U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505T)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	**Date of Issuance:**
53883-526	11/12/24

Term of Issuance:
Conditional

Name of Pesticide Product:
CSI 2 LB. Bifen EC

Name and Address of Registrant (include ZIP Code):

Control Solutions, Inc.
5903 Genoa-Red Bluff
Pasadena, TX 77507-1041

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Continues page 2

Signature of Approving Official:

J. d Herrick

Jacquelyn Herrick, Product Manager 3
IVB1, Registration Division (7505T)

Date:
11/12/24

EPA Form 8570-6

2. You are required to comply with the data requirements described in the generic data call-in (GDCI) identified below:

    a. Bifenthrin GDCI-128825-902
    b. Bifenthrin GDCI-128825-1159
    c. Bifenthrin GDCI-097805-1100

    You must comply with all of the data requirements within the established deadlines. If you have questions about the GDCI listed above, you may contact the Chemical Review Manager in the Pesticide Re-Evaluation Division: http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1

3. Make the following label changes before you release the product for shipment:

    - Revise the EPA Registration Number to read, "EPA Reg. No. 53883-526."

4. Submit one copy of the final printed label for the record before you release the product for shipment.

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 FIFRA 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) lists 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 fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

The record for this product currently contains the following CSF:

- Basic CSF dated 3/23/2023

If you have any questions, please contact Hester Dingle at 202-566-2596 or at dingle.hester@epa.gov.

Enclosure

Note to reviewer: [Text] in brackets denotes optional or explanatory language Note to reviewer: {Text} in braces denotes where in the final label text will appear

RESTRICTED USE PESTICIDE

Due to eye irritation and acute oral toxicity.

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

ACCEPTED
11/12/2024
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 53883-526

CSI 2 LB. BIFEN EC

Insecticide/Miticide

[Alternate Brand Name: 2 LB. Bifen EC]

[Generic Descriptor: Insecticide/Miticide]

Contains bifenthrin, the active ingredient used in Brigade® 2EC.

CSI 2 lb. Bifen EC is not manufactured, or distributed by FMC Corporation, seller of Brigade® 2 EC.

{For labels including only outdoor food uses} *[For Outdoor Use Only]*
{For labels including either 1) outdoor food uses and ornamentals/trees or 2) ornamentals/trees only} *[For both indoor and outdoor use.]*

[For use to control listed insects and mites on artichokes, brassicas, bushberries, caneberries, canola, cilantro, citrus, coriander, corn, cotton, crambe, cucurbits, dried beans and peas, fruiting vegetables, grapes, grass grown for seed, pasture, and rangeland, head lettuce, hops, leafy brassicas, leafy petiole vegetables, mayhaw, okra, peanuts, pears, rapeseed, root crops, soybeans, spinach, strawberries, succulent peas and beans, tobacco, and tuberous and corm vegetables.]

[For use to control listed insect pests on Ornamentals and Trees (Field and Container Grown Nursery Stock, Christmas Trees, Interiorscapes and Plantscapes, Lawns, Trees and Shrubs, and on Golf Courses and Sod Farms)*
** Not for Use in California]*

[DO NOT APPLY THIS PRODUCT ON GOLF COURSES AND SOD FARMS IN NASSAU OR SUFFOLK COUNTY, NEW YORK].

ACTIVE INGREDIENT:	**%BY WT.**
Bifenthrin: (2 methyl[1,1 –biphenyl]-3-yl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylate*….	25.1%
OTHER INGREDIENTS:**	74.9%
TOTAL	100.0%

*Cis isomers 97% minimum, trans isomers 3% maximum.
**Contains petroleum distillates, xylene or xylene range aromatic solvents.
This product contains 2 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).

See inside label booklet for First Aid, Precautionary Statements and Directions for Use.

ADAMA

Consumer & Professional Solutions

Manufactured for:
Control Solutions, Inc.
5903 Genoa Red Bluff [Rd][Road]
Pasadena, TX 77507

EPA Reg No. 53883-XXX

EPA Est. No.

Net Contents:

FIRST AID	
IF SWALLOWED:	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give **any** liquid to the person. • Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
NOTE TO PHYSICIAN: This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and should be avoided. This product contains a petroleum distillates. Vomiting may cause aspiration pneumonia.	
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 SafetyCall at **1-866-897-8050** for emergency medical treatment information.	

For Chemical Emergency:
Spill, Leak, Fire, Exposure, or Accident,
Call CHEMTREC Day or Night
1-800-424-9300

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

May be fatal if swallowed. Causes skin irritation. Causes moderate eye irritation. Do not get on skin or on clothing. Avoid contact with eyes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Long-sleeved shirt and long pants
- Chemical-resistant gloves: barrier laminate or viton (≥ 14 mils)
- shoes plus socks

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

- Long-sleeved shirt and long pants
- Chemical-resistant gloves: barrier laminate or viton (≥ 14 mils)
- shoes plus socks

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

- Long-sleeved shirt and long pant
- Chemical-resistant gloves: barrier laminate or viton (≥ 14 mils)
- shoes plus socks
- Protective eyewear

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

- long-sleeved shirt and long pants,
- chemical-resistant gloves: barrier laminate or viton (≥ 14 mils)
- shoes plus socks

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

- long-sleeved shirt and long pants,
- chemical-resistant gloves: barrier laminate or viton (≥ 14 mils)
- shoes plus socks

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

- long-sleeved shirt and long pants,
- chemical-resistant gloves: barrier laminate or viton (≥ 14 mils)
- shoes plus socks

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

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic 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 **CSI 2 LB. BIFEN EC** is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

PHYSICAL/CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

DIRECTIONS FOR USE

RESTRICTED USE PESTICIDE

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

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

For soil or foliar applications, do not apply by ground within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.

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: barrier laminate or Viton (≥ 14 mils)
- 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 Protections Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and greenhouses.
Do not allow people or pets on treated areas until the spray has dried.

RESISTANCE MANAGEMENT

For resistance management, CSI 2 LB. BIFEN EC contains a Group 3A insecticide. Any insect population may contain individuals naturally resistant to CSI 2 LB. BIFEN EC and other Group 3A insecticides/acaricides. The resistant individuals may dominate the insect./mite population if this group of insecticides /acaricides 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 CSI 2 LB. BIFEN EC or other Group 3A insecticides /acaricides within a growing season, or among growing seasons, with different groups that control the same pests.

- Use tank mixtures with insecticides/acaricides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):

    - 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 Control Solutions, Inc at (281) 892-2500 or toll free at (800) 242-5562.

APPLICATIONS INSTRUCTIONS

The rate of **CSI 2 LB. BIFEN EC** applied will vary according to pest pressure and timing of application. Use lower labeled rates under light to moderate infestations and higher labeled rates under heavy insect pressure and for mite control. Use higher labeled rates for arid climates.

Unless otherwise specified for a specific crop, apply when pest population reaches economic (damaging) threshold and repeat as necessary to maintain control. Thorough coverage is essential to achieve control.

In the COMMENTS section of the label for each crop, the application rate when applied by ground and/or air is listed as an amount of spray per acre. In all cases, this refers to finished spray per acre.

CHEMIGATION USE DIRECTIONS

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

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

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 setup 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 area.

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

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

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

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

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

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
Do not apply when wind speed favors drift beyond the area intended for treatment.

For sprinkler irrigation, meter **CSI 2 LB. BIFEN EC** at a continuous uniform rate during the entire irrigation period. Apply in sufficient volume of water or other diluent to ensure accurate application over the treated area. If non-emulsified oil is used as the diluent, use 1 to 2 pints per acre. Maintain continuous agitation of the pesticide supply tank for the duration of the application period. When chemigation systems are used, use 0.5 inch per acre of irrigation water except that for Low Energy Precision Application (LEPA) irrigation, use a minimum of 0.75 inch of water per acre.

MANDATORY SPRAY DRIFT MANAGEMENT

Aerial Applications:

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

SPRAY DRIFT ADVISORIES

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

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

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

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

BOOM HEIGHT – Ground Boom
• For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft
• Higher release heights increase the potential for spray drift.

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

TEMPERATURE AND HUMIDITY
• When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

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

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

Handheld Technology Applications:
• Take precautions to minimize spray drift

BUFFER ZONES
VEGETATIVE FILTER STRIPS

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

Only apply products containing 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).
    - For Western irrigated agriculture, if a sediment control basin is present, a vegetative filter strip is not required.
- In all other areas, a vegetative filter strip with a minimum width of 25 feet is required, unless the following conditions are met. The vegetative filter strip requirement may be reduced from 25 feet to 15 feet if at least one of the following applies:
    - The area of application is considered prime farmland (as defined in 7 CFR § 657.5).

- Conservation tillage is being implemented on the area of application. Conservation tillage is defined as any system that leaves at least 30% of the soil surface covered by residue after planting. Conservation tillage practices can include mulch-till, no-till, or strip-till.
- A functional terrace system is maintained on the area of application.
- Water and sediment control basins for the area of application are functional and maintained.
- The area of application is less than or equal to 10 acres.

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

For guidance, refer to the following publication for information on constructing and maintaining effective buffers:
• *Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services.* USDA, NRCS. 2000. Fort Worth, Texas. 21 pp.
http://www.in.nrcs. usda.gov/technical/agronomy/newconbuf.pdf.

BUFFER ZONE TO WATER BODIES

Ground Application

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

Ultra Low Volume (ULV) Aerial Application

- Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds). Applications made by mosquito control districts and other public health officials are exempt 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, natural ponds, estuaries, and commercial fish ponds).

Additional Requirements for Ground Application
Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.
For airblast applications, turn off outward-pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

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

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

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

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

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.

ROTATIONAL CROPS

If applying to crops for which Bifenthrin tolerances exist, the crops may be rotated at any time. All other crops may be rotated 30 days following the final application of **CSI 2 LB BIFEN EC**.

MIXING INSTRUCTIONS

The spray tank must be clean, thoroughly rinsed, and decontaminated before adding either **CSI 2 LB. BIFEN EC** alone or with tank mix combinations (see **CSI 2 LB. BIFEN EC in Tank Mixtures** section below). If water is used as the carrier, use clean water.

For aerial applications made on brassicas (see **CROPS** section of the label below for full list of approved brassicas), canola, crambe, rapeseed, foliar applications on corn, cucurbits (see **CROPS** section of the label below for full list of approved cucurbits), eggplant, grapes, head lettuce, and succulent peas and beans (see **CROPS** section of the label below for full list of approved succulent peas and beans), 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. For aerial applications made on cotton, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray. Thorough coverage is essential to achieve control.

CSI 2 LB. BIFEN EC Used Alone: When **CSI 2 LB. BIFEN EC** is used alone, add the labeled amount to the spray tank when the tank is half filled with water or other carrier; then add the rest of the water or other carrier (as permitted on this label). Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

CSI 2 LB. BIFEN EC with Fertilizer: Fill the spray tank approximately one-half full with water and/or liquid fertilizer, add the proper amount of **CSI 2 LB. BIFEN EC**, and then add the rest of the water and/or fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform spray mixture.

Perform a jar compatibility test with the appropriate ratio of **CSI 2 LB. BIFEN EC** and fertilizer to ensure the mixture will stay in solution. Maintain constant agitation during mixing and application.

CSI 2 LB. BIFEN EC in Tank Mixtures: If a tank mixture is used, perform a compatibility test before actual tank mixing. Test all untried mixtures using proper ratios and mixing sequences of all ingredients to be included in the mixture. Once compatibility is confirmed for the tank mix, fill the tank half full with water or other carrier. Start and continue agitation throughout mixing following conventional mixing order practices. **CSI 2 LB. BIFEN EC** may be applied in tank mixtures with other products approved for use on registered crops.

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.

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

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

How to Report Bee Kills

It is recommended that users contact both the state lead agency and the U.S. Environmental Protection Agency to report bee kills due to pesticide application. Bee kills can be reported to EPA at beekill@epa.gov. 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.

FOOD CROPS USE INSTRUCTIONS

ARTICHOKE

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Artichoke Plume Moth Cribrate Weevil	0.10	6.4	Apply when pest population reaches damaging threshold. Repeat as necessary to maintain control, but do not apply more than once every 15 days. **Ground Application:** Apply in water in a minimum of 75 gallons per acre as a full cover spray. **Air Application:** Apply in water in a minimum of 10 gallons per acre.

RESTRICTIONS:

- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year.
- Do not make more than 5 applications per acre per year.
- Minimum re-treatment interval (RTI) is 15 days.
- Do not apply within 5 days of harvest (PHI).

BRASSICAS

CROP	PEST	RATE		APPLICATION INSTRUCTIONS
		LB AI/A	FL OZ/A	
Head and Stem Brassica Vegetables: Broccoli Chinese Broccoli (gai lon, white flowering broccoli) Brussels Sprouts Cauliflower Cavalo Broccolo Kohlrabi Cabbage Chinese Cabbage (napa) Chinese Mustard Cabbage (gai choy)	Aphids Armyworms Corn Earworm Crickets Cucumber Beetle Cutworms Diamondback Moth Flea Beetle Ground Beetles Imported Cabbageworm Leafhoppers Loopers Saltmarsh Caterpillar Stink Bugs Thrips Tobacco Budworm Whitefly Wireworm (Adults)	0.033-0.10	2.1-6.4	**Ground Application:** Apply in water in a minimum of 10 gallons per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Emulsified oil may be substituted for water. See section entitled **MIXING INSTRUCTIONS** for details on the amount of oil to use in the spray tank in lieu of water.
	Banks Grass Mite Carmine Mite *Lygus* Spp. Pacific Spider Mite Twospotted Spider Mite	0.08-0.10	5.12-6.4	

RESTRICTIONS:

- Do not apply more than 0.5 lb active ingredient (32 ounces formulated) per acre per year.
- Do not make more than 5 applications after bloom.
- Do not apply within 7 days of harvest (PHI).
- Repeat applications if needed to maintain control, but do not make applications less than 7 days apart.

BUSHBERRIES[*]

CROP	PEST	RATE		APPLICATION INSTRUCTIONS
		LB AI/A	FL OZ/A	
Blueberry (highbush and lowbush) Currant Elderberry Gooseberry Huckleberry	Aphids Blueberry Maggot Fruitworms Japanese Beetle Leafhoppers Leaf Rollers Plum Curculio Spanworm	0.033-0.10	2.1-6.4	**Ground application:** Apply in water in a minimum of 10 gallons per acre. **Air application:** Apply in water in a minimum of 2 gallons per acre.
	Twospotted Spider Mite, Carmine Mite, Pacific Spider Mite, *Lygus* spp.	0.08-0.10	5.12-6.4	

RESTRICTIONS:

- Do not apply more than 0.5 lb active ingredient (32 fluid ounces formulated) per acre per year.
- Do not make more than 5 applications per year.
- Do not apply within 1 day of harvest (PHI).
- Do not make applications less than 7 days apart.

[*Not for Use in California]

CANEBERRIES

CROP	PEST	RATE		APPLICATION INSTRUCTIONS
		LB AI/A	FL OZ/A	
Caneberries: Blackberries Bingleberries Dewberries Loganberries Lowberries Marionberries Olallieberries Raspberries Youngberries	Leafrollers Orange Tortrix Root Weevils	0.05-0.10	3.2-6.4	**Ground Application:** Apply in water in a minimum of 50 gallons per acre. **Air Application:** Apply in water in a minimum of 10 gallons per acre. One application may be made pre-bloom and a second application may be made post bloom.
	Spider Mites	0.10	6.4	

RESTRICTIONS:

- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per year.
- Do not make more than 2 applications per year.
- Do not apply within 3 days of harvest (PHI).

CANOLA, CRAMBE, RAPESEED

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Aphids Armyworms Cutworms Diamondback Moth Flea Beetles Flea Hoppers Grasshoppers	0.033-0.04	2.1-2.6	**Ground Application:** Apply in water in a minimum of 10 gallons per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Emulsified oil may be substituted for water. See section entitled **MIXING INSTRUCTIONS** for details on the amount

Loopers *Lygus* Bugs Other Lepidopterous Larvae Plant Bugs Seedpod Weevil Stink Bugs Thrips Whitefly			of oil to use in the spray tank in lieu of water.
RESTRICTIONS: • Do not apply more than 0.08 lb. active ingredient (5.12 ounces formulated) per acre per year. • Do not make more than 2 applications per year. • Do not apply within 35 days of harvest (PHI). • Repeat applications if needed to maintain control, but do not make applications less than 14 days apart.			

CHRISTMAS TREES (For use only in Washington and Oregon)

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Root Weevil Spruce Spider Mite	0.06-0.10	3.9-6.4	**Ground Application:** Apply in water in a minimum of 20 gallons per acre. **Air Application:** Apply in water in a minimum of 5 gallons per acre. **CSI 2 LB. BIFEN EC** is usually not phytotoxic to Christmas trees. However, make applications to a small representative group of plants to ensure that a particular variety grown under current conditions is not unusually sensitive to **CSI 2 LB. BIFEN EC**.
RESTRICTIONS: • Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per year. • Do not make more than 2 foliar applications of bifenthrin (all products) per year. • Do not make applications through irrigation systems. • Do not apply more often than once every 21 days.			

CILANTRO, CORIANDER

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Aphids Beet Armyworm Cabbage Looper Cutworm Flea Beetle Grasshoppers Leafminer Saltmarsh caterpillar Spotted Cucumber Beetle Thrips Whitefly	0.033-0.10	2.1-6.4	**Ground Application:** Apply in water in a minimum of 10 gallons per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Apply in sufficient water to obtain thorough coverage.
Two Spotted Spider Mite	0.08-0.10	5.12-6.4	
RESTRICTIONS: • Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year. • Do not make applications less than 7 days apart. • Do not make more than 5 applications per year. • Do not apply within 3 days of harvest (PHI).			

CITRUS (Except Florida)*

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Asian Cockroach Diaprepes Root Weevil *(Diaprepes abbreviatus),* Fire Ants	0.25 – 0.50	16-32	**Ground Application:** Apply in water in a minimum of 30 gallons per acre. Use a handgun or shielded sprayer to apply to individual citrus trees if they are not planted in solid rows. Diaprepes root weevil emergence generally occurs in the spring, but weather conditions can prompt a second emergence in the fall. In areas where only a spring emergence is expected, use 32 ounces of **CSI 2 LB. BIFEN EC**. In areas where a second emergence is expected, use 16 ounces of **CSI 2 LB. BIFEN EC** in the early season and 16 ounces of **CSI 2 LB. BIFEN EC** later in the season. If the length of control of **CSI 2 LB. BIFEN EC** is not sufficient to cover the emergence of the root weevil, use other pest control measures from State Agricultural Extension Specialists or other local experts. *Use in California not permitted unless accompanied by a supplemental label. This product must be used in accordance with the directions for use on this label, or exemptions under FIFRA (FIFRA Section 18 exemptions, FIFRA 2(ee) Bulletins).

RESTRICTIONS:

- Do not apply through irrigation systems.
- Do not allow any application of **CSI 2 LB. BIFEN EC** to contact fruit or foliage.
- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year.
- Do not make more than 2 applications per year.
- Do not apply by air.
- Ground application only.
- Do not apply within 1 day of harvest (PHI).

CITRUS (Florida only)

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Blue Green Citrus Root Weevil *(Pachnaeus opalus)* Brown Leaf Notcher *(Epicaerus mexicanus)* Diaprepes Root Weevil *(Diaprepes abbreviatus)* Little Leaf Notcher *(Artipus floridanus)* Southern Blue Green Citrus Root Weevil *(Pachnaeus Litus)*	0.25-0.50	16-32	**Ground Application:** Apply in water in a minimum of 40 gallons per acre. Greater spray volumes increase uniformity of coverage. Also coverage uniformity may be aided by using a pre-and post-irrigation application. Use a handgun or shielded sprayer to apply to individual citrus trees if they are not planted in solid rows. All citrus root weevils have a similar life cycle. They have three immature stages: egg, larva, and pupa. Adult weevils emerge from the soil and lay eggs on host plants above ground, the larvae enter the soil to feed on roots, and the pupae and teneral adult stages are spent below ground.

Asian Cockroach, Fire Ants	0.1-0.25	6.4-16	Adults emerge beneath citrus trees throughout the year. Time **CSI 2 LB. BIFEN EC** application during peak adult emergence. Peak adult emergence varies within and among species and by region. Peak emergence for the blue- green root weevil is normally April and May. Diaprepes adult emergence from the soil appears to be triggered by the onset of regular rainfall events and can have two emergence peaks, in mid-May to mid-July and/or late-August to mid-October. The second peak is variable and may relate to host plant availability. Little leaf notcher has three generations per year. Although there is considerable overlap of generations, adults appear most abundant in April/May, July/August, and October/November. For best control of emerging root weevils, apply **CSI 2 LB. BIFEN EC** to the soil beneath the citrus trees from the trunk to the drip line of the tree. **CSI 2 LB. BIFEN EC** protects citrus tree roots from citrus root weevils by forming a barrier which provides contact activity on neonate larvae when they fall to the ground shortly after hatching from eggs which were oviposited in the citrus tree foliage. Once application is made, be careful not to disturb the treated soil. In areas where only a spring emergence is expected, use 32 ounces of **CSI 2 LB. BIFEN EC**. In areas where a second emergence is expected, use 16 ounces of **CSI 2 LB. BIFEN EC** in the early season and 16 ounces of **CSI 2 LB. BIFEN EC** later in the season. If the length of control of **CSI 2 LB. BIFEN EC** is not sufficient to cover the emergence of the root weevil, use other pest control measures from State Agricultural Extension Specialists or other local experts.

RESTRICTIONS:

- Do not apply through irrigation systems.
- Do not allow any application of **CSI 2 LB. BIFEN EC** to contact fruit or foliage.
- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year.
- Do not make more than 2 applications per year.
- Do not apply by air.
- Ground application only.
- Do not apply within 1 day of harvest (PHI).

CONIFER SEED ORCHARDS
(For Use Only in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, South Carolina, Tennessee, Texas, Virginia)

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Cone Worms Seed Bugs Seed Worms	0.1-0.2	6.4-12.8	**Ground Application:** Apply in water in a minimum of 100-500 gallons per acre **Air Application:** Apply in water in a minimum of 10 gallons per acre or 0.5 gallon refined vegetable oil per acre. Apply in sufficient water to obtain thorough coverage. Begin applications 7 days after peak pollen flight and continue on 30-day intervals up to a maximum of 0.6 Ib. active per acre per year.

RESTRICTIONS:

- Do not apply more than 0.6 lb ai/A (38.4 fl oz/A) per year.
- Do not make more than six applications per year.
- Do not make applications less than 30 days apart.

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

PEST	RATE		APPLICATION INSTRUCTIONS
Corn Rootworm Larvae Northern Southern Western	0.0046 pound active per 1000 linear feet of row	0.30 fluid ounces per 1000 linear feet of row	**Ground Application:** Apply in water in a minimum of 3 gallons per acre. For use on corn at planting, apply a 5- inch to 7 inch T-band over the open seed furrow. Center the spray nozzle over the row behind the planter shoe in front of the press wheel. In-furrow pop-up fertilizers may be used alone or in tank mixtures with **CSI 2 LB. BIFEN EC**. See the section entitled **MIXING INSTRUCTIONS**, **CSI 2 LB. BIFEN EC with Fertilizer** for additional instructions and precautions when mixing with fertilizers.
Army Cutworm Cutworm Species Grubs Seedcorn Beetle Seedcorn Maggot True Armyworm or Armyworm Species Wireworms	0.0023 to 0.0046 pound active per 1000 linear feet of row	0.15 to 0.30 fluid ounces per 1000 linear feet of row	

RESTRICTIONS:

- Do not apply to soil where there is greater than 30% cover of crop residue remaining.
- Do not graze livestock in treated area or cut treated crops for feed within 30 days of treatment.
- Do not apply more than 0.1 lb. active ingredient (6.4 ounces formulated) per acre per year as an at plant application.
- Do not apply within 30 days of harvest (PHI).

Row Spacings (inches)[1]	**40**	**38**	**36**	**30**
CSI 2 LB. BIFEN EC (pounds ai per acre)	0.060	0.064	0.069	0.080
CSI 2 LB. BIFEN EC (formulated ounces per acre)	3.9	4.1	4.4	5.12

[1]Use this table to determine the **CSI 2 LB. BIFEN EC** needs per acre.

CORN: FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED (PRE & PPI)

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Armyworm spp. Black Cutworm Seedcorn Maggot Stalkborer White Grub Wireworm	0.047 to 0.062 Pre-Plant Incorporated (PPI)	3 to 4 Pre-Plant Incorporated (PPI)	**Ground Application:** Apply in water in a minimum of 3 gallons per acre. Use the labeled rate as a preplant incorporated treatment either alone or in tank mix combination with registered preplant incorporated herbicides. Incorporate **CSI 2 LB. BIFEN EC** to the intended planting depth, but no deeper than 3 inches. The 3 to 4 oz. rate must be applied as PPI and can be tank mixed and applied with PPI herbicides. Apply the 2.56 oz. rate PRE and can be tank mixed and applied with PRE herbicides.
Black Cutworm Armyworm spp. Stalkborer	0.040 lb/ai per acre Pre-emergence (PRE)	2.56 fl. oz. per acre Pre-emergence (PRE)	

RESTRICTIONS

- Do not apply more than 0.3 lb ai/A per year including, at-plant, PRE, PPI, and foliar applications.
- Do not apply within 30 days of harvest.
- Do not graze livestock in treated areas or cut treated crops for feed within 30 days of the last application.
- Use of ultra low volume (ULV) application on corn is prohibited.
- Do not make aerial or ground applications to corn if heavy rainfall is imminent.

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

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Aphids Army Cutworm Beet Armyworm Cereal Leaf Beetle Chinch Bug Common Stalk Borer Corn Earworm Corn Rootworm Adult Cucumber Beetle Adult Cutworm Species European Corn Borer Fall Armyworm Flea Beetle Grasshoppers Greenbug Japanese Beetle Adult Sap Beetle Southern Armyworm Southern Corn Leaf Beetle Southwestern Corn Borer Stink Bugs Tarnished Plant Bug True Armyworm or Armyworm Species Webworms Western Bean Cutworm Yellowstriped Armyworm	0.033-0.10	2.1-6.4	**Ground Application:** Apply in water in a minimum of 10 gallons per acre except see specific comment below for TX, NM, OK, and AZ mite control. **Air Application**: Apply in water in a minimum of 2 to 5 gallons per acre except see specific comment below for TX, NM, OK, and AZ mite control. In all states, insect control will be improved by increasing the finished spray per acre to 5 gallons. In Texas, New Mexico, Oklahoma, and Arizona, use a minimum of 10 gallons of water per acre by ground and 5 gallons of water per acre by air when making applications to control mites. Emulsified oil may be substituted for water. See section entitled **MIXING INSTRUCTIONS** for details on the amount of oil to use in the spray tank in lieu of water. Make applications of **CSI 2 LB. BIFEN EC** as necessary to maintain control being careful not to exceed reapplication intervals or maximum labeled rates specified in this section. For pests which attack the ear, apply just before silking. For corn borer control, make application just before or at egg hatch. For mite control, apply when colonies first form prior to leaf damage and before they disperse into the canopy (for Banks Grass Mite-before dispersal into the upper 2/3 of the plant). Use higher labeled rates of **CSI 2 LB. BIFEN EC** when pest pressure is severe or crop is under stress from drought and/or heat. When these conditions exist, use tank mixtures with dimethoate for good control. For control of other insect pests: Apply when pests first appear and repeat as necessary. 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 **Twospotted Spider Mite** and **Carmine Mite** control, apply when colonies first form prior to leaf damage or discoloration and before widespread mite dispersal throughout the canopy. Use higher labeled rates 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. **For Mite Control In Texas, New Mexico, Oklahoma, and Arizona:** 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.
Banks Grass Mite Carmine Mite Twospotted Spider Mite	0.08-0.10	5.12-6.4	

Restrictions:

- Do not apply more than 0.3 lb. active ingredient (19.2 ounces formulated) per acre per year including PRE and PPI, at-planting, plus foliar applications.
- Use of **CSI 2 LB. BIFEN EC** on corn is prohibited in all coastal counties.
- Do not make more than 3 foliar applications per year.
- Do not graze livestock in treated areas or cut treated crops for feed within 30 days of the last application.

- Use of ultra low volume (ULV) application on corn is prohibited.
- Do not make aerial or ground applications to corn if heavy rainfall is imminent.
- Do not apply within 30 days of harvest (PHI).

CORN: SWEET CORN, SWEET CORN GROWN FOR SEED
(AT PLANTING)

PEST	RATE		APPLICATION INSTRUCTIONS
Corn Rootworm Larvae Northern Southern Western	0.0046 pound active per 1,000 linear feet of row	0.30 fluid ounces per 1,000 linear feet of row	**Ground Application:** Apply in water in a minimum of 3 gallons per acre. For use on corn at planting, apply in a 5- inch to 7-inch T-band over the open seed furrow. Center the spray nozzle over the row behind the planter shoe in front of the press wheel. In-furrow pop-up fertilizers may be used alone or in tank mixtures with **CSI 2 LB. BIFEN EC**. See the section entitled **MIXING INSTRUCTIONS**, **CSI 2 LB. BIFEN EC with Fertilizer** for additional instructions and precautions when mixing with fertilizers.
Army Cutworm Cutworm Species Grubs Seedcorn Beetle Seedcorn Maggot True Armyworm or Armyworm Species Wireworms	0.0023 to 0.0046 pound active per 1,000 linear feet of row	0.15 to 0.30 fluid ounces per 1,000 linear feet of row	

RESTRICTIONS:

- Do not apply to soil where there is greater than 30% cover of crop residue remaining.
- Do not graze livestock in treated area or cut treated crops for feed within 30 days of treatment.
- Do not apply more than 0.1 lb. active ingredient (6.4 ounces formulated) per acre per year as an at plant application.
- Do not apply within 30 days of harvest (PHI).

Row Spacings (inches) [1]	**40**	**38**	**36**	**30**
CSI 2 LB. BIFEN EC(pounds ai per acre)	0.060	0.064	0.069	0.080
CSI 2 LB. BIFEN EC(formulated ounces per acre)	3.9	4.1	4.4	5.12

[1]Use this table to determine the **CSI 2 LB. BIFEN EC** needs per acre.

CORN: SWEET CORN, SWEET CORN GROWN FOR SEED (FOLIAR)

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Aphids Army Cutworm Beet Armyworm Cereal Leaf Beetle Chinch Bug Common Stalk Borer Corn Earworm Corn Rootworm Adult Cucumber Beetle Adult Cutworm Species European Corn Borer Fall Armyworm Flea Beetle Grasshoppers Greenbugs Japanese Beetle Adult Sap Beetle Southern Armyworm Southern Corn Leaf Beetle Southwestern Corn Borer Stink Bugs Tarnished Plant Bug True Armyworm or Armyworm Species Webworms Western Bean Cutworm Yellowstriped Armyworm	0.033-0.10	2.1-6.4	**Ground Application:** Apply in water in a minimum of 10 gallons per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Emulsified oil may be substituted for water. See section entitled **MIXING INSTRUCTIONS** for details on the amount of oil to use in the spray tank in lieu of water. Make applications of **CSI 2 LB. BIFEN EC** as necessary to maintain control being careful not to exceed reapplication intervals or maximum labeled rates specified in this section. For pests which attack the ear, apply just before silking. For corn borer control, make application just before or at egg hatch. For mite control, apply when colonies first form prior to leaf damage and before they disperse into the canopy (for Banks Grass Mite - before dispersal into the upper 2/3 of the plant). Use higher labeled rates of **CSI 2 LB. BIFEN EC** when pest pressure is severe or crop is under stress from drought and/or heat. When these conditions exist, use tank mixtures with dimethoate for acceptable control.
Banks Grass Mite Carmine Mite Twospotted Spider Mite	0.08-0.10	5.12-6.4	

RESTRICTIONS:

- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per year.
- Do not make more than 2 foliar applications per year.
- Do not graze livestock in treated areas or cut treated crops for feed within 1 day of the last application.
- Use of ultra low volume (ULV) application on corn is prohibited.
- Do not make aerial or ground applications to corn if heavy rainfall is imminent.
- Do not apply within 1 day of harvest (PHI).

COTTON

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	**FL OZ/A**	
European Corn Borer Soybean (Banded) Thrips Tobacco Thrips	0.02-0.10	1.3-6.4	**Ground Application**: Apply in water in a minimum of 5 gallons per acre. **Air Application**: Apply in water in a minimum of 1 gallon per acre. Emulsified oil may be substituted for water. See section entitled **MIXING INSTRUCTIONS** for details on the amount of oil to use in the spray tank in lieu of water. **ULV Application:** Apply in a minimum of 1 quart per acre using refined vegetable oil with aircraft calibrated to give adequate coverage. Make applications of **CSI 2 LB. BIFEN EC** as necessary to maintain control being careful not to exceed reapplication intervals or maximum labeled rates specified in this section. **To Control Boll Weevil:** Apply **CSI 2 LB. BIFEN EC** at 3- to 4-day intervals until pest populations are reduced below economic threshold levels. **To Control Mites and Aphids:** Apply when pests first appear. Repeat as necessary to maintain control without exceeding maximum labeled application rates and reapplication intervals. Use higher labeled rates when an economic threshold has been established.
Boll Weevil Bollworm Cabbage Looper Cotton Aphid Cotton Fleahopper Cotton Leafperforator Cutworms Fall Armyworm Plant Bugs Saltmarsh Caterpillar Southern Garden Leafhopper Stink Bugs Tobacco Budworm Whitefly Yellowstriped Armyworm	0.04-0.10	2.6-6.4	
Beet Armyworm Carmine Spider Mite *Lygus* spp. Pink Bollworm Twospotted Spider Mite	0.06-0.10	3.8-6.4	

RESTRICTIONS:

- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year.
- Do not make more than 24 applications per acre per year when using reduced application rates.
- Do not graze livestock in treated areas or cut treated crops for feed.
- Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season. Synthetic pyrethroid products include Ambush®, Ammo®, Asana® XL, Baythroid®, Capture®, Danitol®, Karate®, Mustang®, and Scout X-TRA®.
- Do not apply within 14 days of harvest (PHI).
- Minimum re-treatment interval (RTI) is 3 days.

CUCURBITS

CROP	PEST	RATE		APPLICATION INSTRUCTIONS
		LB AI/A	FL OZ/A	
Chayote (fruit) Chinese waxgourd (Chinese preserving melon) Citron Melon Cucumber Gherkin Edible Gourd, [(hyotan, cucuzza), *Luffa* spp. (hechima, Chinese okra), *Momordica* spp. (balsam apple, balsam pear, bitter melon, Chinese cucumber)] Muskmelon (hybrids and/or cultivars of *Cucumis melo*) (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 spp*.) Squash, summer (crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), Squash, winter (butternut squash, calabaza, hubbard squash (*C. mixta; C. pepo)* acorn squash, spaghetti squash) Watermelon (hybrids and/ or varieties of *Citrullus* spp.)	Aphids Armyworms Cabbage Looper Corn Earworm Cucumber Beetles Cutworms Grasshoppers Leafhoppers Melonworms Pickleworms Rindworms Squash Bugs Squash Vine Borer Stink Bugs Tobacco Budworm	0.04-0.10	2.6-6.4	**Ground Application:** Apply in water in a minimum of 20 gallons per acre. **Air Application:** Apply in water in a minimum of 5 gallons per acre. Emulsified oil may be substituted for water. See section entitled **MIXING INSTRUCTIONS** for details on the amount of oil to use in the spray tank in lieu of water.
	Whitefly Banks Grass Mite Twospotted Spider Mite Carmine Mite *Lygus* spp.	0.08-0.10	5.12-6.4	

RESTRICTIONS:

- Do not apply more than 0.3 lb. active ingredient (19.2 ounces formulated) per acre per year.
- Do not make more than 3 applications per year
- Do not make more than two applications after bloom.
- Repeat applications if needed to maintain control, but do not make applications less than 7 days apart.
- Do not apply within 3 days of harvest (PHI).

DRIED BEANS AND PEAS

CROP	PEST	RATE		APPLICATION INSTRUCTIONS
		LB AI/A	FL OZ/A	
Dried cultivars of Bean (*Lupinus spp.)* Grain Lupin Sweet Lupin White Lupin White Sweet Lupin **Bean** *(Phaseolus spp.)* Field Bean Kidney Bean Lima Bean (dry) Navy Bean Pinto Bean Tepary Bean **Bean** (*Vigna spp.*) Adzuki Bean Blackeyed Pea Catjang Cowpea Crowder Pea Moth Bean Mung Bean Rice Bean Southern Pea Urd Bean Broad bean (dry) Chickpeas Guar Lablab Bean Lentils **Pea** (*Piscum spp.)* Field Pea Pigeon Pea	Banks Grass Mite Twospotted Spider Mite Carmine Mite *Lygus* spp.	0.08 to 0.10	5.12 to 6.4	**Ground Application:** Apply in water in a minimum of 10 gallons per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Emulsified oil may be substituted for water. See section entitled **MIXING INSTRUCTIONS** for details on the amount of oil to use in the spray tank in lieu of water. Thorough coverage is essential to achieve control.
	Aster Leafhopper Flea Beetle Grasshoppers Leafhoppers	0.025 to 0.10	1.6 to 6.4	
	Aphids Beet Armyworm Fall Armyworm Southern Armyworm Yellowstriped Armyworm Bean Leaf Beetle Cucumber Beetles Japanese Beetle Adult Sap Beetle Plant Bug Stink Bugs Tarnished Plant Bug Alfalfa Caterpillar Cloverworm European Corn Borer Cutworms Western Bean Cutworm Corn Earworm Loopers Corn Rootworm Adults Thrips Webworms Pea Weevil Pea Leaf Weevil Whitefly Imported Cabbageworm Saltmarsh Caterpillar Tobacco Budworm Leafminer	0.033 to 0.10	2.1 to 6.4	

RESTRICTIONS:

- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) to peas or 0.3 lb ai/A (19.2 fl oz/A) to beans per year.
- Do not make more than 2 applications to peas and 3 applications to beans per year.
- Do not make applications less than 7 days apart.
- Do not apply within 14 days of harvest (PHI).

FRUITING VEGETABLES

CROP	PEST	RATE		APPLICATION INSTRUCTIONS
		LB AI/A	FL OZ/A	
Eggplant Groundcherry Pepino Pepper (Bell & Non-Bell)	Armyworms (including Beet Armyworm, Fall Armyworm, Southern Yellowstriped Armyworm) Cabbage Loopers Colorado Potato Beetle Corn Earworm Cucumber Beetles European Corn Borer Flea Beetles Leafminers Loopers Pepper weevil Plant Bugs Stink Bugs Thrips Tomato Hornworm Tomato Pinworm Vegetable Leafminer Whitefly	0.033 to 0.10	2.1 to 6.4	**Ground Application:** Apply in water in a minimum of 10 gallons per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. When applying by air, emulsified oil may be substituted for water, See section entitled **MIXING INSTRUCTIONS** for details on the amount of oil to use in the spray tank in lieu of water.
	Banks Grass Mite Broad Mite Carmine Mite *Lygus* spp Pacific Spider Mite Twospotted Spider Mite	0.08 to 0.10	5.12 to 6.4	

RESTRICTIONS:

- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per year.
- Do not make more than 2 applications per year.
- Do not apply within 7 days of harvest (PHI).

Tomatoes Tomatillo	Aphids Armyworms (including Beet Armyworm, Fall Armyworm, Southern Yellowstriped Armyworm) Bean Leaf Beetle Cabbageworms Carmine Mite Cloverworm Corn Earworm Corn Rootworm Cucumber Beetle Cutworms Diamondback Moth European Corn Borer Flea Beetles Flea Hoppers Grasshoppers Japanese Beetle (Adult) Leafhoppers Loopers *Lygus* spp. Melonworms Pea Weevil	0.033 to 0.08	2.1 to 5.2	**Ground Application:** Apply in water in a minimum of 15 gallons per acre. **Air Application:** Apply in water in a minimum of 3 gallons per acre.

	Pea Leaf Weevil Pickleworms Plant Bugs Rindworms Salt Marsh Caterpillar Sap Beetle Seedpod Weevil Squash Bugs Stink Bug spp. Tobacco Budworm Tarnished Plant Bug Thrips Whitefly			
	Twospotted Spider Mite	0.08 to 0.10	5.12 to 6.4	

RESTRICTIONS:

- Do not apply more than 0.1 lb ai/A (6.4 fl oz/A) per application.
- Do not apply more than 0.4 lb ai/A (25.6 fl oz/A) per year.
- To maintain a proper spray interval, do not make applications less than 10 days apart.
- Do not make more than 4 applications per year.
- Do not apply within 1 day of harvest (PHI).

GRAPES

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Cutworms[*] Eastern Grape Leafhopper Grape berry moth[*] Japanese beetles adults[*] Variegated Leafhopper Western Grape Leafhopper	0.05 to 0.10	3.2 to 6.4	**Ground Application:** Apply in water in a minimum of 25 gallons per acre. **Air Application:** Apply in water in a minimum of 10 gallons per acre. Emulsified oil may be substituted for water. See section entitled MIXING INSTRUCTIONS for details on the amount of oil to use in the spray tank in lieu of water. When pest pressure is moderate to severe, use the higher labeled rate.
Black Vine Weevil Glassywinged Sharpshooter Twospotted Spider Mite	0.10	6.4	

RESTRICTIONS:

- Do not apply more than 0.1 lb. active ingredient (6.4 ounces formulated) per acre per year.
- Do not make more than 1 application per year.
- Do not apply within 30 days of harvest (PHI).

[*Not for Use in California]

HOPS

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Aphids Armyworms Cutworms Leafrollers Loopers	0.06-0.10	3.8-6.4	**Ground Application**: Apply in water in a minimum of 100 – 150 gallons per acre in early season; 200-250 gallons per acre late season. **Air Application:** Apply in water in a minimum of 10 gallons per acre. Make a directed spray up the vine 3 feet and the soil surface 1.5 to 2 feet on either side of the plant to control root weevil.
Root Weevils	0.05-0.10	3.2-6.4	
Twospotted Spider Mite	0.10	6.4	

RESTRICTIONS:

- Do not apply more than 0.1 lb. active ingredient (6.4 ounces formulated) per acre per application.
- Do not apply more than 0.3 lb. active ingredient (19.2 ounces formulated) per acre per year.
- Do not make more than 3 applications per year.
- To maintain a proper spray interval, do not make applications less than 21 days apart.
- Use of ultra low volume (ULV) application on hops is prohibited.
- Do not apply within 14 days of harvest (PHI).

LEAFY BRASSICAS AND TURNIP GREENS

CROP	PEST	RATE		APPLICATION INSTRUCTIONS
		LB AI/A	FL OZ/A	
Broccoli Raab Bok Choy Kale Mizuna Mustard Greens Mustard Spinach Rape Greens Turnip Greens*	Aphids Armyworms Corn Earworm Crickets Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Grasshoppers Ground Beetles Imported Cabbageworm Japanese Beetle (adult) Leafhoppers Loopers Saltmarsh Caterpillar Stink Bugs Thrips Tobacco Budworm Whitefly Wireworm (adults)	0.033 to 0.10	2.1 to 6.4	**Ground Application:** Apply in water in a minimum of 10 gallons per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Emulsified oil may be substituted for water. See section entitled **MIXING INSTRUCTIONS** for details on the amount of oil to use in the spray tank in lieu of water. Thorough coverage is essential to achieve control. * Not for use in California.
	Banks Grass Mite Twospotted Spider Mite Carmine Mite Pacific Spider Mite *Lygus* spp.	0.08 to 0.10	5.12 to 6.4	

RESTRICTIONS:

- Do not apply more than 0.4 lb. active ingredient (25.6 ounces formulated) per acre per year.
- Do not make more than 4 applications per year.
- Repeat applications if needed to maintain control, but do not make applications less than 7 days apart.
- Do not apply within 7 days of harvest (PHI).

LEAFY PESTIOLE VEGETABLES

CROP	PEST	RATE		APPLICATION INSTRUCTIONS
		LB AI/A	FL OZ/A	
Cardoon Celery Celtuce Chinese Celery Florence Fennel Rhubarb Swiss Chard	Aphids Armyworms Corn Earworm Crickets Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Ground Beetles Leafhoppers Loopers Stink Bugs Thrips Wireworm (Adults)	0.033 to 0.10	2.1 to 6.4	**Ground Application:** Apply in water in a minimum of 10 gallons per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Thorough coverage is essential to achieve control.
	Carmine Mite *Lygus* spp. Pacific Spider Mite Twospotted Spider Mite	0.08 to 0.10	5.12 to 6.4	

RESTRICTIONS:

- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year.
- Do not make more than 5 applications per year.
- Repeat applications if needed to maintain control, but do not make applications less than 7 days apart.
- Do not apply within 7 days of harvest (PHI).

LETTUCE, HEAD

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Aphids Armyworms Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetle Imported Cabbageworm Leafhoppers Loopers Salt Marsh Caterpillar Stink Bug spp. Tobacco Budworm Whitefly	0.033-0.10	2.1-6.4	**Ground Application:** Apply in water in a minimum of 15 gallons per acre. **Air Application:** Apply in water in a minimum of 5 gallons per acre. Emulsified oil may be substituted for water. See section entitled **MIXING INSTRUCTIONS** for details on the amount of oil to use in the spray tank in lieu of water.
Carmine Mite *Lygus* spp. Twospotted Spider Mite	0.08-0.10	5.12-6.4	

RESTRICTIONS:

- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year.
- Do not make more than 5 applications per year.
- Do not apply within 7 days of harvest (PHI).

MAYHAW*

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Plum Curculio	0.08 -0.10	5.12 -6.4	**Ground Application:** Apply in water in a minimum of 28 gallons of finished spray per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Apply in sufficient water to obtain uniform coverage as needed.

RESTRICTIONS:

- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per year.
- Do not make more than 2 applications per year.
- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply within 30 days of harvest (PHI).

*Not registered for use in California unless accompanied by a supplemental label.

OKRA

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Aphids Armyworms Corn Earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Japanese Beetle (Adult) Leafminers Loopers Stink bugs Thrips Whitefly	0.033 – 0.10	2.1 – 6.4	**Ground Application:** Apply in water in a minimum of 10 gallons of finished spray per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Apply in sufficient water to obtain uniform coverage as needed.
Broad Mite Carmine Mite *Lygus* spp. Two Spotted Spider Mite	0.08 – 0.10	5.12 – 6.4	

RESTRICTIONS:

- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply more than 0.20 lb. active ingredient (12.8 ounces formulated) per acre per year.
- Do not make more than 2 applications per year.
- Do not apply within 7 days of harvest (PHI).

PEANUT *

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/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	0.033 -0.1	2.1 - 6.4	**Ground Application:** Apply in water in a minimum of 10 gallons of finished spray per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Apply in sufficient water to obtain uniform coverage as needed.

Threecornered Alfalfa Hopper Velvetbean Caterpillar Yellowstriped Armyworm			
Aphids Spider Mites Thrips Whitefly	0.06 - 0.1	3.8 - 6.4	

RESTRICTIONS:

- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year.
- Do not make more than 5 applications per year.
- To maintain a proper spray interval, do not make applications less than 14 days apart.
- Do not feed immature plants and peanut hay to livestock.
- Do not apply within 14 days of harvest (PHI).

* Not for Use in California.

PEARS

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Aphids Codling Moth Cutworms Green Fruitworm Leafhoppers Leafminers Leafrollers *Lygus* spp. Plant Bugs Plum Curculio San Jose Scale (Crawlers) Stink Bugs Tarnished Plant Bugs	0.04 – 0.2	2.6 – 12.8	**Ground Application:** Apply in water in a minimum of 200 gallons per acre (dilute) and 50 gallons per acre (concentrate). **Air Application:** Apply in water in a minimum of 10 gallons per acre by air.
Twospotted Spider Mite Yellow Mite	0.06 – 0.2	3.8 – 12.8	
European Red Mite	0.08 – 0.2	5.12 – 12.8	

RESTRICTIONS:

- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year with no more than 0.45 (28.8 ounces formulated) pound active per acre applied after petal fall.
- Do not make more than 3 applications per year.
- To maintain a proper spray interval, do not make applications less than 30 days apart.
- Do not graze livestock in treated orchards or cut treated cover crops for feed.
- Do not apply within 14 days of harvest (PHI).

ROOT CROPS (except Sugar Beets)

CROP	PEST	RATE		APPLICATION INSTRUCTIONS
		LB AI/A	FL OZ/A	
Burdock, edible Carrot Celeriac Chervil, Turnip rooted Chicory Ginseng Horseradish Parsley, Turnip rooted Parsnip Radish Radish, Oriental Rutabaga Salsify Salsify, Black Salsify, Spanish Skirret Turnip	Aphids Beet Armyworm Celery Leaftier Corn Earworm Cross-Striped Cabbageworm Cutworm species 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	0.08 -– 0.10	5.12 -– 6.4	**Ground Application:** Apply in water in a minimum of 25 gallons of finished spray per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Apply in sufficient water to obtain uniform coverage as needed.

RESTRICTIONS:

- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year.
- Do not make more than 5 applications per year.
- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply within 21 days of harvest (PHI).

CROP	PEST	RATE		COMMENTS
		LB AI/A	FL OZ/A	
Garden Beet	Aphids Fire Ants Flea Beetles Lepidopterous Larvae Spider Mites Whitefly	0.08 - 0.10	5.12 - 6.4	**Ground Application:** Apply in water in a minimum of 25 gallons of finished spray per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Apply in sufficient water to obtain uniform coverage as needed.

RESTRICTIONS:

- Do not apply more than 0.40 lb. active ingredient (25.6 ounces formulated) per acre per year.
- Do not make more than 4 applications per year.
- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply within 1 day of harvest (PHI).

SOYBEANS

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Alfalfa Caterpillar Aphids Aster Leafhopper Bean Leaf Beetle Beet Armyworm* Cloverworm Corn Earworm Corn Rootworm Adult Cucumber Beetles Cutworms European Corn Borer Fall Armyworm Flea Beetle Grasshoppers Imported Cabbageworm Japanese Beetle Adult Leafhoppers Leafminers Loopers Mexican Bean Beetle Adult Pea Leaf Weevil Pea Weevil Plant Bug Saltmarsh Caterpillar Sap Beetle Southern Armyworm Soybean Aphid Stink Bugs Tarnished Plant Bug Thrips Tobacco Budworm* Webworms Western Bean Cutworm Whitefly Yellowstriped Armyworm	0.033 – 0.10	2.1 – 6.4	**Ground Application:** Apply in water in a minimum of 10 gallons per acre. **Air Application:** Apply in water in a minimum of 2 gallon per acre. *Pyrethroid resistance is common for Beet Armyworm and Tobacco Budworm. Consult your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and/or IPM guidance for the specific site and resistant pest problems.
Lygus spp. Whitefly Twospotted Spider Mite	0.08 – 0.10	5.12 – 6.4	

RESTRICTIONS:

- To maintain a proper spray interval, do not make applications less than 30 days apart.
- Do not apply more than 0.3 lb. active ingredient (12.8 ounces formulated) per acre per year.
- Do not make more than 3 applications per year.
- Do not apply within 18 days of harvest (PHI).

SPINACH

PESTS	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Armyworms Colorado Potato Beetle Corn Earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Leafminers Loopers Pepper Weevil	0.033 – 0.10	2.1 – 6.4	**Ground Application:** Apply in water in a minimum of 10 gallons per acre. **Air Application:** Apply in water in a minimum of 5 gallons per acre. For whitefly and fire ant control either at planting or as a foliar treatment, apply up to 6.4 oz. (0.1 lb. active) per acre being careful not to exceed reapplication intervals or maximum labeled rates specified in this section.

Thrips Tomato Hornworm Tomato Pinworm Whitefly			
Banks Grass Mite Broad Mite Carmine Mite Fire Ants *Lygus* spp. Pacific Spider Mite Twospotted Spider Mite	0.08 – 0.10	5.12 – 6.4	

RESTRICTIONS:

- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply more than 0.4 lb. active ingredient (25.6 ounces formulated) per acre per year.
- Do not make more than 4 applications per year.
- Do not apply within 40 days of harvest (PHI).

STRAWBERRIES

PESTS	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Aphids Armyworms Fleabeetles *Hehothis* spp Leafrollers *Lygus* spp Plant Bugs Spittlebugs Stink Bugs Strawberry Clipper Strawberry Sap Beetle	0.04- 0.2	2.56-12.8	Apply when pest populations reach damaging thresholds and repeat as necessary at 7-14 day intervals. **Ground Application:** Apply a full cover spray in a minimum of 50 gallons of finished spray per acre **Air Application:** (Aerial application is prohibited in Florida) Apply specified dosage in a minimum of 5 gallons per acre.
Strawberry Root Weevil Black Vine Weevil	0.05- 0.2	3.2-12.8	
Spider mites	0.1- 0.2	6.4-12.8	

RESTRICTIONS:

- Do not apply more than 0.5 lb. active ingredient (ounces formulated) per acre per year.
- Do not make more than 12 applications per acre per year when using reduced application rates.
- No preharvest interval is required.

CALIFORNIA SPECIFIC REQUIREMENTS FOR STRAWBERRY HARVESTERS Harvesters and other personnel performing tasks with all day foliage contact in treated fields within five (5) days of application must wear a long-sleeved shirt long pants and shoes plus socks.

Following treatment of strawberry fields at rates of CSI 2 LB. BIFEN EC greater than 0.1 Ib ai/acre harvesters must wear gloves for five (5) days following application.

SUCCULENT PEAS AND BEANS

CROP	PEST	RATE		APPLICATION INSTRUCTIONS
		LB AI/A	FL OZ/A	
Pea (*Pisum* spp.) Dwarf Pea Edible-pod Pea English Pea	Aster Leafhopper Flea Beetle Grasshoppers Leafhoppers	0.025-0.10	1.6-6.4	**Ground Application:** Apply in water in a minimum of 10 gallons per acre. **Air Application:** Apply in water in a minimum of 2 gallons per acre. Emulsified oil may be substituted for water. See section entitled **MIXING INSTRUCTIONS** for details on amount of oil to use in the spray tank.
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	Alfalfa Caterpillar Aphids Bean Leaf Beetle Beet Armyworm Cloverworm Corn Earworm Corn Rootworm Adult Cucumber Beetle Cutworms European Corn Borer Fall Armyworm Japanese Beetle Adult Loopers Pea Leaf Weevil Pea Weevil Plant Bugs Sap Beetle Southern Armyworm Stink Bugs Tarnished Plant Bug Thrips Webworms Western Bean Cutworm Whitefly Yellowstriped Armyworm	0.033-0.10	2.1-6.4	
	Banks Grass Mite Carmine Mite *Lygus* spp. Twospotted Spider Mite	0.08-0.10	5.12-6.4	

RESTRICTIONS:

- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated product) per acre per year.
- Do not make more than 2 applications per year.
- Do not make applications less than 3 days apart.
- Do not apply within 3 days of harvest (PHI).

TOBACCO

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Armyworm spp. Cutworm spp. Mole Crickets Stalkborers Tobacco Flea Beetle (larvae) White Grubs Wireworms	0.0625-0.10	4.0 - 6.4	**Pre-Transplant Soil Applications:** Apply 0.0625 - 0.1 lb. active ingredient per acre in a minimum of 10 gallons per acre to control soil pests. Use of suitable equipment to incorporate into top 4" of the soil is required to control below-ground pests. **Transplant Water Treatment Application:** Apply 0.0625 - 0.1 lb. active ingredient per acre in a water treatment application volume of 10-200 gallons per acre.
Aphid spp. Armyworm spp. Flea Beetle (Adult) Chinch bugs Stink bugs Japanese Beetles Grasshoppers Cutworm spp. Tarnished Plant Bugs Green bugs Thrips Whiteflies	0.04 - 0.10	2.56 - 6.4	**Foliar Applications:** Apply 0.04 - 0.1 lb. active ingredient per acre foliar application up to and including layby in a minimum of 10 gallons per acre.
Spider Mites *Lygus* spp.	0.10	6.4	

RESTRICTIONS:

- For foliar applications, do not make more than 2 applications per year.
- May be tank mixed with herbicides approved for tobacco use.
- For all applications do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per year.
- Do not apply later than layby.

TREE NUT CROPS

Tree Nut Crops: Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, pistachio, and Walnut (Black & English)

PEST	RATE		APPLICATION INSTRUCTIONS
	LB AI/A	FL OZ/A	
Black Pecan Aphid Codling Moth Filbert Worm Hickory Shuckworm Leaffooted Bugs Navel Orangeworm Oblique Banded Leafroller Peach Twig Borer Pecan Leaf Casebearer Pecan Nut Casebearer Pecan Phylloxera Plant Bugs Stink Bugs Walnut Aphid Yellow Pecan Aphid	0.052-0.20	3.2-12.8	**Ground Application:** 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. **Air Application:** Apply in a minimum of 10 gallons of finished spray per acre.
European Red Mite Spider Mites	0.08-0.20	5.1-12.8	
Fire Ants Walnut Husk Fly	0.1-0.20	6.4-12.8	

RESTRICTIONS:

- Minimum spray intervals: Apply **CSI 2 LB. BIFEN EC** as needed to maintain control, but not apply at intervals sooner than 15 days.
- Observe a 21-day Pre-Harvest Interval (PHI) for Pecans and a 7-day Pre-Harvest Interval (PHI) for all other registered tree nut crops.
- Do not exceed 0.2 lb. active ingredient per acre per application.

- Do not exceed 0.50 lb. active ingredient per acre per year.
- Do not make more than 3 applications per year.
- Do not graze livestock in treated orchards or cut treated cover crops for feed.
- Do not apply within 21 days of harvest (PHI) for Pecans.
- Do not apply within 7 days of harvest (PHI) for all other nut crops.

TUBEROUS AND CORM VEGETABLES

CROP	PEST	RATE		APPLICATION INSTRUCTIONS
		LB AI/A	FL OZ/A	
Arracacha Arrowroot Potato Chinese Artichoke Jerusalem Artichoke Edible Canna Cassava (bitter & sweet) Chayote (root) Chufa Dasheen (taro) Ginger Leren Potato Sweet Potato Tanier Turmeric Yam bean True yam	Corn Wireworm Tobacco Wireworm	0.30 (at-plant)	19.2 (at-plant)	**In-Furrow planting time treatment: CSI 2 LB. BIFEN EC** may be applied as an in- furrow planting time treatment for the control of wireworms, rootworms, and white grubs. Apply **CSI 2 LB. BIFEN EC** at the rate of 0.3 lb. active ingredient per acre as an in-furrow spray or T-band spray at planting time. **Lay-By treatment: CSI 2 LB. BIFEN EC** may be applied as a layby treatment for the control of wireworms, rootworms and white grubs. Apply **CSI 2 LB. BIFEN EC** to the drill area and cover with soil utilizing cultivation equipment set to throw soil to the drill area. Apply **CSI 2 LB. BIFEN EC** as a banded spray over the row at a rate of 0.05 -0.15 lb. active ingredient per acre (3.2 - 9.6 ounces formulated) in 10 gallons per acre of spray. **Foliar spray: CSI 2 LB. BIFEN EC** may be applied as a foliar spray for the control of the adult life stages of flea beetles, click beetles (wireworms), cucumber beetles (rootworms), whitefringed beetles and May/June beetles (white grubs). Apply **CSI 2 LB. BIFEN EC** at the rate of 0.033 to 0.10 lb. active ingredient per acre (2.1 to 6.4 ounces formulated) in 10 gallons of spray by ground and 3 gallons of spray by air.
	Japanese Beetle Grubs June Beetle Southern Potato Wireworm	0.05-0.15 (layby)	3.2-9.6 (layby)	
	Banded Cucumber Beetle Black Flea Beetle Cucumber Beetle Rootworms Sweetpotato Flea Beetle Sweetpotato Weevil Whitefringed Beetle White Grub Sugarcane Beetle	0.033-0.10 (foliar)	2.1-6.4 (foliar)	

RESTRICTIONS:

- For foliar applications, do not make more than 2 foliar applications per year and do not make application less than 21 days apart.
- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year, including soil applications.
- Do not apply within 21 days of harvest (PHI).

ORNAMENTALS*

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

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, sod farms and golf courses.

Note: Applicators to Christmas trees and sod farms must use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Applicators to Christmas trees and sod farms must conform to the labeling requirements outlined in the **AGRICULTURAL USE REQUIREMENTS** box.

USE INSTRUCTIONS

CSI 2 LB. BIFEN EC mixes with water and other aqueous carriers to control a broad assortment of insects and mites on trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in interiorscapes, including hotels, shopping malls, office buildings and outdoor plantscapes: nurseries, residential dwellings, parks, institutional buildings, recreational areas, athletic fields, golf courses, sod farms, and home lawns. Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity in 365 days following application.

For soil or foliar applications, do not apply by ground within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.

Do not spray the product into fish pools, ponds, streams, or lakes. Do not apply directly to sewers or storm drains, or to any area like a drain or gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur.
Do not allow the product to enter any drain during or after application.

Do not apply directly to impervious horizontal surfaces such as sidewalks, driveways, and patios.

Do not apply or irrigate to the point of runoff.

All outdoor spray applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses:
1. Application to pervious surfaces such as soil, lawn, turf, and other vegetation;
2. Perimeter band treatments of 7 feet wide or less from the base of a man-made structure to pervious surfaces (*e.g*., soil, mulch, or lawn);
3. Applications to underside of eaves, soffits, doors, or windows permanently protected from rainfall by a covering, overhang, awning, or other structure;
4. Applications around potential exterior pest entry points into man-made structures such as doorways and windows, when limited to a band not to exceed one inch;
5. Applications to vertical surfaces (such as the side of a man-made structure) directly above impervious surfaces (e.g., driveways, sidewalks, etc.), up to 2 feet above ground level;
6. Applications to vertical surfaces directly above pervious surfaces, such as soil, lawn, turf, mulch or other vegetation) only if the pervious surface does not drain into ditches, storm drains, gutters, or surface waters.

Spot treatments must not exceed two square feet in size (for example, 2 ft. by 1 ft. or 4 ft. by 0.5

Do not make applications during rain.

Avoid applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours).

Rainfall within 24 hours after application may cause unintended runoff of pesticide applications.

Do not apply when the wind speed is greater than 15 mph.

CSI 2 LB. BIFEN EC may be tank-mixed with other products, including insect growth regulators. When tank mixing **CSI 2 LB. BIFEN EC** 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 **CSI 2 LB. BIFEN EC** 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.

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. 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. Provide constant agitation to keep the mixture in solution.

APPLICATION INSTRUCTIONS

TRUNK SPRAYS TO ORNAMENTAL TREES AND 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	REMARKS AND RESTRICTIONS
Dandroctonus bark beetles mountain pine beetle, southern pine beetle, western pine beetle, and black turpentine beetle.	16 -32 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.
Engraver beetle (*Ips* spp.)	16 – 32 fl. oz. per 100 gallons (0.25 – 0.5 lb. AI per 100 gallons)	Use 10-14 gallons of finished spray per tree.	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.
Other bark beetles ambrosia beetles, elm bark beetles, and metallic wood borers such as emerald ash borer.	16 – 32 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.
Clearwing moth borers ash borer, banded ash clearwing, dogwood borer, lesser peachtree borer, lilac borer, oak borer, peachtree borer, rhododendron borer **Coleopteran borers** bronze birch borer, flatheaded apple tree borer	6.4 – 12.8 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 **CSI 2 LB. BIFEN EC** 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 (12.8 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 (12.8 fl. oz.) of this product to trees per acre.

FOLIAR SPRAYS TO ORNAMENTALS AND TREES

(Field and Container Grown Nursery Stock, Christmas Trees, Interiorscapes and Plantscapes, Lawns, Trees and Shrubs, and on Golf Courses and Sod Farms)

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 0.04 to 0.32 fl. oz. **CSI 2 LB. BIFEN EC** per 1,000 sq. ft. or 1.8 to 14.4 fl. oz. per 100 gallons. **CSI 2 LB. BIFEN EC** may be diluted and applied in various volumes of water providing that the maximum label rate (0.32 fl. oz. per 1,000 sq. ft. or 14.4 fl. oz. per 100 gallons) is not exceeded. **CSI 2 LB. BIFEN EC** may be applied through low volume application equipment by dilution with water or other carriers and providing that the maximum label rate (0.32 fl. oz. per 1,000 sq. ft. or 14.4 fl. oz. per 100 gallons) is not exceeded.

Statements for Outdoor Applications at Commercial Nurseries

- Do not apply when the wind speed is greater than 15 mph.
- Applicators are required to select the nozzle and pressure that deliver a medium or coarser droplet size (ASABE S572).
- For soil or foliar applications, do not apply by ground equipment within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.
- Do not make applications during rain. Avoid making applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours).
- Rainfall within 24 hours after application may cause unintended runoff of pesticide application.

Calculating Dilution Rates Using the Ornamental Application Rates Table and the CSI 2 LB. BIFEN EC 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 0.08 to 0.16 fl. oz. of this product should be applied per 1,000 sq. ft. You select an application rate of 0.16 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 0.24 fl. oz. of this product in 10 gallons of water.

CSI 2 LB. BIFEN ECORNAMENTAL DILUTION CHART

Application Rate	Fluid Ounces (mL) of CSI 2 LB. BIFEN EC 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.
0.04	0.018	0.5	0.09	2.6	0.18	5.3	1.8
0.08	0.036	1.1	0.18	5.3	0.36	10.6	3.6
0.16	0.072	2.1	0.36	10.6	0.72	21.3	7.2
0.32	0.144	4.3	0.72	21.3	1.44	42.6	14.4

$$\frac{(7.9)(\text{Fl. Oz. of } \textbf{CSI 2 LB. BIFEN EC} \text{ added to tank})}{(\text{gallons of finished spray mix})(128)} = \text{Percent Active Ingredient of Spray Mix}$$

ORNAMENTAL AND TREE FOLIAR APPLICATION RATES

The application rates listed in the following table will provide excellent control of the noted pests under typical conditions. However, at the discretion of the applicator, this product may be applied at up to 0.32 fl. oz. per 1,000 sq. ft (14.4 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	RATE	REMARKS AND RESTRICTIONS
Bagworms[1] Cutworms Elm Leaf Beetles Fall Webworms Gypsy Moth Caterpillars Lace Bugs Leaf Feeding Caterpillars Tent Caterpillars Tussock moth	0.04 – 0.08 fl. oz. per 1,000 sq. ft. (1.8 – 3.8 fl. oz. per 100 gallons) (0.0006 - 0.0012 lbs. a.i. per 1,000 sq. ft 0.03 - 0.06 lbs. a.i. per 100 gallons)	[1] Bagworms: Apply when larvae begin to hatch and spray larvae directly. Applications when larvae are young will be most effective. [2] Beetles, Scale Crawlers, Twig Borers, and Weevils: Treat trunks, stems and twigs in addition to plant foliage. [3] Spider Mites: **CSI 2 LB. BIFEN EC** provides optimal twospotted spider mite control when applied during spring to mid-summer. Use higher labeled rates and/or more frequent treatments 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, **CSI 2 LB. BIFEN EC** 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.
Adelgids Ants Aphids Bees Beet Armyworm Beetles [2] Black Vine Weevil (Adults) Scales, such as Brown Soft Scales California Red Scale (Crawlers)[2] Elongated Hemlock Scale Pine Needle Scales (crawlers)[2] San Jose Scales (Crawlers)[2] Broad Mites Budworms Cicadas Citrus Thrips Clover Mites Crickets Earwigs European Red Mite Flea Beetles Fungus Gnats (Adults) Glassywinged Sharpshooter Grasshoppers Japanese Beetle (Adult) Leafhoppers Leafrollers Mealybugs Mites Mosquitoes Nantucket Pine Tip Moth Pillbugs Pine sawflies Plant Bugs (*Lygus* spp.)	0.08 – 0.16 fl. oz. per 1,000 sq. ft. (3.6 – 7.2 fl. oz. per 100 gallons) (0.0012 - 0.0025 lbs. a.i. per 1,000 sq. ft. 0.056 - 0.112 lbs. a.i. per 100 gallons)	

Psyllids Scorpions Spider Mites[3] Spiders Spittlebugs Thrips Tip Moths Treehoppers Twig Borers[2] Wasps Weevils[2] such as White Pine Weevil Pales Weevil Diaprepes adults Orchid Weevil White flies Zimmerman pine moths		
Imported Fire Ants** Leafminers Pecan Leaf Scorch Mite Pine Shoot Beetle (Adults) Spider Mites[3]	0.16 – 0.32 fl. oz. per 1,000 sq. ft. (7.2 – 14.4 fl. oz. per 100 gallons) (0.0025 - 0.005 lbs. a.i. per 1,000 sq. ft. 0.112 - 0.225 lbs. per 100 gallons)	** For foraging ants

BROADCAST SPRAYS TO TURFGRASS (lawns, golf courses, sod farms, parks).
Apply **CSI 2 LB. BIFEN EC** as a broadcast treatment. Use higher volumes up to 10 gallons of carrier per 1000 square feet to get uniform coverage when treating dense grass foliage.
For low water volume usage, less than 2 gallons/1000 square feet, addition of a non-ionic or silicone-based surfactant (0.25% v/v) is recommended. Irrigation to treated area within a few hours following application can improve efficacy to sub-surface pests such as, but not limited to, mole crickets.

Restrictions:

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

Spray Drift Precautions (For Turf & Ornamental Uses)
Do not apply when wind conditions laver downwind drift to nearby water bodies.

Do not apply when wind velocity exceeds 10 miles per hour. Avoid application when wind gusts approach 10 mph.
Apply using nozzles that provide the largest droplet size compatible with adequate coverage

Turfgrass Application Rates
The application rates listed in the following table will provide excellent control of the respective pests under typical conditions. However, at the discretion of the applicator, **CSI 2 LB. BIFEN EC** may be applied at up to 0.33 fl. oz. per 1000 square feet to control each of the pests listed in this table. Do not apply more than 0.23 lbs. AI (14.72 fl. oz.) of this product to turfgrass per acre. Use the higher labeled rates when maximum residual control is desired or heavy pest populations occur.

PEST	RATE	
Armyworms[1] Cutworms[1] Sod Webworm[1]	0.05 to 0.08 fl. oz. per 1,000 sq. ft. (2.18 – 3.48 fl. oz./A)	0.00078 - 0.0012 lbs. ai/1,000 sq. ft. (0.03 - 0.05 lbs. ai/A)
Annual Bluegrass Weevil (*Hyperodes*) (Adult)[2] Banks Grass Mite[6] Billbugs (Adult)[3] Black Turfgrass Ataenius (Adult)[4] Crickets Earwigs Fleas (Adult) Grasshoppers Mealybugs Mites[6]	0.08 to 0.16 fl. oz. per 1,000 sq. ft. (3.48 – 6.97 fl. oz./A)	0.0012 - 0.0025 lbs. ai/1,000 sq. ft. (0.05 – 0.11 lbs. ai/A)
Ants Chinch Bugs[5] Fleas (Larvae)[7] Imported Fire Ants[8] Japanese Beetle (Adult) Mole Cricket (Adult)[9] Mole Cricket (Nymph)[10] Ticks[11]	0.16 to 0.32 fl. oz. per 1,000 sq. ft. (6.96 – 13.94 fl. oz./A)	0.0025 - 0.005 lbs. ai/1,000 sq. ft. (0.11 - 0.22 lbs. ai/A)

1. **Armyworms, Cutworms and Sod Webworms:** To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. If the grass area is being maintained at a mowing height of greater than 1 inch, use higher labeled rates (up to 0.33 fluid oz. per 1000 square feet (0.23 lbs. AI or 14.72 fl. oz per acre)) during periods of high pest pressure.

2. **Annual Bluegrass Weevil (Hyperodes) adults:** Time applications to control adult weevils as they leave their overwintering sites and move into grass areas. This movement generally begins when Forsythia is in full bloom and concludes when flowering dogwood (Carnes florida) is in full bloom. Consult your State Cooperative Extension Service for more specific information regarding application timing.

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

4. **Black Turfgrass Ataenius adults:** Make applications during May and July to control the first and second generation of black turfgrass ataenius adults, respectively. Time the May application to coincide with the full bloom stage of Vanhoutte spiraea (Spiraea vanhouttei) and horse chestnut (Aesculus hippocastanum). Time the July application to coincide with this blooming of Rose of Sharon (Hibiscus syriacus).

5. **Chinch Bugs:** Chinch Bugs infest the base of grass plants and are often found in the thatch layer. Irrigation of the grass area before treatment will optimize the penetration at the insecticide to the area where the chinch bugs are located. Use higher volume applications if the thatch layer is excessive or if a relatively long mowing height is being maintained. Chinch bugs can be one of the most difficult pests to control in grasses and the higher labeled rates (up to 0.33 fluid oz. per 1000 square feet (0.23 lbs. AI or 14.72 fl. oz per acre)) may be required to control populations that contain both nymphs and adults during the middle of the summer.

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

7. **Flea larvae:** Flea larvae develop in the soil of shaded areas that are accessible to pets or other animals. Use a higher volume application when treating these areas to ensure penetration of the insecticide into the soil. Note: if the lawn area is being treated with this product at 0.08 fluid oz., per 1000 square feet for adult flea control, then the larval application rate may be achieved by increasing the application volume two- to four-fold.

8. **Imported Fire Ants:** Control will be optimized by combining broadcast applications that will control foraging workers and newly mated fly-in queens with mound drenches that will control existing colonies. If the soil is not moist, then it is important to irrigate before application or use a high volume application. For broadcast treatments apply 0.32 fluid oz. per 1,000 square feet (0.22 lbs AI or 13.94 fl. oz./A). Treat mounds by diluting 0.05 fluid oz. of **CSI 2 LB. BIFEN EC** per gallon of water and applying 1 to 2 gallons of finished spray per mound. Treat the mounds with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. Treat a four-foot diameter circle around the mound. For best results, apply in cool weather (65 - 80°F) or in early morning or late evening hours.

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

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

11. **Ticks (Including ticks that may transmit Lyme Disease and Rocky Mountain Spotted fever):** Do not make spot applications. Treat the entire area where exposure to ticks may occur as permitted by the label. Use higher spray volumes when treating areas with dense ground cover or heavy leaf liner. Ticks may be reintroduced from surrounding areas on host animals. Retreatment may be necessary to achieve and/or maintain control during periods of high past pressure. Repeat application is necessary only if there are signs of renewed activity. Repeat application must be limited to no more than once per seven days.
Deer ticks (*Ixodes* spp.) have a complicated lice cycle that ranges over a two-year period and involves four life stages. Make applications in the late fall and/or early spring to control adult ticks that are usually located on brush or grass above the soil surface and in mid to late spring to control larvae and nymphs that reside in the soil and leaf litter.
American dog ticks may be a considerable nuisance in suburban settings, particularly where homes are built on land that was previously field or forest. These ticks commonly congregate along paths or roadways where humans are likely to be encountered. Make applications as necessary from mid-spring to early fall to control American dog tick larvae, nymphs and adults.

CSI 2 LB. BIFEN ECLAWN
DILUTION CHART

Application Volume: Gallons/ 1000 sq. ft.	Application Rate: Fl. Oz./ 1000 sq. ft.	Fluid Ounces (mL) of CSI 2 LB. BIFEN EC diluted to the Volumes of Finished Spray						
		1 Gallon		5 Gallons		10 Gallons		100 Gallons
		Fl. oz.	mL	Fl. oz.	mL	Fl. oz.	mL	Fl. oz.
1	0.05	0.05	1.48	0.25	7.39	0.50	14.8	5.00
1	0.08	0.08	2.37	0.40	11.83	0.80	23.7	8.00
1	0.16	0.16	4.73	0.80	23.66	1.60	47.3	16.00
1	0.32	0.32	9.46	1.60	47.32	3.20	94.6	32.00
2	0.05	0.025	0.74	0.13	3.70	0.25	7.4	2.50
2	0.08	0.040	1.18	0.20	5.91	0.40	11.8	4.00
2	0.16	0.080	2.37	0.40	11.83	0.80	23.7	8.00
2	0.32	0.160	4.73	0.80	23.66	1.60	47.3	16.00
3	0.05	0.017	0.49	0.08	2.46	0.17	4.9	1.67
3	0.08	0.027	0.79	0.13	3.94	0.27	7.9	2.67
3	0.16	0.053	1.58	0.27	7.89	0.53	15.8	5.33
3	0.32	0.107	3.15	0.53	15.77	1.07	31.5	10.67
4	0.05	0.013	0.37	0.06	1.85	0.13	3.7	1.25
4	0.08	0.020	0.59	0.10	2.96	0.20	5.9	2.00
4	0.16	0.040	1.18	0.20	5.91	0.40	11.8	4.00
4	0.32	0.080	2.37	0.40	11.83	0.80	23.7	8.00
5	0.05	0.010	0.30	0.05	1.48	0.10	3.0	1.00
5	0.08	0.016	0.47	0.08	2.37	0.16	4.7	1.60
5	0.16	0.032	0.95	0.16	4.73	0.32	9.5	3.20
5	0.32	0.064	1.89	0.32	9.46	0.64	18.9	6.40

10	0.05	0.005	0.15	0.03	0.74	0.05	1.5	0.50
10	0.08	0.008	0.24	0.04	1.18	0.08	2.4	0.80
10	0.16	0.016	0.47	0.08	2.37	0.16	4.7	1.60
10	0.32	0.032	0.95	0.16	4.73	0.32	9.5	3.20

GRASS GROWN FOR SEED, PASTURE AND RANGELAND

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

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

PESTS CONTROLLED	RATE	APPLICATION INSTRUCTIONS
Alfalfa Caterpillar Alfalfa Looper Alfalfa Weevil Blue Alfalfa Aphid[1] Cutworms Egyptian Alfalfa Weevil (larvae & adult) Flea Beetles Green Cloverworm Green Peach Aphid[1] Hornworms Meadow Spittlebug Pea Aphid[1] Potato Leafhopper Spotted Alfalfa Aphid[1] Threecornered Alfalfa Hopper Velvetbean Caterpillar Webworms	6.4 fl. oz/A (0.1 lb ai/A)	Apply as insects appear in sufficient volume of water to ensure thorough coverage of foliage. Use higher labeled rate for increased pest pressure or for increased residual pest control. Do not exceed maximum labeled rate. Apply in a minimum of 2 gallons of finished spray per acre by aerial equipment or 10 gallons per acre by ground equipment. Higher volumes of finished spray may improve insect control under higher temperatures, when foliage is dense and/or when insect pressure is high. [1]Aphid control may be variable depending on species present and host-plant relationships.
Armyworm, southern Armyworm, true Armyworm, yellowstriped Ant Cereal Leaf Beetle Chinch Bug Cricket Grass Mealybug Grasshoppers Range Caterpillar Stink Bugs Armyworm, fall Black Grass Bug		
Hunting Bill Bug Plant Bug spp.		

RESTRICTIONS

- Do not apply more than 0.2 lbs. ai per acre per year.
- Do not make applications less than 14 days
- Do not make more than 2 applications per year.
- Applications may be made up to 30 days prior to harvest for forage and hay.
- Do not make applications during rain. Avoid making applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours).
- Rainfall within 24 hours after application may cause unintended runoff of pesticide application.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not pour or dispose down the drain or sewer. Call your local solid waste agency for local disposal options.

PESTICIDE STORAGE AND SPILL PROCEDURES: Keep out of reach of children and animals. Store in original containers only, in a cool, dry place and avoid excess heat. Do not freeze. Do not store below 40^0 F. Carefully open containers. If crystals are observed, warm material to above 60^0F by placing container in warm location. Shake or roll container periodically to redissolve solids. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

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

CONTAINER HANDLING:

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.

WARRANTY STATEMENT

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 Control Solutions, Inc. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Control Solutions, Inc. and Seller harmless for any claims relating to such factors.

To the extent consistent with applicable law, Control Solutions, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Control Solutions, Inc., and Buyer and User assume the risk of any such use. CONTROL SOLUTIONS, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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To the extent consistent with applicable law, Control Solutions, Inc. 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 Control Solutions, Inc.

[In lieu of warranty statement, the following text may be used:]

Notice – To the extent consistent with applicable law, Buyer assumes all responsibility for safety and use not in accordance with directions.

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