



## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

December 18, 2025

Karen Murphy  
Regulatory Manager – Liberty Crop Protection  
1880 Fall River Drive Suite 100  
Loveland CO, 80538

Subject: Label Amendment - Registration Review Mitigation for Bifenthrin  
Product Name: LIBERTY IMIDACLOPRID BIFENTHRIN  
EPA Registration Number: 89168-21  
Case Number: 481728  
Application Dates: March 22, 2021

Dear Karen Murphy:

The Agency, in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Bifenthrin Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling and must be used at your next label printing. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may

distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Antoine Gremaud by phone at 919-541-5067, or via email at [Gremaud.antoine@epa.gov](mailto:Gremaud.antoine@epa.gov).

Sincerely,

A handwritten signature in dark ink, appearing to read "Kevin Costello", is positioned above the typed name.

Kevin Costello, Branch Chief  
Risk Management and Implementation Branch 2  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

ENCLOSURE: Stamped label

**RESTRICTED USE PESTICIDE**

Toxic to fish and aquatic organisms. For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicators certification.

Bifenthrin	GROUP	3A	INSECTICIDE
Imidacloprid	GROUP	4A	INSECTICIDE

# LIBERTY IMIDACLOPRID BIFENTHRIN

**ACTIVE INGREDIENTS:**

By Wt.

Bifenthrin: (2-methyl[1,1'-biphenyl]-3-yl) methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylate\* ..... 5.70%  
Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine ..... 5.70%

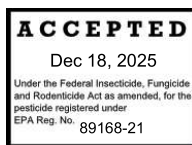
**OTHER INGREDIENTS\*** ..... 88.60%

**TOTAL** ..... 100.00%

CIS isomers 97% minimum, trans isomers 3% maximum.

\*Contains petroleum distillates

This product contains ½ lb. each of Bifenthrin and Imidacloprid active ingredient per gallon.



**KEEP OUT OF REACH OF CHILDREN**  
**DANGER                      PELIGRO**

This label must be in the possession of the user at the time of application. Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)  
See other panels for additional precautionary information.

**EPA Reg. No. 89168-21**

**EPA Est. No.**

**Net Contents:**

**Manufactured for:**  
**Liberty Crop Protection, LLC**  
**1880 Fall River Drive**  
**Suite 100**  
**Loveland, CO 80538**

**110417RD121625**

## FIRST AID

<b>If Swallowed:</b>	<ul style="list-style-type: none"><li>• Immediately call a poison control center or doctor for treatment advice.</li><li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>• Do not give any liquids to the person.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>If in Eyes:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15—20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If on Skin or Clothing:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If Inhaled:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time or your poison control center at 1-800-222-1222.

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

## PRECAUTIONARY STATEMENTS - HAZARDS TO HUMANS AND DOMESTIC ANIMALS - DANGER

Corrosive. Causes irreversible eye damage. Harmful if swallowed or absorbed through skin. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield or safety glasses). 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.

### Personal Protective Equipment (PPE):

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Protective eyewear
- Chemical-resistant gloves made of barrier laminate
- Shoes plus socks

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

## USER SAFETY RECOMMENDATIONS

### Users should:

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

## 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 made of barrier laminate, and
- Shoes plus socks.

## 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/plants or weeds. Do not apply this product or allow it to drift to blooming crops/plants or weeds if bees are visiting the treatment area. **Protect pollinating insects by following label directions intended to minimize drift and to reduce risk to these organisms.**

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

The chemical imidacloprid demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

## PROTECTION OF POLLINATORS



**APPLICATION RESTRICTIONS** EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

**This product can kill bees and other insect pollinators.**

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar. Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:

<http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: [www.aapco.org/officials.html](http://www.aapco.org/officials.html). Pesticide incidents should also be reported to the National Pesticide Information Center at: [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at: [beekill@epa.gov](mailto:beekill@epa.gov)

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. See individual crops for specific pollinator protection application restrictions. If none exist under the specific crop, for foliar applications, follow these application directions for crops that are contracted to have pollinator services or for food/feed, crops & commercially grown ornamentals that are attractive to pollinators:

### 1. FOR CROPS UNDER CONTRACTED POLLINATION SERVICES

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met:



If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

### 2. FOR FOOD CROPS AND COMMERCIALLY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- The application is made to the target site after sunset
- The application is made to the target site when temperatures are below 55 °F
- The application is made in accordance with a government-initiated public health response
- The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying
- The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.



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.

Do not apply this product, by any application method, to lindens, basswood, or *Tilia* species trees in Oregon.

## RESISTANCE- MANAGEMENT RECOMMENDATIONS

For resistance-management, please note LIBERTY IMIDACLOPRID BIFENTHRIN contains both a Group 3A/bifenthrin and 4A/imidacloprid insecticide. Any insect population may contain individuals naturally resistant to LIBERTY IMIDACLOPRID BIFENTHRIN and other Group 3A or 4A insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of LIBERTY IMIDACLOPRID BIFENTHRIN or other Group 3A and 4A insecticides within a growing season, or among growing seasons, with different groups that control the same pests. Avoid application of more than the maximum seasonal use rate or the total number of consecutive sprays of LIBERTY IMIDACLOPRID BIFENTHRIN per season.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest

when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):

- o Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
- o Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
- o When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
- o Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
- o The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide/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 Liberty Crop Protection at 844-425-8488. You can also contact your pesticide distributor or university extension specialist to report resistance.

#### **MANDATORY SPRAY DRIFT MANAGEMENT**

##### **Aerial Applications:**

- Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to select nozzle and pressure that deliver medium or coarser droplets (ASABE S641).
- Do not apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- If the windspeed is 10 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 miles per hour, applicators must use ¾ swath displacement upwind at the downwind edge of the field.
- Do not apply during temperature inversions.

##### **Airblast applications:**

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

##### **Ground Boom Applications:**

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



## **SPRAY DRIFT ADVISORIES**

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

## **IMPORTANCE OF DROPLET SIZE**

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

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

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

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

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

## **BOOM HEIGHT – Ground Boom**

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

## **RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift.

## **SHIELDED SPRAYERS**

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

## **TEMPERATURE AND HUMIDITY**

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

## **TEMPERATURE INVERSIONS**

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

## **WIND**

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift

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

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

## **Handheld Technology Applications:**

Take precautions to minimize spray drift.

## VEGETATIVE FILTER STRIPS

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

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

- For Western irrigated agriculture, a maintained vegetative filter strip of at least 10 feet wide is required. Western irrigated agriculture is defined as irrigated farmland in the following states: WA, OR, CA, ID, NV, UT, AZ, MT, WY, CO, NM, and TX (west of I-35).
  - o For Western irrigated agriculture, if a sediment control basin is present, a vegetative filter strip is not required.
- In all other areas, a vegetative filter strip with a minimum width of 25 feet is required, unless the following conditions are met.

The vegetative filter strip requirement may be reduced from 25 feet to 15 feet if at least one of the following applies:

- o The area of application is considered prime farmland (as defined in 7 CFR § 657.5).
- o Conservation tillage is being implemented on the area of application. Conservation tillage is defined as any system that leaves at least 30% of the soil surface covered by residue after planting. Conservation tillage practices can include mulch-till, no-till, or strip-till.
- o A functional terrace system is maintained on the area of application.
- o Water and sediment control basins for the area of application are functional and maintained.
- o The area of application is less than or equal to 10 acres.

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

## GROUND APPLICATIONS

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

### Ultra Low Volume (ULV) Aerial Application

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

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

### Non-ULV Aerial Application

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

### Maximum Allowable LIBERTY IMIDACLOPRID BIFENTHRIN Use Per Acre Per Season

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

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

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

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

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

### **Application Instructions:**

Rate of application is variable according to pest pressure, timing of sprays, and field scouting. Use lower specified rates under light to moderate infestations; higher specified rates under heavy insect pressures. Arid climates generally require higher rates.

Use adequate spray volumes, properly calibrated application equipment and spray adjuvant to obtain thorough coverage. To optimize deposition, penetration, and translocation, use adjuvants at 0.25 - 0.50% v/v.

Cultivation within 10 feet of a water body is prohibited to allow for the growth of a vegetated filter strip.

In New York State, this product may not be applied within 100 feet (using ground equipment) or 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

California **Special Equipment and Restrictions:** LIBERTY IMIDACLOPRID BIFENTHRIN must be used in a closed system that meets the criteria for closed systems as established by the California Department of Food and Agriculture. The criteria and a list of the closed systems meeting the criteria are available through the California Department of Food and Agriculture.

### **ROTATIONAL CROPS**

Plant back restrictions are determined by the crop. Crops that have tolerances for both bifenthrin and imidacloprid may be rotated at any time. Crops with tolerances for bifenthrin and not imidacloprid can be rotated 12 months following the final application of LIBERTY IMIDACLOPRID BIFENTHRIN. Crops that have tolerances for imidacloprid and not bifenthrin may be rotated 30 days following the final application of LIBERTY IMIDACLOPRID BIFENTHRIN.

#### **Plant back restrictions:**

Immediate plant back: Crops on this label, including tobacco, tomatoes, eggplant, peppers (bell and non-bell), okra, caneberries, citrus, artichoke, lettuce (head), grapes, spinach, pears, hops, legume vegetables (edible podded), tuberous root and corm vegetables (except sugar beet), cilantro and coriander, soybeans and strawberries.

**30 Day plant back:** Cereals, cucurbits, safflower

**10 Month plant back:** Onion and bulb vegetables

**12 Month plant back:** All other crops

### **MAXIMUM ALLOWABLE USE RATE**

Refer to the individual crop sections for maximum allowable LIBERTY IMIDACLOPRID BIFENTHRIN usage. The maximum allowable use must include all registered use patterns including at-plant, soil applied and/or foliar applications for the 12 months period. The 12-month period is to begin upon the initial application to the acreage.

### **Tank Mixture**

LIBERTY IMIDACLOPRID BIFENTHRIN may be applied in tank mixtures with other products approved for use on registered crops. Follow all restrictions and precautions which appear on the labels of these products. Test for compatibility of products before mixing.

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.

### **CHEMIGATION USE DIRECTIONS**

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

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

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

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

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

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

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide 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. LIBERTY IMIDACLOPRID BIFENTHRIN should be applied continuously for the duration of the water application. LIBERTY IMIDACLOPRID BIFENTHRIN should be diluted in sufficient volume to ensure accurate application over the area to be treated. When using chemigation, a minimum

of 0.5 inch per acre of irrigation water is recommended. Agitation generally is not required when a suitable diluent is used. A diluent test should be conducted to ensure that phase separation will not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable control.

**ARTICHOKE (Globe) (PHI 7 DAYS)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds ai/Acre
Aphid spp. Leafhopper spp. Cribrate weevil Artichoke plume moth	12.8—25.6	0.1 —0.2

**Restrictions:** Preharvest Interval (PHI): 7 Days

Minimum interval between applications: 15 Days

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per year: 51.2 oz (0.2 lb imidacloprid/A and 0.2 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.5 lb ai/A.

**APPLICATION INSTRUCTIONS:** Apply when pest population reaches damaging threshold and repeat as necessary to maintain control, not to exceed 51.2 oz per year, but not more often than 15-day intervals.

Application by ground: Apply a full cover spray in a minimum of 10 gallons of finished spray per acre.

Application by air: Apply specified dosage in a minimum of 2 gallons per acre.

**BRASSICA (Head and Stem) (PHI 7 DAYS)**

Broccoli, Broccoli (Cavalo), Broccoli (Chinese), Brussels sprouts, Cabbage, Cabbage (Chinese Mustard), Cabbage (Chinese napa), Cauliflower, Cavalo Broccoli, Kohlrabi

Pest	Use Rates	
	Fl Oz/Acre	Pounds ai/Acre
Aphid spp.	8.48 - 12.2	0.066 - 0.095
Armyworm spp.		
Corn earworm		
Crickets		
Cucumber beetle		
Cutworm spp.		
Diamondback moth		
Ground beetles		
Grasshoppers		
Imported cabbageworm		
Leafhopper spp.		
Loopers		
Lygus spp.		
Saltmarsh caterpillar		
Stink bug spp.		
Thrips		
Tobacco budworm		
Whitefly		
Wireworm (adults)		

**Restrictions:** Preharvest Interval (PHI): 7 Days

Minimum interval between applications: 7 Days

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per crop season: 61.44 oz (0.24 lb imidacloprid/A and 0.24 lb bifenthrin/A)

Maximum, amount of Bifenthrin allowed per crop season: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

Apply LIBERTY IMIDACLOPRID BIFENTHRIN up to 5 applications after bloom.

**APPLICATION INSTRUCTIONS:** Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**BRASSICA (Leafy Greens) (PHI 7 DAYS)**

Broccoli Raab, (Chinese bok choy) Collards, Kale, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens

Pest	Use Rates	
	Fl Oz/Acre	Pounds ai/Acre
Aphid spp. Armyworm spp. Budworm Corn earworm Crickets Cucumber beetle Cutworm spp. Diamondback moth Ground beetles Grasshoppers Imported cabbageworm Leafhopper spp. Loopers Lygus spp. Saltmarsh caterpillar Stink bug spp. Thrips Tobacco budworm Whitefly Wireworm (adults)	8.48—12.2	0.066 — 0.095

**Restrictions:** Preharvest Interval (PHI): 7 Days

Minimum interval between applications: 7 Days

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per crop season: 61.44 oz (0.24 lb imidacloprid/A and 0.24 lb bifenthrin/A)

Maximum, amount of Bifenthrin allowed per crop season: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

Apply LIBERTY IMIDACLOPRID BIFENTHRIN up to 5 applications after bloom.

**APPLICATION INSTRUCTIONS:** Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**CITRUS (PHI 1 DAY)\*:** Calamondin, Citron citrus, Citrus hybrids (includes chironja, tangelo and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Satsuma mandarin, and other cultivars and/or hybrids of these.

Pest	Use Rates	
	Fl Oz/Acre	Pounds ai/Acre
Aphids Asian citrus psyllid Black fly Blue green citrus root weevil ( <i>Pachnaeus opalus</i> ) Brown leaf notcher ( <i>Epicacrus mexicanus</i> ) Diaprepes root weevil ( <i>Diaprepes abbreviatus</i> ) Leafhoppers/Sharpshooters Leafminers Little leaf notcher ( <i>Artipus floridanus</i> ) Mealy bugs Scales Southern blue green citrus root weevil ( <i>Pachnaeus litus</i> ) Whiteflies	32 — 64	0.25 — 0.50

**Restrictions:** \*Not for use in California

Do not apply by air or through irrigation systems.

Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

Do not apply through irrigation systems.

Do not allow any application of the product to contact fruit or foliage.

Preharvest Interval (PHI): 1 day.

Minimum interval between applications: 10 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per year: 64 oz (0.25 lb imidacloprid/A and 0.25 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.25 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.25 lb ai/A.

#### **APPLICATION INSTRUCTIONS:**

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

Scales — time application to the crawler stage. Treat each generation.

Where concentrated applications are appropriate, increase the spray solution concentration to apply an equivalent rate per acre to that applied in the diluted application. The 64.0 fluid ounce/acre rate is based on full sized trees. This rate may be reduced proportionally for smaller trees.

The use of this product protects citrus tree roots from *Diaprepes* and other citrus root weevil feeding by creating a barrier. As Citrus root weevil eggs hatch, the newly hatched larvae (neonates) fall to the soil surface beneath the tree and come into contact with this product as they attempt to burrow into the root zone. Disturbance of the soil beneath the tree should be minimized.

Timing of application is very important. Peak emergence of *Diaprepes* adults varies by citrus



growing region, and environmental factors such as soil moisture can affect citrus root emergence.

Typically, two peaks occur for *Diaprepes*, first in the spring then late summer or early fall. Southern blue green and Blue green citrus weevils and Fuller rose beetle typically have a single emergence peak in the spring. Brown and Little leaf notchers typically have three emergence peaks, spring, summer and fall. Since emergence varies by region and season, the best way to time application is observe the adults. By trapping adults when they are most active (in the morning or and late afternoon) during the spring and summer emergence periods, an estimation of numbers can be obtained. Eggs are laid 8 to 10 weeks following the adult emergence from the soil; larvae invasion into the soil will begin 2 to 3 weeks following adult emergence. This product must be applied prior to the dropping of the neonates. Consult local university extension personnel for current information to protect citrus trees from Citrus root weevils and other pests.

Apply this product by ground equipment to bare soil beneath citrus trees. This product must be uniformly applied from the trunk to the drip line of the tree, apply in a minimum of 40 gals of dilute spray per acre. Greater spray volume should insure greater uniformity of coverage.

A pre and post-application irrigation may aid in the uniformity of coverage as well.

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

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

If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, 32 fl oz formulated product should be used to obtain the longest residual management of *Diaprepes* root weevil.

If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 16 fl oz formulated product can be applied early season and 16 fl oz formulated product can be applied later in the season.

If emergence extends beyond the residual protection of this product, grower is advised to use additional management strategies (i.e. foliar adult control or soil larvae control such as nematodes). Contact your state agricultural Extension Specialist as to the recommendation suited for local conditions.

#### **CILANTRO and CORIANDER (PHI 7 DAYS)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds al/Acre
Aphid spp. Beet armyworm Cabbage looper Cutworm spp. Flea beetle Grasshopper Leafhopper spp. Leafminer Saltmarsh caterpillar Spotted cucumber beetle Thrips Whitefly	8.48 — 11.0	0.066 — 0.086

**Restrictions:** Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per crop season: 33.28 oz (0.13 lb imidacloprid/A and 0.13 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.13 lb ai/A.

#### **COTTON (PHI 14 DAYS)**

Pest	Use rates	
	Fl Oz/Acre	Pounds ai/Acre
Bandedwinged-whitefly Boll weevil Cotton aphid Cotton fleahopper Lygus spp. Plant bugs (excludes <i>Lygus hesperus</i> ) Southern garden leafhopper Stink bugs spp.	7.6—15.4	0.06—0.12
Beet armyworm Bollworm Cabbage looper Cotton leaf perforator Cutworm spp. European corn borer Fall armyworm Pink bollworm Saltmarsh caterpillar Tobacco budworm Thrips spp. Whitefly Yellow striped armyworm	10.2—15.4	0.08—0.12

**Restrictions:** Preharvest Interval (PHI): 14 days.

Minimum interval between applications: 7 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per year: 79.36 oz (0.31 lb imidacloprid/A and 0.31 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.31 lb ai/A.

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.

**APPLICATION INSTRUCTIONS:** Application in Water: Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, one quart of emulsified oil may be substituted for one quart of water in the finished spray.

ULV Application: Apply the listed rate of LIBERTY IMIDACLOPRID BIFENTHRIN in refined vegetable oil in a minimum of 1 quart of finished spray per acre with aircraft calibrated to give adequate coverage.

To Control Boll Weevil: Apply this product at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels.

To Control Aphids: Apply when pest first appears. Repeat as necessary to maintain control. Higher specified rates within the rate range will be required once a damaging threshold is established.

#### FRUITING VEGETABLES:

#### EGGPLANT, PEPPERS (BELL & NON-BELL), GROUNDCHERRY, PEPINO (PHI 7 DAYS)

Pest	Use rates	
	Fl Oz/Acre	Pounds ai/Acre
Aphid spp. Leafhopper spp. Lygus spp. Thrips	7.6— 19.7	0.06 —0.15
Armyworm spp. Artichoke plume moth Cabbage looper Colorado potato beetle Corn earworm Cucumber beetle Cutworms European corn borer Flea beetle Leafminer Loopers Pepper weevil Stink bug Tomato hornworm Tomato pinworm Whitefly	10.2—19.7	0.08—0.15

**Restrictions:** Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per crop season: 51.2 oz (0.20 lb imidacloprid/A and 0.20 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.20 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

**APPLICATION INSTRUCTIONS:** Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**GRAPES (PHI 30 DAYS)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds AI/Acre
Glassywinged sharpshooter Variegated leafhopper Western grape leafhopper Eastern grape leafhopper	7.6 —12.8	0.06 —0.10
Black vine weevil Cutworm spp. Grape berry moth Grapeleaf skeletonizer Japanese beetles (adult) Mealybug	10.2 — 12.8	0.08 —0.10

**Restrictions:** Preharvest Interval (PHI): 30 days.

Minimum interval between applications: 14 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per year: 12.8 oz (0.05 lb imidacloprid/A and 0.05 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.10 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.10 lb ai/A.

**PEANUT <sup>1</sup> (PHI 14 DAYS)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds AI/Acre
Aphid Beet armyworm Corn earworm Cutworm spp. Fall armyworm Grasshoppers Green cloverworm Leaf hoppers Lesser cornstalk borer Loopers Rednecked peanut worm Southern armyworm Southern corn rootworm Spider mites Stink bugs Threecornered alfalfa hopper Thrips Velvetbean caterpillar Whiteflies Yellowstriped armyworm	7.6 —11.2	0.06 —0.0875

**Restrictions:** Preharvest Interval (PHI): 14 days.

Minimum interval between applications: 14 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per year: 33.3 oz (0.13 lb

imidacloprid/A and 0.13 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.13 lb ai/A.

**APPLICATION INSTRUCTIONS:**

<sup>1</sup> Use not permitted in California.

Apply foliar treatments in at least 10 gallons per acre with ground equipment at the rate of 11.2 fl oz (0.08 lb active) per acre at a minimum of 14 day intervals. Do not feed preen immature plants and peanut hay to livestock.

**LETTUCE (HEAD AND LEAF) (PHI 7 DAYS)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds Ai/Acre
Aphid spp. Leafhopper spp. Lygus spp. Stink bug spp. Thrips	7.6 — 12.2	0.06 — 0.095
Armyworm Cabbageworm Colorado potato beetle Corn earworm Cucumber beetle Cutworm spp. Diamondback moth European corn borer Flea beetle Leafminer Loopers Pepper weevil Tomato hornworm Tomato pinworm Tobacco budworm Saltmarsh caterpillar	10.2 — 12.2	0.08 — 0.095

**Restrictions:** Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per crop season: 61.44 oz (0.24 lb imidacloprid/A and 0.24 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

**APPLICATION INSTRUCTIONS:** Apply in water as necessary for insect control using a minimum of 10 gallons of finished spray per acre with ground equipment and 2 gallons per acre by air. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**HOPS (PHI 28 DAYS)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds ai/Acre
Aphid spp. Leaf hopper spp.	7.6 — 25.6	0.06 — 0.2
Armyworm spp. *		
Cutworm spp.		
Leafrollers	25.6	0.2
Looper spp.		
Root weevil		
Two spotted spider mite		

**Restrictions:** Preharvest Interval (PHI): 28 Days

Minimum interval between applications: 21 Days

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per year: 76.8 oz (0.3 lb imidacloprid/A and 0.3 lb bifenthrin/A)

Maximum, amount of Bifenthrin allowed per year: 0.30 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.30 lb ai/A.

**APPLICATION INSTRUCTIONS:** For Root weevil control: Make a direct spray to the base of the plant. Spray up to 3 ft on the vine and 1.5 to 2 ft on sides of the plant. Thorough coverage is essential to achieve control.

\*including all armyworm pests except Beet armyworm

**SPINACH (PHI 40 DAYS)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds ai/Acre
Aphid spp.		
Leafhopper spp.		
Lygus spp.	7.6 — 12.2	0.06 — 0.095
Stink bug spp.		
Thrips		
Armyworm		
Cabbageworm		
Colorado potato beetle		
Corn earworm		
Cucumber beetle		
Cutworm spp.		
Diamondback moth		
European corn borer	10.2 — 12.2	0.08 — 0.095
Flea beetle		
Leafminer		
Loopers		
Pepper weevil		
Tomato hornworm		
Tomato pinworm		
Tobacco budworm		
Saltmarsh caterpillar		

**Restrictions:** Preharvest Interval (PHI): 40 days.

Minimum interval between applications: 7 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per crop season: 61.44 oz (0.24 lb imidacloprid/A and 0.24 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.40 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

**APPLICATION INSTRUCTIONS:** Apply in water as necessary for insect control using a minimum of 10 gallons of finished spray per acre with ground equipment and 2 gallons per acre by air.

When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

#### **STRAWBERRY (PHI 7 DAYS)**

<b>Pest</b>	<b>Use Rates</b>	
	<b>Fl Oz/Acre</b>	<b>Pounds Ai/Acre</b>
Aphid spp. Lygus spp. Stink bug spp. Thrips	7.6— 19.6	0.06—0.15
Armyworm* Corn earworm Cucumber beetle Cutworms European corn borer Flea beetles Leafminer Loopers Japanese beetle (adult) Whitefly	10.2— 19.6	0.08—0.15

**Restrictions:** Preharvest Interval (PHI): 7 Days

Minimum interval between applications: 5 Days

Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per crop season: 35.84 oz (0.14 lb imidacloprid/A and 0.14 lb bifenthrin/A)

Maximum, amount of Bifenthrin allowed per crop season: 0.14 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.14 lb ai/A.

**APPLICATION INSTRUCTIONS:** Apply in a minimum of 5 gallons of finished spray per acre by air or in a minimum of 50 gallons per acre with ground equipment. Aerial applications in Florida are prohibited. Thorough coverage is essential to achieve control.

\* Including all armyworm pests except Beet armyworm.

**OKRA (PHI 7 DAYS)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds AI/Acre
Aphid spp. Lygus spp. Stink bug spp. Thrips	7.6 — 19.6	0.06 —0.15
Armyworm Corn Earworm Cucumber beetle Cutworms European corn borer Flea beetles Leafminer Loopers Japanese beetle (adult) Whitefly	10.2—19.6	0.08—0.15

**Restrictions:** Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per crop season: 51.2 oz (0.20 lb imidacloprid/A and 0.20 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.20 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

**APPLICATION INSTRUCTIONS:** Apply using sufficient water to obtain uniform coverage. Apply as needed. Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment.

**PEARS (PHI 14 DAYS)**

Restrictions: Preharvest Interval (PHI): 14 days. Minimum interval between applications: 30 days.

Pest	Use Rates	
	Fl Oz/Acre	Pounds ai/Acre
Aphid spp. Leafhopper spp. Lygus spp. Stink bug spp.	7.6 — 25.6	0.06 —0.2
Codling moth Cutworm spp. Green fruitworm Leafminer Leafroller Plum curculio	10.2—25.6	0.08—0.2

**Restrictions:** Preharvest Interval (PHI): 14 days.

Minimum interval between applications: 30 days.

Do not graze livestock in treated orchards or cut treated cover crops for feed.

Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.



Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per year: 128 oz (0.50 lb imidacloprid/A and 0.50 lb bifenthrin/A) as a foliar application; 115.0 oz (0.9 lb ai/A) applied after petal fall.

Maximum amount of Bifenthrin allowed per year: 0.5 lb ai/A, as a foliar application; 0.45 lb ai/A applied after petal fall.

Maximum amount of Imidacloprid allowed per year: 0.5 lb ai/A. as a foliar application; 0.45 lb ai/A applied after petal fall.

**APPLICATION INSTRUCTIONS: Application by ground.** Apply as a dilute (minimum of 10 gallons of finished spray per acre).

**Application by air.** Apply the specified rate in a minimum of 2 gallons of finished spray per acre by air.

**POTATO (PHI 21 days) (Foliar uses)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds ai/Acre
	Foliar Application	
Aphid spp. Leafhopper spp.	7.6 — 12.28	0.06 —0.1
Banded cucumber beetle Colorado potato beetle Cucumber beetle European corn borer Grasshopper spp. Looper spp. Flea beetle spp. June beetle Potato psyllid Sugarcane beetle Sweetpotato flea beetle Sweetpotato weevil Tuberworm Whitefringed beetle Whitefly	9.6 — 12.28	0.075 —0.1

**Restrictions:** Preharvest Interval (PHI): 21 Days

Minimum interval between applications: 7 Days

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per year: 51.2 oz. (0.20 lb imidacloprid/A and 0.20 lb bifenthrin/A)

Maximum, amount of Bifenthrin allowed per year: 0.20 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.20 lb ai/A.

Two applications are permitted per year. It is permitted to make one at-plant application followed by a foliar application later in the same growing season.

**APPLICATION INSTRUCTIONS: Foliar Application:** Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray. Thorough coverage is essential to achieve control.

**POTATO (At-plant)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds AI/Acre
Aphid spp. Leafhopper spp. Colorado-potato beetle Flea beetle spp. (adult, larvae) Japanese beetle (larvae) Potato psyllid Rootworm spp. White grub Wireworm	32.0 — 51.2	0.25 — 0.4

**Restrictions:** Preharvest Interval (PHI): 21 Days

Minimum interval between applications: 7 Days

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per year: 51.2 oz (0.20 lb imidacloprid/A and 0.20 lb bifenthrin/A)

Maximum, amount of Bifenthrin allowed per year: 0.20 lb a.i./A.

Maximum amount of Imidacloprid allowed per year: 0.20 lb a.i./A.

A maximum of one at-plant application is permitted per season.

**APPLICATION INSTRUCTIONS: At-plant Application: In-furrow** applications: Apply as an in-furrow spray onto the seed pieces or seed potatoes.

**TUBEROUS AND CORM VEGETABLES (PHI 21 DAYS):** Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava, bitter and sweet; chayote (root); chufa; dasheen (taro); Ginger; Leren; potato; sweet potato; Tanier; Turmeric; Yam bean; yam,true.

Pest	Use Rates	
	Fl Oz/Acre	Pounds AI/Acre
Aphid spp. Leafhopper spp.	7.6 — 15.4	0.06— 0.12
Banded cucumber beetle Black flea beetle Colorado potato beetle Cucumber beetle Flea beetles June beetle Potato psyllid Sugarcane beetle Sweetpotato flea beetle Sweetpotato weevil Whitefringed beetle	10.2 — 15.4	0.08 — 0.12

**Restrictions:** Preharvest Interval (PHI): 21 days.

Minimum interval between applications: 7 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per crop season: 33.28 oz (0.13 lb imidacloprid/A and 0.13 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.13 lb ai/A.

Apply a Maximum of 2 applications per season.

Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a potato crop in one growing season.

**APPLICATION INSTRUCTIONS:** Application in Water: Apply in a minimum of 10 gallons per acre with ground equipment or 2 gallons per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray.

**TREE NUTS, except almonds (PHI 7 DAYS) (Pecan PHI 21 DAYS)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds AI/Acre
Aphids (Except Black pecan aphid) Leaf hoppers/Sharpshooters Phylloxera spp. (leaf infestations) Spittlebugs Thrips	11.2 – 22.4	0.0875 – 0.175
Black pecan aphid Mealybugs San Jose scale	12.8	0.10

**Restrictions:** Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 15 days.

Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per year: 92.6 oz (0.36 lb imidacloprid/A and 0.36 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.50 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.36 lb ai/A.

**APPLICATION INSTRUCTIONS:** Minimum application volume (water): 50 GPA — ground application, 10 GPA — aerial application.

Applications for control of San Jose scale should be timed according to crawler stage, treating each successive generation.

**LEGUME VEGETABLES, except soybean**

**DRIED BEANS AND PEAS (PHI 14 DAYS for dried shelled peas or beans)**

Include: Dried cultivars of bean (*Lupinus* spp.) (*Phaseolus* spp.); and any one (includes grain lupin, sweet lupin, dried cultivar of pea (*Pisum* white lupin, and white sweet lupin); (*Phaseolus* spp.) (includes field bean, kidney bean, lima bean(dry), navy bean, pinto bean, tepary bean; bean ( *Vigna* spp.) (includes adzuki bean, blackeyed pea, catjang, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea. urd bean): broad bean (dry): chickpea: guar: lablab bean: lentil: pea (*Pisum* spp.) (includes field pea); pigeon pea.

Pest	Use Rates	
	Fl Oz/Acre	Pounds AI/Acre
Aphid spp. Grasshopper Leafhopper spp. Lygus spp. Thrips (adult) (foliage feeding)	7.6 — 11.2	0.06 — 0.0875
Alfalfa caterpillar Armyworm spp* Bean leaf beetle Cloverworm Corn earworm Corn rootworm (adult) Cucumber beetle Cutworm spp. European corn borer Flee beetle spp. Japanese beetle (adult) June beetle (adult) Looper spp. Mexican bean beetle Pea leaf weevil Pea weevil Sap beetle (adult) Saltmarsh caterpillar Silverspotted skipper Southern armyworm Threecornered alfalfa hopper Webworm Whitefly	11.2	0.0875

**Restrictions:** Preharvest Interval (PHI): 14 Days

Minimum interval between applications: 7 Days

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per crop season: 33.6 oz (0.13 lb imidacloprid/A and 0.13 lb bifenthrin/A)

Maximum, amount of Bifenthrin allowed per crop season: 0.13 lbai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.13 lb ai/A.

**APPLICATION INSTRUCTIONS:**-Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

\* Including all armyworm rests except Beet armyworm.

**SUCCULENT BEANS AND PEAS (PHI 7 DAYS):** Crops in the Succulent Pea and Bean group, Pea (*Pisum* spp.): Dwarf pea, Edible-pod pea, English pea, Garden pea, Green pea, Snow pea, Sugar snap pea, Pigeon pea; Bean (*Phaseolus* spp.): Broadbean (succulent), Lima bean (green), Runner bean, Snap bean, Wax bean; Bean (*Vigna* spp.): Asparagus bean, Blackeyed pea, Chinese

longbean, Cowpea, Moth bean, Southern pea, Yardlong bean, Jackbean, Soybean (immature seed) Sword bean.

Pest	Use Rates	
	Fl Oz/Acre	Pounds AI/Acre
Aphid spp. Grasshopper Leafhopper spp. Lygus spp. Thrips	7.6 — 11.0	0.06 — 0.086
Alfalfa caterpillar Bean leaf beetle Beet armyworm Cloverworm Corn earworm Corn rootworm (adult) Cucumber beetle Cutworm spp. European corn borer Fall armyworm Flea beetle Japanese beetle (adult) Looper spp. Pea leaf weevil Pea weevil Sap beetle (adult) Southern armyworm Webworm Whitefly Yellowstriped armyworm	10.2—11.0	0.08— 0.086

**Restrictions:** Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per crop season: 33.2 oz.  
(0.13 lb imidacloprid/A and 0.13 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.20 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.13 lb ai/A.

**APPLICATION INSTRUCTIONS:** Application in Water: Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, one Quart of emulsified oil may be substituted for one quart of water in the finished spray.

**SOYBEANS (PHI 21 DAYS)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds AI/Acre
Alfalfa caterpillar	7.6 — 12.2	0.06— 0.095
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		
Leaf hoppers		
Leafminer		
Loopers		
Lygus spp.		
Mexican bean beetle (Adult)		
Pea leaf weevil		
Pea weevil		
Plant bug		
Saltmarsh caterpillar		
Sap beetle		
Southern armyworm		
Stink bugs		
Tarnished plant bug		
Thrips		
Tobacco budworm*		
Twospotted spider mite		
Webworms		
Western bean cutworm		
Whitefly		
Yellowstriped armyworm		

**Restrictions:** Preharvest Interval (PHI): 21 days.

**\*Use not permitted in California.**

Apply a maximum of two applications per season.

Minimum interval between applications: 30 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per year: 24.4 oz (0.095 lb imidacloprid/A and 0.095 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.14 lb AI/A.

Maximum amount of Imidacloprid allowed per year: 0.30 lb AI/A.

**TOBACCO (PHI 14 DAYS)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds AI/Acre
Lygus spp. Aphid spp. Stink bug spp. Thrips	7.6 — 12.8	0.06 — 0.10
Armyworm spp. Chinch bugs Cutworm spp. Flea beetle (Adults) Grasshoppers Japanese beetles Stalkborers Whiteflies	10.2—12.8	0.08— 0.10

**Restrictions:** Preharvest Interval (PHI): 14 days.

Minimum interval between applications: 7 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per year: 51.2 oz (0.20 lb imidacloprid/A and 0.20 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.30 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.28 lb ai/A.

Apply a maximum of 2 applications per season.

Do not apply later than layby.

**APPLICATION INSTRUCTIONS:** Application in Water: Apply in a minimum of 10 gallons per acre with ground equipment or 5 gallon per acre by aircraft. When applying by air, 1 qt of emulsified oil may be substituted for 1 qt of water in the finished spray.

**TOMATO (PHI 1 DAY)**

Pest	Use Rates	
	Fl Oz/Acre	Pounds AI/Acre
Aphid spp. Flea hopper Leafhopper spp. Lygus spp. Squash bug Stink bug spp. Thrips	7.6— 19.7	0.06—0.15
Armyworm spp. Bean leaf beetle Cabbageworm Cloverworm Colorado potato beetle Corn earworm Corn rootworm Cucumber beetle	10.2— 19.7	0.08 — 0.15

Cutworms		
Diamondback moth		
European corn borer		
Flea beetle		
Grasshopper		
Japanese beetle (adult)		
Loopers.		
Melonworm		
Pea leaf weevil		
Pea weevil		
Pepper weevil		
Pickleworm		
Rindworm		
Saltmarsh caterpillar		
Sap beetle		
Seedpod weevil		

**Restrictions:** Preharvest Interval (PHI): 1 day.

Minimum interval between applications: 10 days.

Maximum amount of LIBERTY IMIDACLOPRID BIFENTHRIN allowed per crop season: 61.44 oz  
(0.24 lb imidacloprid/A and 0.24 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.40 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

**APPLICATION INSTRUCTIONS: Application in Water:** Apply in a minimum of 10 gallons per acre with ground equipment or 2 gallons per acre by aircraft. When applying by air, one quart of emulsified oil may be substituted for one quart of water in the finished spray.



## STORAGE AND DISPOSAL

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

**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°F. Carefully open containers.

If crystals are observed, warm material to above 60°F 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.

In case of spill, avoid contact, isolate area, and keep out animals and unprotected persons. Confine spills.

**To confine spill:** If liquid, dike surrounding area or absorb with sand, cat litter, or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

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

### **CONTAINER HANDLING:**

**Nonrefillable container:** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org).

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. If recycling is not available puncture and dispose of in a sanitary landfill or by incineration or if allowed by state and local authorities by burning. If burned stay out of smoke.

**For packages up to 5 gallons. Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### **CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

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