848 ft
<b>Conversion</b>					
0.2 Fluid oz/1000 Linear ft =	2.9 fl oz/acre	3.5 fl oz/acre	5.2 fl oz/acre	7.0 fl oz/acre	7.0 fl oz/acre
0.24 Fluid oz/1000 Linear ft =	3.5 fl oz/acre	4.2 fl oz/acre	6.3 fl oz/acre	8.4 fl oz/acre	8.4 fl oz/acre
0.3 Fluid oz/1000 Linear ft =	4.4 fl oz/acre	5.2 fl oz/acre	7.8 fl oz/acre	10.5 fl oz/acre	10.5 fl oz/acre
0.39 Fluid oz/1000 Linear ft =	5.7 fl oz/acre	6.8 fl oz/acre	10.2 fl oz/acre	13.6 fl oz/acre	13.6 fl oz/acre
0.49 Fluid oz/1000 Linear ft =	7.1 fl oz/acre	8.5 fl oz/acre	12.8 fl oz/acre		
0.73 Fluid oz/1000 Linear ft =	10.6 fl oz/acre	12.7 fl oz/acre			
0.78 Fluid oz/1000 Linear ft =	11.3 fl oz/acre	13.6 fl oz/acre			
0.98 Fluid oz/1000 Linear ft =	14.2 fl oz/acre	17.1 fl oz/acre			
1.47 Fluid oz/1000 Linear ft =	21.3 fl oz/acre	25.6 fl oz/acre			

**Crop Rotation Restrictions**

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

**Tank Mixtures**

AX BIFEN LFR FC may be applied in tank mixtures with other products approved for use on registered crops. Observe all restrictions and precautions which appear on the labels of these products. To ensure successful applications, product compatibility tests should be conducted. **It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.**

**Maximum Allowable AX BIFEN LFR FC Use Per Acre Per Year**

Refer to the individual crop sections for maximum allowable AX BIFEN LFR FC usage per acre per year.

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

**ARTICHOKE**

**At-Plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Cribrate Weevil (Grubs)	8.5	0.49	0.1	Apply as a 5 to 7 inch band (T-band) over an open furrow, or in-furrow with the seed.

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Cribrate Weevil (Grubs)	PRE	PRE	AX BIFEN LFR FC can be tank mixed and applied with PRE herbicides.
	8.5	0.1	
	PPI	PPI	AX BIFEN LFR FC can be tank mixed and applied with PPI herbicides. Incorporation of AX BIFEN LFR FC should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth.
8.5	0.1		

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Artichoke Plume Moth Cribrate Weevil	8.5	0.1	Apply when pest population reaches damaging threshold and repeat as necessary to maintain

(Grubs)			control, but not more often than 15-day intervals.  <b>Application by ground:</b> Apply a full cover spray in a minimum of 75 gallons of finished spray per acre.  <b>Application by air:</b> Apply specified dosage in a minimum of 10 gallons of finished spray per acre.
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not apply within 5 days of harvest.</li> </ul>			

**Artichoke Restrictions:**

- Do not apply more than 0.5 lb ai/A per year including at-plant, PPI, PRE and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**BRASSICAS, Head and Stem (Crop Subgroup 5A)**

Broccoli, Chinese Broccoli (gai lan, white flowering broccoli), Brussels Sprouts, Cauliflower, Cavalo broccoli, Kohlrabi, Cabbage, Chinese Cabbage (napa), and Chinese Mustard Cabbage (gai choy)

**At-Plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Army cutworm Armyworm species Cabbage maggot Cutworm species Grubs Root aphids Root maggot Seedcorn maggot Wireworm	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	Apply as a 5-7 inch band (T-band) over the open seed or transplant furrow, or in-furrow with the seed or transplant.  Cutworm and armyworm treatments may be applied as broadcast treatments to the soil surface.  May be applied through transplant water at time of transplanting
<b>At-Plant Restrictions:</b>				
<ul style="list-style-type: none"> <li>Do not apply more than 0.1lb ai/A per year as an at-plant application</li> </ul>				

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Root Aphids Root Maggots Seed corn maggot Wireworms Garden Symphylans	PRE 3.4 – 6.8	PRE 0.04 – 0.08	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE labeled herbicides and fungicides for pre-transplant application.
	PPI 3.4 – 6.8	PPI 0.04 – 0.08	Incorporation of <b>AX BIFEN LFR FC</b> should not be incorporated any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting or transplant depth.

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids Armyworms Cutworms Corn Earworm Crickets Cucumber Beetles Diamondback Moth Flea Beetles Ground Beetles Imported Cabbageworm Leafhoppers Loopers Saltmarsh Caterpillar Stink Bugs (including brown marmorated stink bugs) Thrips Tobacco Budworm Whitefly Wireworm (adults) Black burrowing bug	2.8 – 8.5	0.033 – 0.1	Thorough coverage is necessary to attain acceptable control. Make application at the onset of infestation reaching locally determined economic thresholds.  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. When applying by air, 1 - 2 quarts of emulsified oil may be substituted for 1 - 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.
Banks Grass Mite Carmine Mite Lygus Species Pacific Spider Mite Twospotted Spider Mite	6.8 – 8.5	0.08 – 0.1	
<p><b>Foliar Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not make more than 5 applications after bloom.</li> <li>• Do not make applications less than 7 days apart.</li> <li>• Do not apply within 7 days of harvest.</li> </ul>			

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

- Do not apply more than 0.5 lb ai/A per year including At-Plant, PRE, PPI, and Foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**BUSHBERRIES (Crop Subgroup 13-07B)[\*]**

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

**At-Plant**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Wireworm White Grubs	8.5	0.1	Apply as a (T-band) over an open furrow immediately prior to transplanting, or in-furrow with the transplant in sufficient water for planting. May also be applied as a solid drench with transplant water at time of transplanting.

**PPI (Site Preparation) & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Wire worm White Grubs	PRE 3.4 – 8.5	PRE 0.04 – 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE herbicides
Blueberry Maggot (larvae)	PPI 8.5	PPI 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI herbicides, insecticides and fungicides where allowed. Incorporation of <b>AX BIFEN LFR FC</b> should not be

any deeper than the intended planting depth. Incorporation depth should be close to the intended planting depth.

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids Blueberry maggot Fruitworms Japanese beetle Leafhoppers Leaf rollers Lecanium scale (crawlers) Obliquebanded leaf roller Plum curculio Red banded leafroller Spanworm Variegated Leafroller Spotted Winged Drosophila	3.4 – 8.5	0.04 - 0.1	Apply in a minimum of 2 gallons 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. Make application at the onset of infestation reaching locally determined economic thresholds.
Banks Grass Mite Carmine Mite Lygus Species Pacific Spider Mite Twospotted Spider Mite	6.8 – 8.5	0.08 – 0.1	
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not make applications less than 7 days apart.</li> <li>Do not apply within 1 day of harvest.</li> </ul>			

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

- Do not apply more than 0.5 lb ai/A per year including at-plant, PRI, PRE and foliar application of **AX BIFEN LFR FC** and other bifenthrin containing products.

[\*][Not for Use in California]

**CANE BERRIES (Crop Subgroup 13-07A)[\*]**

Caneberries including Bingleberries, Blackberries, Dewberries, Loganberries, Lowberries, Marionberries, Olallieberries, Raspberries, and Youngberries.

**At-Plant**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Wireworm White Grubs	8.5	0.1	Apply as a 5 to 7 inch band (T-band) over an open furrow in sufficient water for planting, or in-furrow with the seed. May be applied through transplant water at time of transplanting.

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Wireworm White Grubs	PRE	PRE	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI pesticides labeled for site preparation. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended planting depth.
	8.5	0.1	
	PPI	PPI	
	8.5	0.1	

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Leafrollers Orange Tortrix Root Weevils Spotted Winged Drosophila	4.3 – 8.5	0.05 - 0.1	Apply by air or ground equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gallons per acre by air and 50 gallons per acre by ground).  One application may be made pre-bloom and a second application may be made post-bloom.
Raspberry Crown Borer Spider Mites	8.5	0.1	For Crown Borer, apply 0.1 lb ai/a post harvest (fall) or pre bloom (spring), as a drench application directed at the crown of plants in a minimum of 200 gallons water per acre. Greater efficacy is observed at higher gallons (up to 400 gallons/a) or in an application prior to a significant rainfall event. Do not make both pre bloom foliar and pre bloom drench applications.

**Foliar Restrictions:**

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

**Caneberries (Crop Subgroup 07A) Restrictions:**

- Do not exceed 0.2 lb ai/A per year including at-plant, PRI, PRE, and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**[\*][Not for Use in California]**

**CANOLA, CRAMBE, RAPESEED[\*]**

**At-Plant**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Army cutworm Armyworm species Cutworm species Grape colaspis Grubs Root aphids Seed corn beetle Seed corn maggot Stalkborer Sugarcane beetle True armyworm Wireworm	6.83	0.08	Apply as a 5 to 7 inch band (T-band) over an open furrow, or in-furrow with the seed.

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Army cutworm Armyworm species Cutworm species	PRE 6.83	PRE 0.08	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE herbicides
Grape colaspis Grubs Root aphids Seed corn beetle Seed corn maggot Stalkborer Sugarcane beetle True armyworm Wireworm (PPI only)	PPI 6.83	PPI 0.08	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI herbicides. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth.

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids Armyworms Cutworms Diamondback Moth Loopers Other Lepidopterous Larvae Flea Beetle Flea Hopper Grasshopper Plant Bug Stink Bugs (including Brown marmorated stink bugs) Seedpod Weevil Thrips Whitefly	2.8 - 3.4	0.033 - 0.04	Apply in a minimum of 2 gallons finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment.  When applying by air, 1 - 2 quarts of emulsified oil may be substituted for 1 - 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.
<b>Foliar Restrictions:</b> <ul style="list-style-type: none"> <li>Do not make applications less than 14 days apart.</li> <li>Do not apply within 35 day of harvest.</li> </ul>			

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

- Do not apply more than 0.08 lb ai/A per year including at-plant, PRI, PRE, and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

[\*][Not for Use in California]

**CILANTRO, CORIANDER**

**At-Plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Armyworm species Cutworm species Flea beetle larvae Wireworm	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band) in-furrow with the seed, or broadcast to the soil surface.
<b>At-plant Restrictions:</b> <ul style="list-style-type: none"> <li>Do not apply more than 0.1 lb ai/A per year as an at-plant application.</li> </ul>				

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Army cutworm Armyworm species Cutworm species	PRE 3.4 – 6.8	PRE 0.04 – 0.08	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE herbicides
Grape colaspis Grubs Root aphids Seed corn beetle Seed corn maggot Wireworms (PPI Only)	PPI 3.4 – 6.8	PPI 0.04 – 0.08	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI herbicides. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth.

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids Beet Armyworm Cabbage Looper Cutworm Flea beetle Grasshoppers Leafminer Saltmarsh caterpillar Spotted Cucumber beetle Thrips Whitefly	2.8 – 8.5	0.033 - 0.1	Apply using sufficient water to obtain uniform coverage.  Apply with ground equipment using a minimum of 10 gallons of finished spray per acre or a minimum of 2 gallons per acre by aircraft
Two Spotted Spider Mite	6.8 – 8.5	0.08 - 0.1	
<b>Foliar Restrictions:</b> <ul style="list-style-type: none"> <li>• Do not make applications less than 7 days apart.</li> <li>• Do not apply within 3 day of harvest.</li> </ul>			

**Cilantro and Coriander Restrictions:**

- Do not apply more than 0.5 lb ai/A per year including at-plant, PPI, PRE and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

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

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

**Use Directions:**

When applied as directed, **AX BIFEN LFR FC** will provide control of the following pests listed in the table below. Apply **AX BIFEN LFR FC** by ground equipment to bare soil beneath citrus trees. **AX BIFEN LFR FC** must be uniformly applied from the trunk to the drip line of tree. Apply in a minimum of 40 gallons of dilute spray per acre. Greater spray volume should insure greater uniformity of coverage. A pre- and post-application irrigation may aid in the uniformity of coverage as well.

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

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

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

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

Peak emergence of Diaprepes root weevil generally occurs in the spring. Depending on weather conditions, a minor emergence of Diaprepes

root weevil may also occur in the fall.

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

**BARE SOIL SURFACE UNDER DRIP LINE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Asian cockroach Fire ants ( <i>Solenopsis species</i> )	8.5 - 21.25	0.1 - 0.25	Apply the specified dosage in a minimum of 40 gallons of finished spray per acre.
Blue Green Citrus Root Weevil Brown Leaf Notcher Diaprepes Root Weevil Little Leaf Notcher Southern Blue Green Citrus Root Weevil	21.25- 42.5	0.25 - 0.5	
<b>Restrictions:</b> <ul style="list-style-type: none"> <li>Do not allow any application of <b>AX BIFEN LFR FC</b> to contact fruit or foliage.</li> <li>Do not apply more than a total of 42.5 fluid ounces of formulated product (0.5 pound active ingredient) per acre per year.</li> <li>Do not apply by air.</li> </ul>			

**CORN**

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

**Use Directions:**

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

**At-plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Corn Rootworm larvae (Northern, Southern and Western)	6.8 - 17.0	0.39 - 0.98	0.08 - 0.2	Apply as a 5 to 7 inch band (T-band) over an open furrow, or in-furrow with the seed.  For Army cutworm, Stalkborer, Cutworm species, True armyworm or Armyworm species, apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), in-furrow with the seed, or broadcast to the soil surface.
Army cutworm Armyworm species Cutworm species Grape colaspis Grubs Root aphids Seed corn beetle Seed corn maggot Stalkborer Sugarcane beetle True armyworm Wireworm	3.4 - 13.6	0.2 - 0.78	0.04 - 0.16	
<b>At-Plant Restrictions:</b> <ul style="list-style-type: none"> <li>Do not apply more than 0.2 pound active per acre per year as an at-plant application.</li> <li><b>For field corn</b> - Do not apply more than 0.3 lb ai/A per year including PPI, at-plant, pre-emergence, and foliar applications of other bifenthrin products.</li> <li><b>For sweet corn</b> - Do not apply more than 0.2 lb ai/A total per year including PPI, at-plant, pre-emergence, and foliar applications of other bifenthrin products.</li> </ul>				



**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Armyworm species Black Cutworm Grape colaspis Seed corn beetle Seed corn maggot White Grub Wireworm	PPI 4 – 5.3	PPI 0.047 – 0.062	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI herbicides. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth.
Armyworm species Black Cutworm Seed corn beetle Stalkborer	PRE 3.4	PRE 0.04	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE herbicides.

**Foliar**

PEST	USE RATES		APPLICATION INSTRUCTIONS
	Fluid oz/A	Pound ai/A	
Aphids Army Cutworm Beet Armyworm Cereal Leaf Beetle Chinch Bug Common Stalk Borer Corn Earworm <sup>1</sup> Corn Rootworm (Adult) Cucumber Beetle (Adults) Cutworm Species European Corn Borer <sup>2</sup> Fall Armyworm Flea Beetle Grasshoppers Greenbug Japanese Beetle (Adult) Sap Beetle Southern Armyworm Southern Corn Leaf Beetle Southwestern Corn Borer <sup>2</sup> Stinkbugs (including brown marmorated stink bugs) Tarnished Plant Bug True Armyworm or Armyworm Species Webworms Western Bean Cutworm Yellowstriped Armyworm	2.8 - 8.5	0.033-0.1	Apply in a minimum of 2-5 gallons of finished spray per acre by aircraft or in a minimum of 10 gallons per acre with ground equipment. To improve control by aircraft, use 5 gallons of finished spray per acre particularly when initial populations are heavier than normal.  When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray.  Thorough coverage is essential to achieve control.  <sup>1</sup> <b>To Control Ear-Attacking Pests:</b> Apply <b>AX BIFEN LFR FC</b> just before silking and repeat as necessary to maintain control.  <sup>2</sup> <b>Southwestern Corn Borer, European Corn Borer:</b> Make application for corn borer control with initial application at or shortly before egg hatch. <b>For Control Of Other Insect Pests:</b> Apply when pests first appear and repeat as necessary.  <sup>3</sup> <b>For Control of Mites:</b> Apply for Banks Grass Mite control when colonies first form prior to leaf damage or discoloration and before dispersal above the bottom third of the plant.  For <b>Twospotted Spider Mite</b> and <b>Carmine Mite</b> control, apply when colonies first form prior to leaf damage or discoloration and before widespread mite dispersal throughout the canopy. Higher rates will be necessary for heavier initial populations and corn under heat or drought stress. Field experience with dimethoate at 0.5 lb. active per acre in tank mixture has demonstrated good control under these conditions.
Banks Grass Mite <sup>3</sup> Carmine Mite <sup>3</sup> Twospotted Spider Mite <sup>3</sup>	6.8 - 8.5	0.08 – 0.1	<b>For Mite Control in Texas, New Mexico, Oklahoma, and Arizona:</b> Apply in a minimum of 5 gallons of finished spray per acre by aircraft or in a minimum of 10 gallons per acre with ground equipment.

**Foliar Restrictions:**

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

**Corn Restrictions:**

- For field corn
  - Do not apply more than 0.3 lb ai/A total per year including ppi, at-plant, pre-emergence, and foliar applications of **AX BIFEN LFR FC** and other bifenthrin products.
- For sweet corn
  - Do not apply more than 0.2 lb ai/A total per year including ppi, at-plant, pre-emergence, and foliar applications of **AX BIFEN LFR FC** and other bifenthrin products.

**COTTON[\*]****At-plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Cutworm spp White Grub Wireworm Grape colaspis Root Maggot Seedcorn Maggot	1.7 – 8.5	0.1 – 0.5	0.02 – 0.1	Apply as a 5 to 7 inch band (T-band) over an open furrow, or in-furrow with the seed.

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Cutworm species	PRE 3.4 – 8.5	PRE 0.04 – 0.1	
Cutworm species White Grub Wireworm Grape colaspis Root maggot Seedcorn maggot	PPI 3.4 – 8.5	PPI 0.04 – 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI herbicides. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth.

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
European Corn Borer Soybean (Banded) Thrips Tobacco Thrips	1.7 – 8.5	0.02 - 0.1	Apply as needed using sufficient water to obtain uniform coverage. Apply with ground equipment using a minimum of 5 gallons of finished spray per acre or a minimum of 1 gallon per acre by aircraft.  <b>AX BIFEN LFR FC</b> may be applied in water or refined vegetable oil (soybean/cottonseed).
Boll Weevil <sup>1</sup> Bollworm Cabbage Looper Cotton Aphid <sup>2</sup> Cotton Fleahopper Cotton Leafperforator Cutworms Fall Armyworm Plant Bugs Saltmarsh Caterpillar Southern Garden Leafhopper Stink Bugs (including brown marmorated stink bugs) Tobacco Budworm Whitefly Yellow Striped Armyworm	3.4 – 8.5	0.04 - 0.1	<b>Application in Water:</b> Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray.  <b>ULV Application:</b> Apply the specified rate of <b>AX BIFEN LFR FC</b> in refined vegetable oil in a minimum of 1 quart of finished spray per acre with aircraft calibrated to give adequate coverage.  <sup>1</sup> <b>Boll Weevil:</b> Apply <b>AX BIFEN LFR FC</b> at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels.  <sup>2</sup> <b>Aphids and Mites:</b> Apply when pests first appear. Repeat as necessary to maintain control. Higher rates will be required once a damaging threshold is established.
Beet Armyworm Carmine Spider Mite <sup>2</sup> Lygus species Pink Bollworm Twospotted Spider Mite <sup>2</sup>	5.1 – 8.5	0.06 - 0.1	
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>•Do not apply within 14 days of harvest.</li> <li>•Do not graze livestock in treated areas or cut treated crops for feed.</li> </ul>			

**Cotton Restrictions:**

- Do not apply more than 0.5 lb ai/A per year including at-plant, PRE, PPI, and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products in all states [except in California].
- [For California do not apply more than 0.3 pounds active per acre per year.]
- Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.

[\*][Not for Use in California]

**CUCURBITS (Crop Group 9)**

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

**At-plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Cucumber beetle larvae	6.8 – 8.5	0.39 – 0.49	0.08 – 0.1	Apply as a 5 to 7 inch band (T-band) over an open furrow, or in-furrow with the seed. May be applied through transplant water at time of transplanting.  To control cucumber beetle larvae, apply as a 5 to 7 inch band over an open furrow (T-band), or in-furrow with the seed.  To control wireworm, grubs, and flea beetle larvae, apply as a 5 to 7 inch band over an open furrow (T-band), or in-furrow with the seed or transplant.  To control army cutworm, cutworm species, true armyworm and armyworm species, apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), in-furrow with the seed, broadcast to the soil surface or banded over the row.
Army cutworm Armyworm species Cutworm species Flea beetle larvae Grubs True Armyworm Wireworm	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	
<b>At Plant Restrictions:</b>				
•Do not apply more than 0.1 lb ai/A per year as an at-plant application				

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Seed Corn Maggot Wireworms	PRE 6.8 – 8.5	PRE 0.08 – 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE pesticides. Apply through drip of drip tape. Apply when soil is moist towards the end of the irrigation run.  <b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI labeled pesticides. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth. Apply through drip or Drip tape. Apply when soil is moist towards the end of the irrigation run.
Army cutworm Armyworm species Cutworm species Flea beetle larvae Grubs True Armyworm	PPI 6.8 – 8.5	PPI 0.08 - 0.1	

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids Armyworms Cabbage Looper Corn Earworm Cucumber beetles Cutworms Grasshopper Leafhoppers Melonworm Pickleworm Plant Bug Rindworm Squash Bugs Squash Vine Borer Stink Bugs (including brown marmorated stink bugs) Tobacco Budworm	3.4 – 8.5	0.04 - 0.1	Thorough coverage is necessary to attain acceptable control. Make application at the onset of infestation reaching locally determined economic thresholds  Apply in a minimum of 5 gallons of finished spray per acre by air or in a minimum of 20 gallons per acre with ground equipment When applying by air 1 2 quarts of emulsified oil may be substituted for 1 – 2 quarts of water in the finished spray Thorough coverage is essential to achieve control
Carmine Mite Lygus species Mite Twospotted Spider Mite Whitefly			

**Foliar Restrictions:**

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

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

- Do not apply more than 0.3 lb ai/A per year including At-plant, PRE & PPI, and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

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

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; Pea (Pisicum), Field pea, Pigeon pea, purple hulled peas

**At-Plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Corn rootworm larvae	6.8 – 8.5	0.39 – 0.49	0.08 – 0.1	Apply as a 5 to 7 inch band over the row on the soil surface, 5 to 7 inch band (T-band) over an open furrow, or in-furrow with the seed. Apply broadcast to the soil surface for control of Army cutworm, Cutworm species, True armyworm, or Armyworm species.
Army cutworm	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	
Armyworm species				
Cutworm species				
Grape colaspis				
Grubs				
Root maggot				
True armyworm				
Wireworm				

**At- Plant Restrictions:**

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

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Army cutworm	PRE	PRE	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE herbicides. Apply in a minimum of 10 gallons per acre.
Armyworm species	6.8 – 8.5	0.08 – 0.1	
Cutworm species	PPI	PPI	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI herbicides. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth. Apply in a minimum of 10 gallons per acre.
Grape colaspis			
Grubs			
Root maggot			
True armyworm			
Wireworm (PPI only)	6.8 – 8.5	0.08 - 0.1	

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aster Leafhopper	2.1 – 8.5	0.025 - 0.1	Apply in a minimum of 2 gallons 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.
Flea Beetle			
Grasshoppers			
Leafhoppers			
Alfalfa Caterpillar	2.8 – 8.5	0.033 - 0.1	When applying by air 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray. Thorough coverage is essential to achieve control
Aphids			
Bean Leaf Beetle			
Beet Armyworm			
Cloverworm			
Corn Earworm			
Corn Rootworm (Adult)			
Cucumber Beetles			
Cutworms			
European Corn Borer			

Fall Armyworm Grasshoppers Imported cabbageworm Japanese beetle (Adult) Leafminer Loopers Mexican Bean Beetle Pea Leaf Weevil Pea Weevil Plant Bug Saltmarsh caterpillar Sap Beetle Southern Armyworm Stink Bugs (including brown marmorated stink bugs) Tarnished Plant Bug Thrips Twospotted Spider Mite Tobacco budworm Webworms Western Bean Cutworm Whitefly Yellowstriped Armyworm			
Banks Grass Mite Carmine Mite Lygus Species	6.8 - 8.5	0.08 – 0.1	
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not apply within 14 days of harvest</li> <li>Do not make applications less than 7 days apart</li> </ul>			

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

- Do not apply more than 0.2 lb ai/A to peas, or 0.3lb ai/A to beans per year including At-Plant, PRE & PPI, and Foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**EGGPLANT**

**At-Plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Army cutworm Armyworm species Cutworm species Grubs Root maggot True armyworm Wireworm	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), or in-furrow with the transplant or seed. Apply broadcast to the soil surface for control of Army Cutworm, Cutworm species, True Armyworm or Armyworm species.
<b>At-Plant Restrictions:</b>				
<ul style="list-style-type: none"> <li>Do not apply more than 0.1 lb ai/A per year as an at-plant application.</li> </ul>				

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Army cutworm Armyworm species Cutworm species	PRE 8.5	PRE 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE pesticides. Post Plant Soil Applied: Apply through drip or Drip tape. Apply when soil is moist towards the end of the irrigation run.
Grubs Root maggot True armyworm Wireworm	PPI 3.4 – 8.5	PPI 0.04 – 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI labeled pesticides. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth. Post Plant Soil Applied: Apply through drip or Drip tape. Apply when soil is moist towards the end of the irrigation run.

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Armyworms (Including Beet) Armyworm Fall Armyworm Southern Cabbage Looper Colorado Potato Beetle Corn Earworm Cucumber Beetle Cutworms European Corn Borer Flea Beetle Leafminers Loopers Pepper weevil Plant Bug Stink Bug (including brown marmorated stink bugs) Thrips Tomato Hornworm Tomato Pinworm Vegetable Leafminer Whitefly Yellowstriped Armyworm	2.8 – 8.5	0.033 - 0.1	Thorough coverage is necessary to attain acceptable control. Make application at the onset of infestation reaching locally determined economic thresholds.  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.  When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray.  Thorough coverage is essential to achieve control.
Banks Grass Mite Broad Mite Carmine Mite Lygus species Pacific Spider Mite Twospotted Spider Mite	6.8 - 8.5	0.08 – 0.1	

**Foliar Restrictions:**

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

**Eggplant Restrictions:**

- Do not apply more than 0.2 lb ai/A per year including At-Plant, PRE & PPI, and Foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**GRAPES[\*]**

**At-Plant**

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

**PPI (Site Preparation) & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Grape Phylloxera (suppression only) Vine Mealybug	PRE 8.5	PRE 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE pesticides. Post Plant Soil Applied: Apply through drip or Drop Tape. Apply when soil is moist towards the end of the irrigations run.
	PPI 8.5	PPI 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI pesticide labeled for site preparation. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth. Post Plant Soil Applied: Apply through drip or Drop Tape. Apply when soil is moist towards the end of the irrigations run.

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Cutworms Eastern Grape Leafhopper Grape Berry Moth Japanese Beetles (Adults) Lady Beetle ( <i>Scymnus</i> spp.) Variegated Leafhopper Western Grape Leafhopper Grapevine root borer	4.3 – 8.5	0.05 - 0.1	Thorough coverage is necessary to attain acceptable control. Make application at the onset of infestation reaching locally determined economic thresholds.  Apply in a minimum of 10 gallons of finished spray by air or in a minimum of 25 gallons of finished spray with ground equipment.  When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray.  When pest pressure is moderate to severe, use higher rate.
Black Vine Weevil Glassywinged Sharpshooter Twospotted Spider Mite	8.5	0.1	
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not apply within 30 days of harvest.</li> </ul>			

**Grape Restrictions:**

- Do not apply more than 0.10 lb ai per acre per year including at-plant, PPI, PRE and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**[\*][Not for Use in California]**



**HEAD LETTUCE**

**At-Plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Rootworm larvae	6.8 – 8.5	0.39 – 0.49	0.08 – 0.1	Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), or in-furrow with the seed. Apply broadcast to the soil surface for control of Army cutworm, Cutworm species, True armyworm, armyworm species, or bulb mites.
Army cutworm	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	
Armyworm species				
Bulb mites				
Cutworm species				
Grubs				
Lettuce root aphid				
Root maggot				
True armyworm				
Wireworm				

**At-Plant Restrictions:**

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

**PPI**

PEST	USE RATES	
	Fluid oz/A	Pound ai/A
Lettuce Root Aphid	6.8 – 8.5	0.08 – 0.1
Garden Symphians		

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids	2.8 – 8.5	0.033 – 0.1	Apply in water as necessary for insect control using a minimum of 15 gallons of finished spray per acre with ground equipment and 5 gallons per acre by air. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray.  Thorough coverage is essential to achieve control.
Armyworms			
Corn earworm			
Cucumber Beetles			
Cutworms			
Diamondback Moth			
Flea Beetles			
Imported Cabbageworm			
Leafhoppers			
Loopers			
Salt Marsh Caterpillar			
Stink Bug species (including brown marmorated stink bugs)			
Tobacco Budworm			
Whitefly			
Carmine Mite			
Lygus Species			
Twospotted Spider Mite			

**Foliar Restrictions:**

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

**Head Lettuce Restrictions:**

- Do not apply more than 0.5 lb ai per acre per year including at-plant, PPI, PRE and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

HOPS[\*]

At-Plant

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Grape colaspis Rootworms Sweet potato flea beetle White grub Wireworm	5.1 – 8.5	0.06 - 0.1	Apply in a T-band that ensures coverage of the entire furrow, immediately prior to planting, or at planting. May also be applied as a soil drench with transplant water at time of transplanting.  Apply in a minimum of 10 gallons per acre of spray.

Lay-By

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Grape colaspis Rootworms White grub Wireworms	5.1 – 8.5	0.06 - 0.1	Apply <b>AX BIFEN LFR FC</b> to the transplant area and incorporate with cultivation equipment set to throw soil towards the hill.  Apply in a minimum of 10 gallons per acre of spray.

PPI

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Grape colaspis Rootworms White grub Wireworms	PPI 5.1 – 8.5	PPI 0.06 - 0.1	Apply <b>AX BIFEN LFR FC</b> to the transplant area and incorporate to planting depth.  Apply in a minimum of 10 gallons per acre of spray.  May be applied as a broadcast application or an incorporated band application

PRE & Post Plant Soil Applied

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Grape colaspis Rootworms White grub Wireworms	PRE 5.1 – 8.5	PRE 0.06 - 0.1	Apply through drip or Drip tape. Apply when soil is moist towards the end of the irrigation run.

Foliar

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids Armyworms Cutworms Leafrollers Loopers	5.1 – 8.5	0.06 - 0.1	<b>Application by ground:</b> For best results, full coverage is essential. Early season recommend 100 – 150 gallons of spray per acre. Late season recommend 200 – 250 gallons of spray per acre.  <b>For Root Weevil control,</b> make a directed spray to the base of the plant. Spray up the vine 3 feet and the soil surface 1.5 to 2 feet on either side of the plant.
Root Weevils	4.3 – 8.5	0.05 - 0.1	
Twospotted spider mite	8.5	0.1	<b>Application by air for late season control of twospotted spider mites:</b> Apply no less than 6.4 oz (0.1 lb ai) per application in a minimum of 10 gallons per acre.

**Foliar Restrictions:**

- Do not exceed 0.1 lb ai per acre per foliar application.
- Do not make applications less than 21 days apart
- Do not apply within 14 days of harvest.

**Hops Restrictions:**

- Do not exceed 0.3 lb ai per acre per year including at-plant, PRE, PPI, Layby and foliar application of **AX BIFEN LFR FC** and other bifenthrin containing products.
- Use of ultra low volume (ULV) application on hops is prohibited.

[\*][Not for Use in California]

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

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

**At-Plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Rootworm larvae	6.8 – 8.5	0.39 – 0.49	0.08 – 0.1	Apply as a 5-7 inch band over the row on the soil surface, a 5-7 inch band over the open furrow (T-band), or in-furrow with the seed or transplant. May be applied through transplant water at time of transplanting. Apply broadcast over the soil surface for control of Army cutworm, Cutworm species, True armyworm or armyworm species.
Army cutworm	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	
Armyworm spp.				
Cutworm spp.				
Grubs				
Lettuce root aphid				
Root maggot				
True armyworm				
Wireworm				
<b>At- Plant Restrictions:</b> Do not apply more than 0.1 lb ai/A per year as an at-plant application.				

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Lettuce root aphid	PRE	PRE	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE pesticides. Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist towards the end of the irrigation run.
Root Maggots	3.4 – 6.8	0.04 - 0.08	
Wireworms	PPI	PPI	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI labeled pesticides. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth. Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist towards the end of irrigation run.
Army cutworm			
Armyworm species			
Cutworm species			
Flea beetle larvae			
Grubs			
True Armyworm	3.4 – 6.8	0.04 - 0.08	

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids	2.8 – 8.5	0.033 - 0.1	Thorough coverage is necessary to attain acceptable control. Make application at the onset of infestation reaching locally determined economic thresholds.
Armyworms			
Corn Earworm			
Cutworms			
Crickets			
Cucumber Beetles			
Diamondback Moth			
Flea Beetles			
Grasshoppers			
Ground Beetles			
Imported Cabbageworm			
Japanese Beetle (adult)			
Leafhoppers			
Loopers			
Saltmarsh Caterpillar			
Stink Bugs (including brown marmorated stink bugs)			
Tobacco Budworm			
Thrips			
Whitefly			
			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. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

Wireworm (adults)			
Banks Grass Mite Carmine Mite Lygus species Pacific Spider Mite Twospotted Spider Mite	6.8 - 8.5	0.08 - 0.1	
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not make applications less than 7 days apart</li> <li>Do not apply within 7 days of harvest.</li> </ul>			

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

- Do not apply more than 0.4 lb ai/A per year including at-plant, PPI, PRE, and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**LEAFY PETIOLE VEGETABLES (Crop Subgroup 4B)[\*]**

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

**At-Plant**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Lettuce Root Aphid Garden Symphlans Cutworm spp.	3.4 – 8.5	0.04 - 0.1	Apply as a 5 to 7 inch band (T-band) over an open furrow, or in-furrow with the seed. May be applied through transplant water at time of transplanting.

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Army cutworm Armyworm species Cutworm species	PRE 3.4 – 8.5	PRE 0.04 - 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with labeled PRE pesticides.
Flea beetle larvae Grubs True Armyworm Wireworm True armyworm	PPI 8.5	PPI 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI labeled pesticides.  Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth.

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids Armyworms Corn Earworm Crickets Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Ground Beetles Imported Cabbageworm Leafhoppers Loopers Saltmarsh Caterpillar Stink Bugs (including brown marmorated stink bugs)	3.4 – 8.5	0.04 - 0.1	Thorough coverage is necessary to attain acceptable control. Make application at the onset of infestation reaching locally determined economic thresholds. Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons of finished spray per acre with ground equipment. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

Thrips Tobacco Budworm Whitefly Wireworm (adults)			
Banks Grass Mite Carmine Mite Lygus species Pacific Spider Mite Twospotted Spider Mite	6.8 - 8.5	0.08 - 0.1	
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not make applications less than 7 days apart</li> <li>Do not apply within 7 days of harvest.</li> </ul>			

**Leafy Petiole Restrictions:**

- Do not apply more than 0.5 lb. active ingredient per acre per year including at-plant, PPI, PRE and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.
- [\*][Not for Use in California]

**MAYHAW[\*]**

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
White Grub Wireworm	PRE 8.5	PRE 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with labeled PRE pesticides.
	PPI 8.5	PPI 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI pesticides labeled for site preparation. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth.

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Plum Curculio	6.8 – 8.5	0.08 - 0.1	Apply foliar treatments in at least 28 gallons per acre
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Apply no more than once every 7 days.</li> <li>Do not apply within 30 days of harvest</li> </ul>			

**Mayhaw Restrictions:**

- Do not apply more than 0.2 lb ai per acre per year including at-plant, PRE, PPI and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

[\*][Not for Use in California]

**OKRA**

**At- Plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Armyworm Cutworm spp Flea beetle larvae Grape colaspis Root maggot Wireworm White Grub	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), in-furrow with the seed, or broadcast to the soil surface.
<b>At- Plant Restrictions:</b>				
<ul style="list-style-type: none"> <li>Do not apply more than 0.1 lb ai/A per year as an at-plant application</li> </ul>				

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Cutworm spp	PRE 3.4 – 8.5	PRE 0.04 – 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI or PRE herbicides. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth.
Cutworm species Flea beetle larvae[*] Wireworm White Grub Grape colaspis Root maggot	PPI 3.4 – 8.5	PPI 0.04 – 0.1	
<b>PPI &amp; PRE Restrictions:</b>			
[*][Not for Use in California]			

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids Armyworms Corn earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Japanese Beetle (Adult) Leafminers Loopers Stink bugs (including brown marmorated stink bugs) Thrips Whitefly	2.8 – 8.5	0.033 - 0.1	Apply as needed using sufficient water to obtain uniform coverage.
Broad Mite Carmine Mite Lygus species Twospotted Spider Mite			6.8 – 8.5
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not make applications less than 7 days apart.</li> <li>Do not apply within 7 days of harvest.</li> </ul>			

**Okra Restrictions:**

- Do not apply more than 0.2 lb ai/A per year including At-Plant, PRE & PPI, and Foliar applications of **AX BIFEN LFR FC** and other bifenthrin products.

**PEANUT[\*]**

**At- Plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Thrips, Leafhoppers, Aphids, and Wireworms	6.8 – 8.5	0.39 – 0.49	0.08 – 0.1	Apply as a 5 to 7 inch band (T-band) over an open furrow, or in-furrow with the seed.

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Beet Armyworm Corn Earworm Cutworm species Fall Armyworm Grasshoppers Green Cloverworm Leafhoppers Lesser Cornstalk borer Loopers Rednecked peanut worm Southern Armyworm Southern Corn Rootworm Stink Bugs (including brown marmorated stink bugs) Threecornered alfalfa hopper Velvetbean caterpillar Yellowstriped armyworm	2.8 – 8.5	0.033 - 0.1	Apply in a minimum of 10 gallons per acre with ground equipment or 2 gallon per acre by air craft
Aphids Spider Mites Thrips Whitefly	6.8 – 8.5	0.08 - 0.1	

**Foliar Restrictions:**

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

**Peanut Restrictions:**

- Do not apply more than 0.5 lb ai per acre per year including at-plant, PPI, PRE and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**[\*][Not for Use in California]**

**PEARS[\*]**

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids Codling Moth Cutworms Green Fruitworm Leafhoppers Leafminers Leafrollers	3.4 – 17.1	0.04 - 0.2	<p><b>Application 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 in sufficient water to provide thorough coverage.</p> <p><b>Application by air:</b> Apply the specified dosage in a minimum of 10 gallons per acre by air.</p>

Lygus species Plant Bugs Plum Curculio San Jose Scale (Crawlers) Stink Bugs (including brown marmorated stink bugs) Tarnished Plant Bugs			
Twospotted Spider mite Yellow Mite	5.1 – 17.1	0.06 - 0.2	
European Red Mite	6.8 – 17.1	0.08 - 0.2	
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not make applications less than 30 days apart.</li> <li>Apply up to 14 days prior to harvest.</li> <li>Do not graze livestock in treated orchards or cut treated cover crops for feed</li> </ul>			

**Pear Restrictions:**

- Do not apply more than 0.5 pound active per acre per year including at-plant, PRE, PPI and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products with no more than 0.45 pound active per acre applied after petal fall.

[\*][Not for Use in California]

**PEPPERS (BELL and NON-BELL) & PEPINO**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Army Cutworm Armyworm species Cutworm species Flea beetle larvae Grubs Pepper maggot Root aphid Root maggot Stalk borer True armyworm Wireworm	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), or in-furrow with the transplant or seed. May be applied through transplant water at time of transplanting. Apply broadcast over the soil surface for control of Army cutworm, Cutworm species, True armyworm, Armyworm species, or Stalk borer
<b>At Plant Restrictions:</b>				
<ul style="list-style-type: none"> <li>Do not apply more than 0.1 lb ai/A per year as an at-plant application</li> </ul>				

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Army cutworm Armyworm species Cutworm species Flea beetle larvae Grubs True Armyworm Wireworm	PRE 8.5	PRE 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE pesticides Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist towards the end of the irrigation run.
	PPI 3.4 – 8.5	PPI 0.04 – 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI labeled pesticides. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth. Post Plant Soil Applied: Apply through drip or drip tape. Apply when soil is moist towards the end of the irrigation run.



**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Armyworms (Including Beet) Armyworm Fall Armyworm Southern Cabbage Looper Colorado Potato Beetle Corn Earworm Cucumber Beetle Cutworms European Corn Borer Flea Beetle Leafminers Loopers Pepper weevil Plant Bug Stink Bug (including brown marmorated stink bugs) Thrips Tomato Hornworm Tomato Pinworm Vegetable Leafminer Whitefly Yellowstriped Armyworm	2.8 – 8.5	0.033 - 0.1	Thorough coverage is necessary to attain acceptable control. Make application at the onset of infestation reaching locally determined economic thresholds.  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.  When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.
Broad Mite Carmine Mite Lygus species Pacific Spider Mite[*] Twospotted Spider Mite	6.8 – 8.5	0.08 - 0.1	
<p><b>Foliar Restrictions:</b></p> <ul style="list-style-type: none"> <li>Do not make applications less than 7 days apart.</li> <li>Do not apply within 7 days of harvest.</li> </ul> <p><b>[*][Not for Use in California]</b></p>			

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

- Do not apply more than 0.2 lb ai/A per year including at-plant, PPI, PRE and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**ROOT CROPS (Except Sugar Beets and Garden Beets) (Crop Subgroup 1B)[\*]**

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

**At-Plant**

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

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Crown and Root Aphids Flea Beetles Cutworms	PRE 8.5	PRE 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE pesticides
Seedcorn and Root Maggots Wireworms	PPI 8.5	PPI 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI labeled herbicides. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids Beet Armyworm Celery Leaf Tier Corn Earworm Cross Striped Cabbageworm Cutworms Diamondback Moth European Corn Borer Fall Armyworm Fire Ants Flea Beetles Green Cloverworm Hornworms Imported Cabbageworm Loopers Southern Armyworm Spider Mites Tobacco Budworm Velvetbean Caterpillar Whitefly Yellowstriped Armyworm	6.8 – 8.5	0.08 - 0.1	Thorough coverage is necessary to attain acceptable control. Make application at the onset of infestation reaching locally determined economic thresholds.  Apply foliar treatments in at least 25 gallons per acre.
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not make applications less than 7 days apart.</li> <li>Do not apply within 21 days of harvest.</li> </ul>			

**Root Crops Restrictions:**

- Do not apply more than 0.5 lb ai per acre per year including at-plant, PRE, PPI and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

[\*][Not for Use in California]

**GARDEN BEETS[\*]**

**At-Plant**

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

**PPI & PRE**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Crown and Root Aphids Flea Beetles Cutworms Seedcorn and Root Maggots Wireworms	PRE 8.5	PRE 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE pesticides
	PPI 8.5	PPI 0.1	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI labeled herbicides. Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth. Incorporation depth should be close to the intended depth

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
<b>Garden Beet Pests Only</b> Aphids Fire Ants Flea Beetles Lepidopterous Larvae Spider Mites Whitefly	6.8 – 8.5	0.08 - 0.1	Thorough coverage is necessary to attain acceptable control. Make application at the onset of infestation reaching locally determined economic thresholds.  Apply foliar treatments in at least 25 gallons per acre.
<b>Foliar Restrictions:</b> <ul style="list-style-type: none"> <li>Do not make applications less than 7 days apart.</li> <li>Do not apply within 1 day of harvest.</li> </ul>			

**Garden Beets Restrictions:**

- Do not apply more than 0.4 lb ai per acre per year including at-plant, PRE, PPI and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

[\*][Not for use in California]

**SOYBEANS**

**At-Plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Rootworm larvae	6.8 – 8.5	0.39 – 0.49	0.08 – 0.1	Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), or in-furrow with the seed.
Army cutworm Armyworm species Cutworm species Grape colaspis Grubs Root maggot Seed corn beetle Seedcorn maggot True armyworm Wireworm Bean Leaf Beetle Larvae	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	
<b>At- Plant Restrictions:</b> <ul style="list-style-type: none"> <li>Do not apply more than 0.1 lb ai/A per year as an at-plant application</li> </ul>				

**PRE & PPI**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Armyworm species Black Cutworm	PRE 3.4	PRE 0.04	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE herbicides.
Armyworm species Black Cutworm Seedcorn beetle Stalkborer Bean Leaf Beetle Larvae Seed corn Maggot White Grub Wireworm Seedcorn Maggot	PPI 4 - 5.3	PPI 0.047 - 0.062	<b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI herbicides.  Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth.

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Alfalfa Caterpillar Aphids Armyworms Bean Leaf Beetle Blister Beetle species Corn Earworm Corn Rootworm (Adult) Cowpea Curculio Cucumber Beetle (Adult) Cutworms Dectes Stem Borer European Corn Borer False Cinch Bug Flea Beetle Grasshoppers Green cloverworm Hornworms Imported Cabbageworm Japanese Beetle (Adult) Leaf Skeletonizer species Leafhoppers Leafminers (Adults) Lesser Cornstalk Borer Loopers Kudzu Bug Mexican Bean Beetle Painted Lady (Thistle) Caterpillar Pea Leaf Weevil Saltmarsh Caterpillar Seedcorn Maggot (Adult) Silverspotted Skipper Spittlebug Stink Bug (including brown marmorated stink bugs) Three Cornered Alfalfa Hopper Thrips Tobacco Budworm Velvetbean Caterpillar	2.8 – 8.5	0.033 – 0.1	Apply in a minimum of 10 gallons per acre with ground equipment or 2 gallon per acre by aircraft.  Pyrethroid resistance is common for Beet Armyworm and Tobacco Budworm. Please consult your local or state agricultural authority to determine if resistant pest populations are in your area. If so, refer to the resistance management statement in the DIRECTIONS FOR USE section of this label.

Webworm Woollybear Caterpillar			
Lygus species Whitefly Twospotted spider mite	6.8 – 8.5	0.08 – 0.1	
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not make applications less than 30 days apart</li> <li>Do not apply within 18 days of harvest.</li> </ul>			

**Soybean Restrictions:**

- Do not apply more than 0.3 lb ai/A per year including At-Plant, PRE & PPI, and Foliar applications of this and other bifenthrin products.

**SPINACH**

**At-Plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Rootworm larvae Garden Symphylans	6.8 – 8.5	0.39 – 0.49	0.08 – 0.1	Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), or in-furrow with the seed.
Army cutworm Armyworm species Cutworm species Grubs Root maggot Seedcorn maggot True armyworm Wireworm	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	
<b>At Plant Restrictions:</b>				
<ul style="list-style-type: none"> <li>Do not apply more than 0.1 lb ai/A per year as an at-plant application</li> </ul>				

**PPI**

PEST	USE RATES	
	Fluid oz/A	Pound ai/A
Seed Corn Maggot Wireworms Garden Symphylans	PPI 3.4 – 6.8	PPI 0.04 – 0.08

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Armyworms Colorado Potato Beetle Corn earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Leafminers Loopers Pepper Weevil Tomato Hornworm Tomato Pinworm Thrips Whitefly	2.8 – 8.5	0.033 – 0.1	<p>For control of whiteflies, apply foliar treatments of <b>AX BIFEN LFR FC</b> by ground or air at rates of up to 0.1 lb active per acre at minimum 7 day intervals up to a maximum of 4 applications. Do not apply within 40 days of harvest.</p> <p>For control of fire ants apply <b>AX BIFEN LFR FC</b> to the soil (at planting) or as a foliar treatment by ground or air at rates of up to 0.1 lb active per acre at minimum 7 day intervals up to a maximum of 4 applications.</p> <p>Apply the specified dosage in 5-50 gallons of finished spray per acre by air or 10-50 gallons finished spray per acre by ground.</p>
Banks Grass Mite Broad Mite	6.8 – 8.5	0.08 – 0.1	

Carmine Mite Fire Ants Lygus species Pacific Spider Mite Twospotted spider mite			
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not make applications less than 7 days apart</li> <li>Do not apply within 40 days of harvest.</li> </ul>			

**Spinach Restrictions:**

- Do not apply more than 0.4 lb ai/A per year including At-Plant, PRE & PPI, and Foliar applications of this and other bifenthrin products.

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

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

**At-Plant**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Rootworm larvae	6.8 – 8.5	0.39 – 0.49	0.08 – 0.1	Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), or in-furrow with the seed.
Army cutworm Armyworm species Cutworm species Grape colaspis Grubs Root maggot Seedcorn maggot True armyworm Wireworm	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	
<b>At- Plant Restrictions:</b>				
<ul style="list-style-type: none"> <li>Do not apply more than 0.1 lb ai/A per year as an at-plant application</li> </ul>				

**PRE & PPI**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Army cutworm Armyworm species Cutworm species Grape colaspis Grubs Root maggot True armyworm Wireworm (PPI only)	PRE 6.8 – 8.5	PRE 0.08 – 0.1	<p><b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE herbicides.</p> <p>Post Plant Soil Applied: Apply through drip or Drip Tape. Apply when soil is moist towards the end of the irrigation run.</p>
	PPI 6.8 – 8.5	PPI 0.08 – 0.1	<p><b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI herbicides.</p> <p>Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth. Apply in a minimum of 10 gallons per acre. Post Plant Soil Applied: Apply through drip or Drip tape. Apply when soil is moist towards the end of the irrigation run.</p>

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aster Flea Beetle Leafhopper	2.1 – 8.5	0.025 - 0.1	Apply in a minimum of 2 gallons finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment.
Adult Sap Beetle Alfalfa Caterpillar Aphids Armyworm, Beet Armyworm, Fall Armyworm, Southern Armyworm, Yellowstriped Bean Leaf Beetle Cloverworm Corn earworm Corn Rootworm (Adult) Cucumber Beetle Cutworms European Corn Borer Grasshoppers Japanese Beetle Loopers Pea Leaf Weevil Pea Weevil Plant Bug Stink Bugs (including brown marmorated stink bugs) Tarnished Plant Bug Thrips Webworms Western Bean Cutworm Whitefly	2.8 – 8.5	0.033 - 0.1	When applying by air, 1 – 2 quarts of emulsified oil may be substituted for 1 – 2 quarts of water in the finished spray.  Thorough coverage is essential to achieve control.  Make application at the onset of infestation reaching locally determined economic threshold.
Banks Grass Mite Carmine Mite Lygus species Twospotted spider mite	6.8 – 8.5	0.08 to 0.1	
<b>Foliar Restrictions:</b> <ul style="list-style-type: none"> <li>Do not apply within 3 days of harvest.</li> <li>Do not make applications less than 3 days apart</li> </ul>			

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

- Do not apply more than 0.2 lb ai/A per year including At-Plant, PRE & PPI, and Foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**TOBACCO**

**PRE-TRANSPLANT and AT-TRANSPLANT**

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Armyworm species Cutworm species Flea beetle larvae Mole cricket Stalkborer White grubs Wireworm	3.4 – 8.5	0.2 – 0.49	0.04 – 0.1	<b>Pre-transplant soil applications:</b> Use of suitable equipment to incorporate into top 4" of the soil is required to control below ground pests. <b>At-transplant water treatment application:</b> Apply 0.0625 to 0.1 pound ai/A in a water treatment application volume of 10 to 200 gal/A.  May be tank mixed with herbicides approved for tobacco use.
<b>Pre-Transplant &amp; At-Transplant Restrictions:</b>				

- Do not apply later than layby.

#### Foliar

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphid spp.* Armyworm spp. Chinch bugs Cutworm spp. Flea beetle (Adults) Grasshoppers Green bugs Japanese beetles Stink Bugs (including brown marmorated stink bugs) Thrips White flies Tarnished plant bugs	3.4 – 8.5	0.04 – 0.1	Apply 0.04 to 0.10 lb ai/A per foliar application up to, and including, layby in a minimum of 10 gal/A.  May be tank mixed with Command, Spartan or Aquesta™ 4 F, and other herbicides approved for tobacco use.  *See resistance statement under “Directions for Use” section.
Hornworm Tobacco Budworm	6.8 – 8.5	0.08 – 0.1	
Spider mites Lygus spp.	8.5	0.1	
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>• Do not make more than 2 foliar applications per season.</li> <li>• Do not apply later than layby.</li> </ul>			

#### Tobacco Restrictions:

- Do not apply more than 0.2 lb ai/A per year including at-plant, PRE, PPI and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

#### TOMATOES, TOMATILLOS, & GROUNDCHERRIES

##### At-Plant

PEST	USE RATES			DIRECTIONS
	Fluid oz/A	Fluid oz/1000 Linear ft.	Pound ai/A	
Army cutworm Armyworm species Cutworm species Flea beetle larvae Grubs Root maggot Stalkborer True armyworm Wireworm	3.4 – 6.8	0.2 – 0.39	0.04 – 0.08	Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), or in-furrow with the transport or seed. May be applied through transplant water at time of transplanting. Apply broadcast to the soil surface for control of Army cutworm, Cutworm species, True armyworm, Armyworm species, or Stalkborer.
<b>At- Plant Restrictions:</b>				
<ul style="list-style-type: none"> <li>• Do not apply more than 0.1 lb ai/A per year as an at-plant application</li> </ul>				



**PRE & PPI**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Army cutworm Armyworm species Cutworm species Flea beetle larvae Garden symphylans Grubs True Armyworm Wireworm	PRE 6.8	PRE 0.08	<p><b>AX BIFEN LFR FC</b> can be tank mixed and applied with PRE herbicides.</p> <p>Post Plant Soil Applied: Apply through drip or Drip Tape. Apply when soil is moist towards the end of the irrigation run.</p>
	PPI 3.4 – 6.8	PPI 0.04 – 0.08	<p><b>AX BIFEN LFR FC</b> can be tank mixed and applied with PPI herbicides.</p> <p>Incorporation of <b>AX BIFEN LFR FC</b> should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth. Apply in a minimum of 10 gallons per acre. Post Plant Soil Applied: Apply through drip or Drip tape. Apply when soil is moist towards the end of the irrigation run.</p>

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Aphids Armyworms (including Beet) Armyworm, Fall Armyworm, Southern Bean Leaf Beetle Cabbageworm Carmin Mite Cloverworm Corn earworm Corn Rootworm Cucumber Beetles Cutworms Diamondback Moth European Corn Borer Flea Beetles Flea Hopper Grasshopper Japanese Beetle (Adult) Leafhoppers Loopers Lygus species Melonworm Pea Weevil Pea Leaf Weevil Pickleworm Plant Bug Rindworm Salt Marsh Caterpillar Sap Beetle Seedpod Weevil Squash Bugs Stink bug species (including brown marmorated stink bugs) Tobacco Budworm Tarnished Plant Bug Thrips Whitefly	2.8 – 6.8	0.033 – 0.08	<p>Thorough coverage is necessary to attain acceptable control. Make application at the onset of infestation reaching locally determined economic levels.</p> <p>Apply in water. Apply the specified dosage in 5 to 50 gallons of finished spray per acre by air or 10 to 50 gallons of finished spray per acre by ground. Thorough coverage is essential to achieve control.</p>

Yellowstriped Armyworm			
Twospotted spider mite	6.8 – 8.5	0.08 – 0.1	
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not make applications less than 10 days apart.</li> <li>Do not apply within 1 day of harvest</li> </ul>			

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

- Do not apply more than 0.40 lb ai/A per year including at-plant, PRE, PPI and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**TREE NUTS[\*]**

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

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Black Pecan Aphid Codling Moth Filbert Worm Hickory Shuckworm Leaffooted Bugs Navel Orangeworm Oblique Banded Leafroller Peach Twig Borer Pecan Leaf Casebearer Pecan Nut Casebearer Pecan Phylloxera Plant Bugs Stink Bugs (including brown marmorated stink bugs) Walnut Aphid Yellow Pecan Aphid	4.3 – 17.1	0.05 - 0.2	Apply by ground or air equipment using sufficient water to obtain full coverage of foliage. Apply as a dilute (minimum of 200 gallons of finished spray per acre) or concentrate (minimum of 50 gallons of finished spray per acre) by ground or apply the specified amount in a minimum of 10 gallons of finished spray per acre by air.
European Red Mite Pecan Weevil Spider Mite species	6.8 – 17.1	0.08 - 0.2	
Fire ants Walnut Husk Fly	8.5 – 17.1	0.1 - 0.2	
<b>Foliar Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not make applications less than 15 days apart.</li> <li>Do not apply within 21 days of harvest for pecans and 7 days for all other registered tree nut crops.</li> <li>Do not graze livestock in treated orchards or cut treated cover crops for feed.</li> </ul>			

**Tree Nuts Restrictions:**

- Do not apply more than 0.5 lb active ingredient (1 quart) per acre per year including at-plant, PRE, PPI and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**[\*][Not for Use in California]**

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

Potato, Sweet potato, Arracacha, Arrowroot, Chinese artichoke, Jerusalem artichoke, Edible canna, Cassava (bitter and sweet), Chayote (root), Chufa, Dasheen (taro), Ginger, Leren, Tanier, Turmer, Yam bean, True yam.

**At-Plant**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Grape colaspis Rootworms Sweet potato flea beetle White grub	12.75 – 25.5	0.15 – 0.3	<b>AX BIFEN LFR FC</b> insecticide may be applied as a soil incorporated broadcast, directed bed spray or a T-band spray into the planting furrow for the control of wireworms, sweet potato flea beetle, and white grubs. Apply <b>AX BIFEN LFR FC</b> at the rate

Wireworms			of 0.15 to 0.3 pounds active ingredient (12.75 to 25.5 fluid ounces formulated) per acre in a minimum of 10 gallons per acre of spray.
<b>At Plant Restrictions:</b>			
<ul style="list-style-type: none"> <li>Do not apply more than 0.3 lb ai/A per year as an at-plant application.</li> </ul>			

**Lay-By**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Grape colaspis Rootworms Wireworms White grub	12.75 – 25.5	0.15 – 0.3	<b>AX BIFEN LFR FC</b> insecticide may be applied as one or more soil directed and incorporated treatments at cultivation or layby for the control of wireworms and white grubs. Apply <b>AX BIFEN LFR FC</b> to the drill area and incorporate by cultivation equipment set to throw soil towards the drill area. Apply in a minimum of 10 gallons per acre of spray.

**PPI**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
Grape colaspis Rootworms Wireworms White grub	12.75 – 25.5	0.15 – 0.3	Apply <b>AX BIFEN LFR FC</b> to the transplant area and incorporate to planting depth. Apply <b>AX BIFEN LFR FC</b> in a minimum of 10 gallons per acre of spray. May be applied as a broadcast application or an incorporated band application

**Foliar**

PEST	USE RATES		DIRECTIONS
	Fluid oz/A	Pound ai/A	
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	2.8 – 8.5	0.033 - 0.1	Apply in a minimum of 3 gallons finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment.  <b>AX BIFEN LFR FC</b> 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).

**Foliar Restrictions:**

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

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

- Do not apply more than 0.5 lb ai/A per year including soil, lay-by, at-plant, PPI and foliar applications of **AX BIFEN LFR FC** and other bifenthrin containing products.

**APPLICATIONS INSTRUCTIONS – ORNAMENTALS\***

**NON-AG USE:** INTERIORSCAPES AND PLANTSCAPES, LAWNS, TREES AND SHRUBS, AND ON GOLF COURSES

**AG USE:** ORNAMENTALS AND TREES (INCLUDING FIELD AND CONTAINER GROWN NURSERY STOCK, CHRISTMAS TREES), Nurseries, Conifers (field and container grown), and pine seed orchards

\* NOT FOR USE IN CALIFORNIA TO CONTROL LISTED INSECT PESTS ON ORNAMENTALS AND TREES (INCLUDING FIELD AND CONTAINER GROWN NURSERY STOCK, CHRISTMAS TREES, INTERIORSCAPES AND PLANTSCAPES, LAWNS, TREES AND SHRUBS, AND ON GOLF COURSES).

For use on plants intended for aesthetic purposes or climatic modifications and being grown in interior plantscapes and on outdoor ornamentals, Christmas trees, nurseries, lawns, and golf courses.

**PRODUCT INSTRUCTIONS**

**AX BIFEN LFR FC** mixes with water and other aqueous carriers to control listed insects and mites on trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in interiorscapes, including hotels, shopping malls, office buildings, etc. and outdoor plantscapes: nurseries, residential dwellings, parks, institutional buildings, recreational areas, athletic fields, golf courses, and home lawns. Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity 365 days after application.

**AX BIFEN LFR FC** may be tank-mixed with other products, including insect growth regulators. When tank mixing **AX BIFEN LFR FC** with other products observe all precautions and limitations on each separate product label. The addition of spreader stickers is not necessary. The physical compatibility of **AX BIFEN LFR FC** may vary with different sources of pesticide products, and local cultural practices. Any tank mixture which has not been previously tested should be prepared on a small scale (pint or quart jar), using the proper proportions of chemicals and water to ensure the physical compatibility of the mixture. It is the pesticide user’s responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

The following procedure is recommended for preparation of a new tank mix, unless specified otherwise in label directions:

1. Add wettable powders to tank water
2. Agitate
3. Add fluids and flowables
4. Agitate
5. Add emulsifiable concentrates
6. Agitate

If a mixture is found to be incompatible following the order of addition, try reversing the order of addition, or increase the volume of water. **Note:** If the tank mixture is found to be compatible after increasing the amount of water then the sprayer will need to be recalibrated for a higher volume application. Do not allow tank mix to stand overnight. When using tank mixes, observe all restrictions and precautions which appear on the labels of these products. Provide constant agitation to keep the mixture in solution.

**APPLICATION RATES**

**TRUNK SPRAYS TO ORNAMENTAL TREES (including Christmas trees)**

**For Control of Bark Beetles and Boring Beetles**

Refer to the table below. Application rates and timing differ according to the target pest and other factors specific to each local situation. Consult your local State Extension specialist or other qualified expert for recommendations. Note: Do not apply more than 12.8 fl. oz. (0.2 lbs. AI) per acre of this product to trees. Repeat application may be necessary if reinfestation is likely.

PEST	RATE	SPRAY VOLUME	USE INSTRUCTIONS
<b>Dandroctonus bark beetles:</b> mountain pine beetle, southern pine beetle, western pine beetle, and black turpentine beetle.	21 - 43 fl. oz. per 100 gallons (0.25 – 0.5 lb. AI per 100 gallons)	Use 1-4 gallons of finished spray per tree.	Make applications to the trunk of the tree with a hydraulic sprayer in the early spring or prior to adult beetle flight and tree infestation. Apply spray directly to the main trunk from the base of the tree to at least half-way into the live crown. Spray until the bark is thoroughly wet.
Engraver beetle ( <i>Ips</i> spp.)	21 - 43 fl. oz. per 100 gallons (0.25 – 0.5 lb. AI per 100 gallons)	Use 10-14 gallons of finished spray per tree.	

<b>Other bark beetles:</b> ambrosia beetles, elm bark beetles, and metallic wood borers such as emerald ash borer.	21 - 43 fl. oz. per 100 gallons (0.25 – 0.5 lb. AI per 100 gallons)	Use 2-5 gallons of finished spray per tree.	Make applications of a spray mixture to the trunk, scaffolding and limbs of the tree with a hydraulic sprayer in the early spring or prior to adult beetle flight and tree infestations. Spray until the bark is thoroughly wet.
<b>Clearwing moth borers:</b> ash borer, banded ash clearwing, dogwood borer, lesser peachtree borer, lilac borer, oak borer, peachtree borer, rhododendron borer  <b>Coleopteran borers:</b> bronze birch borer, flatheaded apple tree borer	8.6 – 17.2 fl. oz. per 100 gallons (0.1 – 0.2 lb. AI per 100 gallons)	Use 1-4 gallons of finished spray per tree.	Apply to the branches and trunks prior to adult emergence. Spray until the bark is thoroughly wet. For maximum residual control, use highest labeled rate.

#### Treatment of Infested Trees to Control Emerging Brood

Make applications of a spray mixture containing 2.0 pints of **AX BIFEN LFR FC** per 100 gallons of water to trees that still have beetles in the bark. Apply spray directly to the main trunk from the base of the tree to at least half-way into the live crown. Spray until the bark is thoroughly wet (usually 1 to 4 gallons of spray per tree). Do not apply more than 0.2 lbs. AI (19.4 fl. oz.) of this product to trees per acre.

Trees on which all needles have turned brown generally have been vacated and should not be sprayed unless infestation is confirmed. To confirm an infestation, scrape off the outer bark to determine if trees are still infested. If live infestations remain in the trunks, fell the trees and cut into sections. Spray the trunk and large limbs and turn sections so that all of the surface area can be treated. Do not apply more than 0.2 lbs. AI (19.4 fl. oz.) of this product to trees per acre.

#### PRODUCT INFORMATION

##### FOLIAR SPRAYS TO ORNAMENTALS AND TREES

(Field and Container Grown Nursery Stock, Christmas Trees)

##### Non-Ag Uses: Interiorscapes and Plantscapes, Lawns, Trees and Shrubs, and on Golf Courses

For applications to ornamentals (trees, shrubs, ground covers, bedding plants and foliage plants, conifers (field and container grown), Christmas Trees and pine seed orchards) apply 0.6 to 0.44 fl. oz. **AX BIFEN LFR FC** per 1,000 sq. ft. or 2.4 to 19.4 fl. oz. per 100 gallons. **AX BIFEN LFR FC** may be diluted and applied in various volumes of water providing that the maximum label rate (0.44 fl. oz. per 1,000 sq. ft. or 19.4 fl. oz. per 100 gallons) is not exceeded. **AX BIFEN LFR FC** may be applied through low volume application equipment by dilution with water or other carriers and providing that the maximum label rate (0.44 fl. oz. per 1,000 sq. ft. or 19.4 fl. oz. per 100 gallons) is not exceeded.

##### Calculating Dilution Rates Using the Ornamental Application Rates Table and the **AX BIFEN LFR FC** Dilution Chart

Use the following steps to determine the appropriate dilution of this product required to control the specific pests:

1. Find the least susceptible target pest (the pest that requires the highest application rate for control).
2. Select an application rate in terms of fluid ounces of this product.
3. Find your application volume and how much spray you want to prepare.
4. Use the **Ornamental Dilution Chart** to determine the appropriate volume of this product that must be mixed in your desired volume of water.

For example, to control black vine weevil adults on rhododendron, the **Ornamental Application Rates** table shows that 0.12 to 0.20 fl. oz. of this product should be applied per 1,000 sq. ft. You select an application rate of 0.20 fl. oz. per 1,000 sq. ft. because maximum residual

control is desired. Your application volume is approximately 300 gallons per acre which is equivalent to 6.9 gallons per 1,000 sq. ft. Consulting the **Ornamental Dilution Chart** shows that you should dilute 0.72 fl. oz. of this product in 10 gallons of water.

AX BIFEN <b>LFR FC</b> ORNAMENTAL DILUTION CHART							
Application Rate	Fluid Ounces (mL) of AX BIFEN <b>LFR FC</b> diluted to the Volumes of Finished Spray						
	1 Gallon		5 Gallons		10 Gallons		100 Gallons
Fl. oz./1,000 sq. ft.	Fl. oz.	mL	Fl. oz.	mL	Fl. oz.	mL	Fl. oz.
0.06	0.018	0.5	0.09	2.6	0.18	5.3	1.8
0.12	0.036	1.1	0.18	5.3	0.36	10.6	3.6
0.20	0.072	2.1	0.36	10.6	0.72	21.3	7.2
0.44	0.144	4.3	0.72	21.3	1.44	42.6	14.4

$$\frac{(17.15)(\text{Fl. Oz. of AX BIFEN **LFR FC** added to tank})}{(\text{gallons of finished spray mix})(128)} = \text{Percent Active Ingredient of Spray Mix}$$

#### ORNAMENTAL AND TREE FOLIAR APPLICATION RATES

The application rates listed in the following table will provide control of the noted pests under typical conditions. However, at the discretion of the applicator, this product may be applied at up to 0.44 fl. oz. per 1,000 sq. ft (19.4 fl. oz. per 100 gallons) to control each of the pest listed in this table. The higher application rates should be used when maximum residual control is desired.

PEST	RATES	USE INSTRUCTIONS
Bagworms <sup>1</sup> Cutworms Elm Leaf Beetles Fall Webworms Gypsy Moth Caterpillars Lace Bugs Leaf Feeding Caterpillars Tent Caterpillars Tussock moth	0.06 – 0.12 fl. oz. per 1,000 sq. ft.  (1.8 – 3.8 fl. oz. per 100 gallons)	<sup>1</sup> Bagworms: For best results, apply when larvae begin to hatch and spray larvae directly. Applications when larvae are young will be most effective.  <sup>2</sup> Beetles, Scale Crawlers, Twig Borers, and Weevils: May treat trunks, stems and twigs in addition to plant foliage.  <sup>3</sup> Spider Mites: <b>AX BIFEN LFR FC</b> provides optimal twospotted spider mite control when applied during spring to mid-summer. Higher application rates and/or more frequent treatments may be required for acceptable twospotted spider mite control during mid- to late-summer. The addition of a surfactant or horticultural oil may increase the effectiveness of this product. Combinations of this product with other registered miticides have also proven effective. Alternately, <b>AX BIFEN LFR FC</b> applications may be rotated with those of other products that have different modes of action in control programs that <i>are</i> designed to manage resistance by twospotted spider mites. Consult your local Cooperative Extension Service for resistance management recommendations in your region.

PEST	RATES	USE INSTRUCTIONS
Adelgids Ants (Excluding fire, carpenter, harvester, and pharaoh ants) Aphids Bees Beet Armyworm Beetles <sup>2</sup> Black Vine Weevil (Adults) Scales: Brown Soft Scales California Red Scale (Crawlers) <sup>2</sup> Elongated Hemlock Scale Pine Needle Scales (crawlers) <sup>2</sup> San Jose Scales (Crawlers) <sup>2</sup> Broad Mites Budworms Cicadas Citrus Thrips Clover Mites Crickets Earwigs European Red Mite Flea Beetles Fungus Gnats (Adults) Glassywinged Sharpshooter Grasshoppers	0.12 – 0.20 fl. oz. per 1,000 sq. ft.  (3.6 – 7.2 fl. oz. per 100 gallons)	<sup>1</sup> Bagworms: For best results, apply when larvae begin to hatch and spray larvae directly. Applications when larvae are young will be most effective.  <sup>2</sup> Beetles, Scale Crawlers, Twig Borers, and Weevils: May treat trunks, stems and twigs in addition to plant foliage.  <sup>3</sup> Spider Mites: <b>AX BIFEN LFR FC</b> provides optimal twospotted spider mite control when applied during spring to mid-summer. Higher application rates and/or more frequent treatments may be required for acceptable twospotted spider mite control during mid- to late-summer. The addition of a surfactant or horticultural oil may increase the effectiveness of this product. Combinations of this product with other registered miticides have also proven effective. Alternately, <b>AX BIFEN LFR FC</b> applications may be rotated with those of other products that have different modes of action in control programs that are designed to manage resistance by twospotted spider mites. Consult your local Cooperative Extension Service for resistance management recommendations in your region.

PEST	RATES	USE INSTRUCTIONS
Japanese Beetle (Adult) Leafhoppers Leafrollers Mealybugs Mites Nantucket Pine Tip Moth Pillbugs Pine sawflies Plant Bugs (including <i>Lygus</i> spp.) Psyllids+ Spider Mites <sup>3</sup> Spittlebugs Thrips Tip Moths Treehoppers Twig Borers <sup>2</sup> Weevils <sup>2</sup> : White Pine Weevil Pales Weevil Diaprepes adults Orchid Weevil White flies Zimmerman pine moths	0.12 – 0.20 fl. oz. per 1,000 sq. ft.  (3.6 – 7.2 fl. oz. per 100 gallons)	<p><sup>1</sup> Bagworms: For best results, apply when larvae begin to hatch and spray larvae directly. Applications when larvae are young will be most effective.</p> <p><sup>2</sup> Beetles, Scale Crawlers, Twig Borers, and Weevils: May treat trunks, stems and twigs in addition to plant foliage.</p> <p><sup>3</sup> Spider Mites: <b>AX BIFEN LFR FC</b> provides optimal twospotted spider mite control when applied during spring to mid-summer. Higher application rates and/or more frequent treatments may be required for acceptable twospotted spider mite control during mid- to late-summer. The addition of a surfactant or horticultural oil may increase the effectiveness of this product. Combinations of this product with other registered miticides have also proven effective. Alternately, <b>AX BIFEN-LFR FC</b> applications may be rotated with those of other products that have different modes of action in control programs that are designed to manage resistance by twospotted spider mites. Consult your local Cooperative Extension Service for resistance management recommendations in your region.</p>
Leafminers Pecan Leaf Scorch Mite Pine Shoot Beetle (Adults) Spider Mites <sup>3</sup>	0.20 – 0.44 fl. oz. per 1,000 sq. ft.  (7.2 – 14.4 fl. oz. per 100 gallons)	



## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used should be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### **CONTAINER HANDLING:**

**[For plastic containers ≤ 5 gallons: Nonrefillable Container:** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.]

**[For plastic containers > 5 gallons: Nonrefillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.]

## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of AXION AG PRODUCTS LLC or Seller, TO THE EXTENT CONSISTENT WITH APPLICABLE LAW All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold AXION AG PRODUCTS LLC and Seller harmless for any claims relating to such factors.

AXION AG PRODUCTS LLC 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 AXION AG PRODUCTS LLC, and TO THE EXTENT CONSISTENT WITH APPLICABLE LAW Buyer and User assume the risk of any such use. AXION AG PRODUCTS LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, neither AXION AG PRODUCTS LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF AXION AG PRODUCTS LLC 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 AXION AG PRODUCTS, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

AXION AG PRODUCTS LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of Sale and Limitation of Warranty and Liability which may not be modified except by written agreement signed by a duly authorized representative of AXION AG PRODUCTS LLC.

**[LANGUAGE ON LABEL AFFIXED TO CONTAINER]**

**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

**AX BIFEN LFR FC**

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

ACTIVE INGREDIENT:	(% by weight)
Bifenthrin*	17.15%
OTHER INGREDIENTS:	82.85%
TOTAL	100.0%

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

This product contains 1.5 pounds active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN**

**WARNING/AVISO**

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

FIRST AID	
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact CHEMTREC at 1-800-424-9300 for emergency medical treatment information.	
<b>NOTE TO PHYSICIAN</b> - This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.	

For Chemical Emergency:

Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**WARNING**

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

**ENVIRONMENTAL HAZARDS:** This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas.

Do not contaminate water when disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are foraging the treatment area. The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

**PHYSICAL OR CHEMICAL HAZARDS**

Do not mix or allow coming in contact with oxidizing agent. Hazardous Chemical reaction may occur.

**STORAGE AND DISPOSAL**

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**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used should be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

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

**EPA Reg. No.: 89167-97**

**EPA Est. No.:**

**Net Contents: \_\_\_\_\_ Gal**

**Manufactured For:**

AXION AG PRODUCTS, LLC  
1880 FALL RIVER DRIVE, SUITE 100  
LOVELAND, CO 80538

041321