

#### OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

March 28, 2024

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

Subject: Label Amendment – Revise label to include all representative commodities under

Potato group and Bifenthrin Interim Registration Review

Product Name: Liberty BIFEN-IMIDA 2-1 SC

EPA Registration Number: 89168-85

Application Date: 7/28/2023 Case Number: 492701, 480850

# Dear Karen Murphy:

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

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

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 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.

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

Page 2 of 2 EPA Reg. No. 89168-85 Case No. 492701, 480850

EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Elizabeth Andrews at 202-566-2467 or at Andrews. Elizabeth@epa.gov.

Sincerely,

Scott Campbell, Acting Product Manager 03 Invertebrate and Vertebrate Branch I

Registration Division (7505T) Office of Pesticide Programs

Enclosure

# RESTRICTED USE PESTICIDE

TOXIC TO FISH AND AQUATIC ORGANISMS. FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

# ACCEPTED

03/28/2024

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 2010 25

89168-85

Bifenthrin	GROUP	3A	INSECTICIDE
Imidacloprid	GROUP	<b>4A</b>	INSECTICIDE

# LIBERTY BIFEN-IMIDA 2-1 SC

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*	21.65%
Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine	10.80%
OTHER INGREDIENTS:	<u>67.55%</u>
TOTAL:	100.00%
*CIS isomers 97% minimum, trans isomers 3% maximum.	
This product contains 2 lb. active Rifenthrin and 1 lb. active Imidacloprid per gallon	

# WARNING/AVISO

This label must be in the possession of the user at the time of application. Si usted no entiende la etiqueta, busque a alguien para que se a 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.

NET CONTENTS:	gal
EPA Est. No.	
EPA Reg. No. 89168-85	

Manufactured For Liberty Crop Protection, LLC 1880 Fall River Drive Suite 100 Loveland, CO 80538

111219RD032024

	FIRST AID
IF	Call a poison control center or doctor immediately for treatment advice.
SWALLOWED:	Do not induce vomiting unless told to do so by a poison control center or doctor.
	Do not give any liquids to the person.
	Do not give anything by mouth to an unconscious person.
IF INHALED	Move person to fresh air.
	• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
	Call a poison control center or doctor for further treatment advice.
IF ON SKIN	Take off contaminated clothing.
OR	Rinse skin immediately with plenty of water for 15 to 20 minutes.
CLOTHING:	Call a poison control center or doctor for treatment advice.

#### HOT LINE NUMBER

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 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

**WARNING.** May be fatal if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing. 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 evewear.
- Chemical-resistant gloves made of Barrier Laminate, Butyl Rubber (≥ 14 mils), Nitrile Rubber (≥ 14 mils), Neoprene Rubber (≥ 14 mils), Polyvinyl Chloride (≥ 14 mils) or Viton (≥ 14 mils),
- Shoes plus socks.

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

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves,
- 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.
- Remove PPE immediately after handling this product.
- · Wash the outside of gloves before removing.
- As soon as possible, wash thoroughly and change 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/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:

- o 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. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: 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 and 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/FEED 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 be

Do not apply this product in a way that it 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.

This product must be used in accordance with the directions for use on this label, or exemptions under FIFRA (Special Local Need Registration, FIFRA Section 18 exemption).

#### 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 over long-sleeved shirt and long pants;
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride ≥ 14 mils, or viton ≥ 14 mils
- · Shoes plus socks; and
- Protective eyewear.

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

- Long-sleeved shirt and long pants,
- •Chemical-resistant gloves,
- Shoes plus socks

# **RESISTANCE- MANAGEMENT RECOMMENDATIONS**

For resistance-management, please note LIBERTY BIFEN-IMIDA 2-1 SC contains both a Group 3A/bifenthrin and 4A/imidacloprid insecticide. Any insect population may contain individuals naturally resistant to LIBERTY BIFEN-IMIDA 2-1 SC 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 BIFEN-IMIDA 2-1 SC 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 I use rate or the total number of consecutive sprays of LIBERTY BIFEN-IMIDA 2-1 SC 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 a 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 Directions for Use tillage is defined as any system that leaves at least 30% of the soil surface covered by residue after planting. Conservation tillage practices can include mulch-till, no-till, or strip-till.
  - o A functional terrace system is maintained on the area of application.
  - o Water and sediment control basins for the area of application are functional and maintained.
  - o The area of application is less than or equal to 10 acres.

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

#### **GROUND APPLICATIONS**

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

Ultra Low Volume (ULV) Aerial Application

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

#### Non-ULV Aerial Application

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

Maximum Allowable LIBERTY BIFEN-IMIDA 2-1 SC Use Per Acre Per Year.

Refer to the individual crop sections for maximum allowable LIBERTY BIFEN-IMIDA 2-1 SC usage per acre per year. The maximum allowable use must include all registered use patterns including at-plant, soil applied and/or foliar applications for the 12 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 <a href="https://www.epa.gov/pollinator-protection/find-bestmanagement-practices-protect-pollinators">https://www.epa.gov/pollinator-protection/find-bestmanagement-practices-protect-pollinators</a>.

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.

#### **Application Instructions:**

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

Use adequate spray volumes, properly calibrated application equipment and spray adjuvant if necessary to obtain thorough coverage. Adjuvants may help optimize deposition, penetration, and translocation, use 0.25% v/v of IVC TM 5150. Other adjuvants must be used at 0.25 to 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 25 feet (using ground equipment) or 25 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

#### **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 BIFEN-IMIDA 2-1 SC. Crops that have tolerances for imidacloprid and not bifenthrin may be rotated 30 days following the final application of LIBERTY BIFEN-IMIDA 2-1 SC.

#### Plant back restrictions:

	TIME TO PLANT
CROP	BACK
Artichoke	0 days
Caneberries	0 days
Cereals	30 days
Cilantro/Coriander	0 days
Citrus	0 days
Corn (all)	0 days
Cucurbits	30 days
Eggplant	0 days
Grapes	0 days
Hops	0 days
Legumes (edible podded)	0 days
Lettuce (head & leaf)	0 days

	TIME TO PLANT
CROP	BACK
Okra	0 days
Onion & bulb vegetables	10 months
Pears	0 days
Peppers (bell & non-bell)	0 days
Safflower	30 days
Soybeans	0 days
Spinach	0 days
Strawberries	0 days
Tobacco	0 days
Tomatoes	0 days
Tuberous root & corm	0 days
vegetables	-
All other crops	12 months

#### MAXIMUM ALLOWABLE USE PER YEAR

Refer to the individual crop sections for maximum allowable LIBERTY BIFEN-IMIDA 2-1 SC usage per acre per year. The maximum allowable use must include all registered use patterns including at-plant, soil applied and/or foliar applications for the 12 month period. The 12-month period is to begin upon the initial application to the acreage.

#### **Tank Mixture**

LIBERTY BIFEN-IMIDA 2-1 SC 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. Test for compatibility of products before mixing.

#### **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 BIFEN-IMIDA 2-1 SC should be applied continuously for the duration of the water application. LIBERTY BIFEN-IMIDA 2-1 SC 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.

# CROP USE INSTRUCTIONS AGRICULTURAL USES

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
ARTICHOKE	Aphid spp.	6.4	Make applications when pests appear.
(GLOBE)	Artichoke plume moth Cribrate weevil Leafhopper spp.	(0.10 lb bifenthrin & 0.05 lb imidacloprid)	Apply in sufficient volume to ensure sufficient coverage of foliage.
			<b>Ground application:</b> Apply in a minimum of 75 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
			<b>Aerial application:</b> Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.

- Do not apply more than 32 fl oz (0.75 lb Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.
- Do not apply more than 0.5 lb Al/A of Imidacloprid per year.
- Do not apply more than 0.5 lb Al/A of Bifenthrin per year.
- Pre-Harvest Interval (PHI): 7 day
- Do not apply at intervals less than 15 days.

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
BRASSICA	Aphid spp.	2.1 - 6.0	Make applications when pests appear.
(Head and Stem)	Armyworm spp.*		
	Budworm	(0.03-0.09 lb	Apply in sufficient volume to ensure sufficient
Broccoli, Broccoli	Corn earworm	bifenthrin	coverage of foliage.
(Cavalo),	Crickets	&	
Broccoli (Chinese),	Cucumber beetle	0.02 - 0.05 lb	<b>Ground application:</b> Apply in a minimum of 10
Brussels sprouts,	Cutworm spp.	imidacloprid)	gallons per acre or sufficient spray volume to
Cabbage, Cabbage	Diamondback moth**		obtain full coverage of the foliage or target area.
(Chinese Mustard),	Ground beetles		
Cabbage (Chinese	Grasshoppers		Aerial application: Apply in a minimum of 2
napa),Cauliflower,	Imported cabbageworm		gallons per acre or sufficient spray volume to
Cavalo Broccolo,	Leafhopper spp.		obtain full coverage of the foliage or target area.
Kohlrabi	Loopers		When applying by air, 1 to 2 qts of emulsified oil
	Saltmarsh caterpillar		may be substituted for 1 to 2 qts of water in the
	Stink bug spp.		finished spray.
	Thrips		

Tobacco budworm Wireworm (adults)		When foliage is dense and/or pest populations are high, use 5-
Banks Grass Mite Beet armyworm	5.12 - 6.0	10 gallons/A by air or 20 gallons/A by ground and higher use rates.
Carmine Mite Lygus spp. Pacific spider Mite	(0.08– 0.09 lb bifenthrin &	Use higher listed rates for increased residual control.
Two Spotted Spider Mite Whitefly	0.04 – 0.05 lb imidacloprid)	

- \*Including all armyworm pests except Beet Armyworm.
- \*\* Pyrethroid resistance is common for this pest. Consult your local or state agricultural authority to determine if resistant pest populations are in your area. If so refer to the Resistance Management statement of this label.
- Do not apply more than 0.24 lb Al/A of Imidacloprid per year.
- Do not apply more than 0.5 lb Al/A of Bifenthrin per year.
- Pre-harvest Interval (PHI): 7 days Do not apply at intervals less than 7 days.
- Do not apply more than 5 applications after bloom.
- Do not apply more than 32 fl oz of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE fl oz/A	INSTRUCTIONS
BRASSICA (Leafy Greens) Broccoli Raab, Cabbage (Chinese bok choy), Collards, Kale, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens Turnip tops (greens)***	Aphid spp. Armyworm spp.* Budworm Corn earworm Crickets Cucumber beetle Cutworm spp. Diamondback moth** Ground beetles Grasshoppers Imported cabbageworm Leafhopper spp. Loopers Saltmarsh caterpillar Stink bug spp. Thrips Tobacco budworm Wireworm (adults)	2.1 – 6.0  (0.03– 0.09 lb bifenthrin & 0.02 – 0.05 lb imidacloprid)	Make applications when pests appear.  Apply in sufficient volume to ensure sufficient coverage of foliage.  Ground application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Aerial application: Apply in a minimum of 2 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area. When applying by air, 1 to 2 qts of emulsified oil may be substituted for 1 to 2 qts of water in the finished spray.  When foliage is dense and/or pest populations are high, use 5-10 gallons/A by air or 20 gallons/A by
	Banks Grass Mite Beet armyworm Carmine Mite Lygus spp. Pacific spider Mite Two Spotted Spider Mite Whitefly	& control.  0.04 – 0.05 lb imidacloprid)	Use higher listed rates for increased residual

- \*Including all armyworm pests except Beet Armyworm.
- \*\*Pyrethroid resistance is common for this pest. Consult your local or state agricultural authority to determine if resistant pest populations are in your area. If so refer to the Resistance Management statement of this label.
- \*\*\* This use not permitted in California
- Do not apply more than 0.24 lb Al/A of Imidacloprid per year.
- Do not apply more than 0.5 lb Al/A of Bifenthrin per year.
- Pre-harvest Interval (PHI): 7 days Do not apply at intervals less than 7 days.
- Do not apply more than 5 applications after bloom.
- Do not apply more than 32 fl oz of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
CILANTRO and CORIANDER	Aphid spp. Cabbage looper Cutworm spp. Flea beetle Grasshopper Leafhopper spp. Leafminer Saltmarsh caterpillar	2.1 – 5.6 (0.03– 0.09 lb bifenthrin & 0.02 – 0.04 lb imidacloprid)	Make applications when pests appear.  Apply in sufficient volume to ensure sufficient coverage of foliage.  Ground application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
	Spotted cucumber beetle Thrips		Aerial application: Apply in a minimum of 2 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  When foliage is dense and/or pest populations are
	Beet armyworm Twospotted spider mite Whitefly	5.12 – 5.6 (0.08– 0.09 lb bifenthrin & 0.04 lb imidacloprid)	high, use 5-10 gallons/A by air or 20 gallons/A by ground and higher use rates.  Use higher listed rates for increased residual control.

- Do not apply more than 0.13 lb Al/A of Imidacloprid per year, when used as a foliar application.
- Do not apply more than 0.5 lb Al/A of Bifenthrin per year.
- Pre-harvest Interval (PHI): 3 days.
- Do not apply at intervals less than 7 days.
- Do not apply more than 16.5fl oz (0.39 lb Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
CITRUS (Except California)*: Calamondin, Citron citron, 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	Diaprepes root weevil (Diaprepes abbreviatus)	16 – 32 (0.25– 0.50 lb bifenthrin & 0.12 – 0.25 lb imidacloprid)	Apply by ground equipment to bare soil beneath citrus trees - Do not allow any application of the product to contact fruit or foliage.  Must be uniformly applied from the trunk to the drip line of tree. Apply in a minimum of 40 gallons of dilute spray per acre or sufficient spray volume to obtain full coverage of target area. Higher spray volume should insure greater uniformity of coverage.  A pre- and post-application irrigation may aid in the uniformity of coverage as well.  The use of this product protects citrus tree roots from Diaprepes and other citrus root weevil feeding by forming a barrier. As newly hatched Citrus weevil larvae (neonates) fall to the soil surface beneath the tree and come in contact with this product as they attempt to burrow into the root zone. Disturbance of the soil beneath trees should be minimized.  Timing of applications is critical and current information suggests that peak emergence of adult Diaprepes Weevil varies by citrus growing region and these emergence peaks can be dramatically affected by environmental factors, such as soil moisture. Usually, two peaks are observed for Diaprepes, first in spring then late summer or early fall. Southern Blue-Green and Blue-Green Citrus Weevils and Fuller Rose Beetle typically exhibit a single emergence peak in the spring. Brown and Little Leaf Notchers typically exhibit three emergence peaks, spring, summer and fall. Since emergence varies seasonally and by location, timing of this product application can be accurately forecast by observing adults. Adults are most active early morning and late afternoor, numbers can be estimated by trapping throughout spring and summer (emergence periods). Egg laying will occur for 8 to 10 weeks following adult emergence. This product must be applied prior to drop of the neonates. Insecticides are one of several effective tools in an integrated pest management program for Citrus Root Weevils. Application of this product should be used in conjunction with good cultural practices, biological control of lar

- \*Use in California not permitted
- Do not apply by air or through irrigation systems.
- Do not apply starting 10 days prior to bloom through bloom or when bees are foraging.
- Do not apply more than 0.25 lb Al/A of Imidacloprid per year.
- Do not apply more than 0.5 lb Al/A of Bifenthrin per year.
- Pre-harvest Interval (PHI): 1 day Do not apply at intervals less than 10 days.
- Do not apply more than 32 fl oz (0.75 lb. Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
CITRUS (Florida only): Calamondin, Citron citron, Citrus hybrids (includes chironja, tangelo and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Satsuma mandarin, (Casimiroa spp.), and other cultivars and/or hybrids of these	Asian citrus Psyllid Blue green citrus root weevil (Pachnaeus opalus) Brown leaf notcher (Epicacrus mexicanus) Diaprepes root weevil (Diaprepes abbreviatus) Leafhoppers/Sharpshoot ers Leafminers Little leaf notcher (Artipus floridanus) Mealy bugs Scales Southern blue green citrus root weevil (Pachnaeus litus) (Pachnaeus litus) Whiteflies	16 – 32 (0.25– 0.50 lb bifenthrin & 0.12 – 0.25 lb imidacloprid	Apply by ground equipment to bare soil beneath citrus trees - Do not allow any application of the product to contact fruit or foliage.  Must be uniformly applied from the trunk to the dripline of tree. Apply in a minimum of 40 gallons of dilute spray per acre or sufficient spray volume to obtain full coverage of target area. Higher spray volume should insure greater uniformity of coverage.  A pre- and post-application irrigation may aid in the uniformity of coverage as well.  The use of this product protects citrus tree roots from Diaprepes and other citrus root weevil feeding by forming a barrier. As newly hatched Citrus weevil larvae (neonates) fall to the soil surface beneath the tree and come in contact with this product as they attempt to burrow into the root zone. Disturbance of the soil beneath trees should be minimized.  Timing of applications is critical and current information suggests that peak emergence of adul Diaprepes Weevil varies by citrus growing region and these

emergence peaks can be dramatically affected by environmental factors, such as soil moisture. Usually, two peaks are observed for *Diaprepes*, first in spring then late summer or early fall. Southern Blue-Green and Blue-Green Citrus Weevils and Fuller Rose Beetle typically exhibit a single emergence peak in the spring. Brown and Little Leaf Notchers typically exhibit three emergence peaks, spring, summer and fall. Since emergence varies seasonally and by location, timing of this product application can be accurately forecast by observing adults. Adults are most active early morning and late afternoon: numbers can be estimated by trapping throughout spring and summer (emergence periods). Egg laying will occur for 8 to 10 weeks following adult emergence from the soil; larval invasion of the soil will begin 2-3 weeks following adult emergence. This product must be applied prior to drop of the neonates. Insecticides are one of several effective tools in an integrated pest management program for Citrus Root Weevils. Application of this product should be used in conjunction with good cultural practices, biological control of larvae and foliar control of adults. Consult local university extension personnel for current information to protect citrus trees from Citrus Root Weevils and other pests.

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

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

If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, 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.

- Do not apply by air or through irrigation systems
- Do not apply starting 10 days prior to bloom through bloom or when bees are foraging.
- Do not apply more than 0.5 lb Al/A of Imidacloprid per year.
- Do not apply more than 0.5 lb Al/A of Bifenthrin per year.
- Pre-harvest Interval (PHI):1 day
- Do not apply at intervals less than 10 days.
- Do not apply more than 32 fl oz (0.75 lb. Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
COTTON	Bandedwinged whitefly Boll weevil Cotton aphid Cotton fleahopper Lygus spp. Plant bugs (excludes Lygus hesperus) Southern garden leafhopper Stink bug spp.	2.6 – 6.4  (0.04– 0.10 lb bifenthrin & 0.02 – 0.05 lb imidacloprid)	Application in Water: Apply in a minimum of 5 gallons/A with ground equipment or 1 gallon/A by air. When applying by air, 1 qt of emulsified oil may be substituted for one quart of water in the finished spray.  ULV Application: Apply the listed rate of this product in refined vegetable oil in a minimum of 1 qt of finished spray/A with aircraft calibrated to give adequate coverage.
	Armyworm spp.* Bollworm Cabbage looper Cotton leaf perforator Cutworm spp. European corn borer Pink bollworm Saltmarsh caterpillar Tobacco budworm Thrips spp.  Beet armyworm Whitefly	3.8 – 6.4  (0.06– 0.10 lb bifenthrin & 0.03 – 0.05 lb imidacloprid)  6.4  (0.10 lb bifenthrin & 0.05 lb imidacloprid)	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 listed rates will be required once a damaging threshold is established.

- \* Including all armyworm pests except Beet Armyworm.
- Do not apply more than 0.31 lb Al/A of Imidacloprid by foliar application per crop; regardless of formulation or method of application, apply no more than 0.5 lb Al/A per acre per year, including seed treatment, soil and foliar uses
- Do not apply more than 0.5 lb Al/A of Bifenthrin per year.
- Do not apply at intervals less than 7 days.
- Pre-harvest Interval (PHI): 14 days
- Do not graze livestock in treated area or cut treated crops for feed.
- Do not make more than 10 synthetic pyrethroid applications (of a single product or a combination of pyrethroid containing products) to a cotton crop in one growing year.
- Do not apply more than 32 fl oz (0.75 lb Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
FRUITING VEGETABLES: Crops of Crop Group 8 including EGGPLANT, PEPPERS (BELL & NON-BELL), GROUNDCHERRY, PEPINO	Armyworm spp.* Cabbage looper Colorado potato beetle Corn earworm Cucumber beetle Cutworms European corn borer Flea beetle Leafminer Loopers Stink bug spp. Thrips Tomato hornworm Tomato pinworm	2.1 – 6.4  (0.03– 0.10 lb bifenthrin & 0.02 – 0.05 lb imidacloprid)	Make applications when pests appear.  Apply in sufficient volume to ensure sufficient coverage of foliage.  Ground application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Aerial application: Apply in a minimum of 2 gallons per acre or sufficient spray volume to obtain full
	Aphid spp. Artichoke plume moth Banks grass mite Carmine mite Leafhopper spp. Pacific spider mite Pepper weevil Twospotted spider mite Beet armyworm Lygus spp. Whitefly	5.12 – 6.4  (0.08– 0.10 lb bifenthrin & 0.04 – 0.05 lb imidacloprid)  6.4  (0.10 lb bifenthrin & 0.05 lb imidacloprid)	coverage of the foliage or target area. When applying by air, 1 qt of emulsified oil may be substituted for one quart of water in the finished

- \* Including all armyworm pests except Beet Armyworm.
  Do not apply more than 0.24 lb Al/A of Imidacloprid per year, when used as a foliar application.
- Do not apply more than 0.2 lb Al/A of Bifenthrin per year.
- Do not apply at intervals less than 7 days.
- Pre-harvest Interval (PHI): 7 days.
- Do not apply more than 12.8 fl oz (0.3 lb Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.

		RATE	
CROP	TARGET PESTS	fl oz/A	INSTRUCTIONS
GRAPES	Cutworm spp. Eastern grape leafhopper Fleabeetle spp.	3.2 – 6.4	Make applications when pests appear.
	Grape berry moth Grape bud beetle Grape leafroller Grapeleaf skeletonizer	(0.05– 0.10 lb bifenthrin & 0.02 – 0.05 lb imidacloprid)	Apply in sufficient volume to ensure sufficient coverage of foliage.
	Grapeleaf skeletonizer Japanese beetles (adult) Mealybug Omnivorous leafroller Orange tortrix Sharpshooter spp. Thrips (adults) Variegated leafhopper Western grape leafhopper		Ground application: Apply in a minimum of 25 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Aerial application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to
	Black vine weevil Glassywinged sharpshooter Two spotted spider mite	6.4  (0.10 lb bifenthrin & 0.05 lb imidacloprid)	obtain full coverage of the foliage or target area. When applying by air, 1 qt of emulsified oil may be substituted for one quart of water in the finished spray.  When foliage is dense and/or pest populations are high, use higher spray volumes and higher use rates.  Use higher listed rates for increased residual control.

- Do not apply more than 0.1lb Al/A of Imidacloprid per year applied as a foliar application.
- Do not apply more than 0.5 lb Al/A of Imidacloprid year, regardless of formulation or method of application.
- Do not apply more than 0.1lb Al/A of Bifenthrin per year.
- Do not apply at intervals less than 14 days.
- Pre-harvest Interval (PHI): 30 days.
- Do not apply more than 6.4 fl oz (0.15 lb Al/A) oz of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	
		fl oz/A	INSTRUCTIONS
PEANUT	Corn earworm Cutworm spp. Fall armyworm Grasshoppers Green cloverworm Leafhoppers Lesser cornstalk borer Loopers Rednecked peanut worm Southern armyworm Southern corn rootworm Stink bugs spp. Threecornered alfalfa hopper Thrips Velvetbean caterpillar Yellowstriped armyworm	2.1 – 5.6  (0.03– 0.09 lb bifenthrin & 0.02 – 0.04 lb imidacloprid)	Make applications when pests appear.  Apply in sufficient volume to ensure sufficient coverage of foliage.  Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  When foliage is dense and/or pest populations are high, use 20 gallons/A by ground and higher listed use rates.  Use higher listed rates for increased residual control.
	Aphids Beet armyworm Spider mites Whiteflies	5.6 (0.09 lb bifenthrin & 0.04 lb imidacloprid)	

- Do not apply more than 0.13 lb Al/A of Imidacloprid per year as a foliar application.
- Do not apply more than 0.5 lb Al/A of Imidacloprid per year, regardless of formulation or method of application.
- Do not apply more than 0.5 lb Al/A of Bifenthrin per year.
- Pre-harvest Interval (PHI): 14 days.
- Do not apply at intervals less than 14 days.
- Do not feed green immature plants and peanut hay to livestock.

  Do not apply more than 16.5 fl oz (0.39 lb Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	
			INSTRUCTIONS
HEAD LETTUCE	Aphid spp Leafhopper spp. Stink bug spp. Thrips  Armyworm spp.* Cabbageworm	2.1 – 6.0 (0.03– 0.09 lb bifenthrin & 0.02 – 0.05 lb imidacloprid)	Make applications when pests appear.  Apply in sufficient volume to ensure sufficient coverage of foliage.  Ground application: Apply in a
	Corn earworm Crickets Cucumber beetle Cutworm spp. Diamondback moth European corn borer Flea beetle Grasshoppers Ground beetles Leafminer Loopers Pepper weevil Tomato hornworm Tomato pinworm Tobacco budworm Saltmarsh caterpillar	(0.04– 0.09 lb bifenthrin & 0.02 – 0.05 lb imidacloprid)	minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Aerial application: Apply in a minimum of 2 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area. When applying by air, 1 qt of emulsified oil may be substituted for one quart of water in the finished spray.  When foliage is dense and/or pest populations are high, use 5-10 gallons/A by air or 20 gallons/A by
	Beet armyworm Carmine mite Lygus spp. Two-spotted spider mite Whiteflies	6.0 (0.09 lb bifenthrin & 0.05 lb imidacloprid)	ground and higher listed use rates.  Use higher listed rates for increased residual control.

- \* Including all armyworm pests except beet armyworm.
- Do not apply more than 0.24 lb Al/A of Imidacloprid per year as a foliar application.
  Do not apply more than 0.5 lb Al/A of Imidacloprid per year, regardless of formulation or method of application.
- Do not apply more than 0.5 lb Al/A of Bifenthrin per year.
- Do not apply at intervals less than 7 days.
- Pre-harvest Interval (PHI): 7 days.
- Do not apply more than 32 fl oz of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	
		fl oz/A	INSTRUCTIONS
HOPS	Root weevil	3.2 – 6.4	Make applications when pests appear.
		(0.05– 0.10 lb bifenthrin &	Apply in sufficient volume to ensure sufficient coverage of foliage.
		0.02 – 0.05 lb imidacloprid)	Ground application: Apply in a minimum of 100 - 150 gallons per acre in early season; 200 – 250 gallons
	Aphid spp.	3.8 - 6.4	per acre late season.
	Armyworm spp.* Cutworm spp. Leafrollers Looper spp.	(0.06– 0.10 lb bifenthrin & 0.03 – 0.05 lb imidacloprid)	Aerial application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area
			For Root weevil control: Make a direct spray to the base of the plant. Spray
	Two spotted spider mite Beet armyworm	6.4	up to 3 ft on the vine and 1.5 to 2 ft on sides of the plant. Thorough coverage
		(0.10 lb bifenthrin	is essential to achieve control.
		0.05 lb imidacloprid)	Use higher listed rates for increased residual control.

- \*All armyworm except Beet Armyworm
- Do not apply more than 0.3 lb Al/A of Imidacloprid per year.
- Do not apply more than 0.3 lb Al/A of Bifenthrin per year.
- Do not apply at intervals less than 21 days.
- Pre-harvest Interval (PHI): 28 days.
- Do not apply more than 19.2 fl oz (0.45 lb Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
SPINACH	Armyworm spp.* Cabbageworm Colorado potato beetle Corn earworm Cucumber beetle Cutworm spp. Diamondback moth European corn borer Flea beetle Leafhopper spp. Leafminer Loopers Pepper weevil Stink bugs spp. Thrips Tomato hornworm Tomato pinworm Tobacco budworm Saltmarsh caterpillar	2.1 – 6.0  (0.03– 0.09 lb bifenthrin & 0.02 – 0.05 lb imidacloprid)	Make applications when pests appear.  Apply in sufficient volume to ensure sufficient coverage of foliage.  Ground application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Aerial application: Apply in a minimum of 2 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area. When applying by air, 1 qt of emulsified oil may be substituted for one quart of water in the finished spray.
	Banks grass mite Broad mite Carmine mite Lygus spp. Pacific spider mite Twospotted spider mites  Aphids Beet armyworm Whiteflies	5.12 – 6.0  (0.08– 0.09 lb bifenthrin & 0.04 – 0.05 lb imidacloprid)  6.0  (0.09 lb bifenthrin & 0.05 lb imidacloprid)	When foliage is dense and/or pest populations are high, use 5-10 gallons/A by air or 20 gallons/A by ground and higher use rates.  Use higher listed rates for increased residual control.

- \* Including all armyworms pests except beet armyworm.
- Do not apply more than 0.24 lb Al/A of Imidacloprid per year as a foliar application.
- Do not apply more than 0.5 lb Al/A of Imidacloprid per year, regardless of formulation or method of application.
- Do not apply more than 0.43 lb Al/A of Bifenthrin per year.
- Do not apply at intervals less than 7 days.
- Pre-harvest Interval (PHI): 40 days.
- Do not apply more than 27.5 fl oz of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
STRAWBERRY	Aphid spp.	2.56 – 6.0	Make applications when pests appear.
	Armyworm spp.*	(0.04.0.00.0.1.15.01.1	
	Corn earworm	(0.04– 0.09 lb bifenthrin	Apply in sufficient volume to ensure
	Flea beetle spp. Leafhopper spp.	& 0.02 – 0.05 lb imidacloprid)	sufficient coverage of foliage.
	Lygus spp.		Cround application, apply in
	Spittlebug.		<b>Ground application</b> : apply in a minimum of 50 gallons per acre or
	Strawberry clipper		sufficient spray volume to obtain full
	Strawberry sap beetle		coverage of the foliage or target area.
	Whitefly		
			Aerial application¹ apply in a minimum
	Strawberry root weevil	3.2 – 6.0	of 5 gallons per acre or sufficient spray
	Black vine weevil	(0.05– 0.09 lb bifenthrin	volume to obtain full coverage of the
		(0.05– 0.03 lb bheilililli &	foliage or target area.
		0.02 – 0.05 lb imidacloprid)	When foliage is dense and/or pest
		. ,	populations are high, use 20 gallons/A by
			ground and higher use rates.
	Spider mites	6.0	
		/0.00 H 1 'f H '	Use higher rates for increased
		(0.09 lb bifenthrin &	residual control.
		0.05 lb imidacloprid)	¹aerial applications are prohibited in
			Florida.

- \* All armyworm except Beet armyworm
- Do not apply by Air in Florida.
- Do not apply more than 0.5 lb Al/A of Imidacloprid per year, regardless of formulation or method of application.
- Do not apply more than 0.14 lb Al/A of Imidacloprid per year, when applied as a foliar application.
- Do not apply more than 0.14 lb Al/A of Bifenthrin per year.
- Do not apply within 7 days of harvest.
- Do not apply at intervals less than 5 days.
- Do not apply during or within 10 days after bloom or when bees are foraging.

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
OKRA	Aphid spp. Armyworm	2.1 – 6.0	Make applications when pests appear.
	Corn earworm		Apply in sufficient volume to ensure
	Cucumber beetle Cutworms	(0.03– 0.09 lb bifenthrin &	sufficient coverage of foliage.
	European corn borer Flea beetles Leafminer Loopers		<b>Ground application:</b> Apply in a minimum of 10gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
	Japanese beetle (adult) Stink bug spp. Thrips Whitefly		Aerial application: Apply in a minimum of 2 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
			When foliage is dense and/or pest populations are high, use 5-10 gallons/A by air or 20 gallons/A by ground and higher listed use rates.
	Broad Mite	6.0	listed use rates.
	Carmine Mite Lygus spp. Two Spotted Spider Mite	(0.09 lb bifenthrin & 0.05 lb imidacloprid)	Use higher listed rates for increased residual control.

- Do not apply more than 0.24 lb Al/A of Imidacloprid per year as a foliar application.
- Do not apply more than 0.5 Al/A of Imidacloprid per year, regardless of formulation or method of application.
- Do not apply more than 0.20 lb Al/A of Bifenthrin per year.
- Do not apply at intervals less than 7 days.
- Pre-harvest Interval (PHI): 7 days.
- Do not apply more than 12.8 fl oz (0.3 lb Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	
		fl oz/A	INSTRUCTIONS
PEARS	Aphid spp. Codling moth Cutworm spp. Green fruitworm Leafhopper spp. Leafminer Leafroller Lygus spp. Plum curculio Stink bug spp.	2.6 – 12.8  (0.04– 0.20 lb bifenthrin & 0.02– 0.10 lb imidacloprid)	Make applications when pests appear.  Apply in sufficient volume to ensure sufficient coverage of foliage.  Ground application: Apply as a dilute spray in a minimum of 200 gallons per acre (Dilute) and 50 gallons per acre (concentrate) or sufficient spray volume to obtain full coverage of the foliage or target area.
	Twospotted Spider Mite Yellow Mite	3.8-12.8 (0.06– 0.20lb bifenthrin & 0.03 – 0.10 lb imidacloprid)	Aerial application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  When foliage is dense and/or pest populations are high, use 5-10 gallons/A by
	European Red Mite	5.12– 12.8 (0.08– 0.20 lb bifenthrin & 0.04 – 0.10 lb imidacloprid)	air 20 gallons/A by ground and higher listed use rates.  Use higher listed rates for increased residual control.
	Apple maggot	12.8 (0.20 lb bifenthrin & 0.10 lb imidacloprid)	

- Do not apply more than 0.5 lb Al/A of Imidacloprid per year (0.45 lb Al/A after petal fall).
- Do not apply more than 0.5 lb Al/A of Bifenthrin per year (0.45 lb Al/A after petal fall).
- Do not apply at intervals less than 30 days.
- Pre-harvest Interval (PHI): 14 days.
- Do not graze livestock in treated orchards or cut treated cover crops for feed.
- Do not apply more than 32 fl oz (0.75 lb Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.
- Do not apply pre-bloom or during bloom or when bees are foraging.

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
POTATO (Foliar uses) 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	Banded cucumber beetle Black flea beetle Cucumber beetle European corn borer Grasshopper spp. Looper spp. Flea beetle spp. June beetle Sugarcane beetle Sweetpotato flea beetle Sweetpotato weevil Tuberworm Whitefringed beetle	2.1 – 6.0 (0.03– 0.09 lb bifenthrin & 0.02 – 0.05 lb imidacloprid)	Make applications when pests appear.  Apply in sufficient volume to ensure sufficient coverage of foliage.  Ground application: Apply in a minimum of 5 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Aerial application: Apply in a minimum of 1 gallon per acre or sufficient spray volume to obtain full coverage of the foliage or target area. When applying by air,
	Aphid Colorado Potato beetle Leafhopper Potato psyllid Whitefly	6.0 (0.09 lb bifenthrin & 0.05 lb imidacloprid)	1 qt of emulsified oil may be substituted for 1 qt of water in the finished spray.  When foliage is dense and/or pest populations are high, use 5-10 gallons/A by air or 20 gallons/A by ground and higher listed use rates.  Use higher listed rates for increased residual control.

- Do not apply more than 0.2 lb Al/A of Imidacloprid per year as a foliar application.
- Do not apply more than 0.5lb Al/A of Bifenthrin per year.
- Do not apply more than 0.5 lb Al/A of Imidacloprid per year, regardless of formulation or method of application.
- 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 year.
- Do not apply at intervals less than 7 days.
- Pre-harvest Interval (PHI): 21 days.

CROP	TARGET PESTS	RATE fl oz/A	INSTRUCTIONS
POTATO (At-plant) 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	Aphid spp. Colorado potato beetle Flea beetle spp. (adult, larvae) Japanese beetle (larvae) Leafhopper spp. Potato psyllid Rootworm spp. White grub Wireworm	12.8 (0.20 lb bifenthrin & 0.10 lb imidacloprid)	At-plant Application/In- furrow applications: Apply as an in-furrow spray onto the seed pieces or seed potatoes.

- •Pre-harvest Interval (PHI): 21 days.
- •Do not apply more than 0.3 lb Al/A of Imidacloprid per year.
- •Do not apply more than 0.5 lb Al/A of Bifenthrin per year.
- $\bullet$ Do not apply more than 32 fl. oz. (0.75 lb Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year for all application methods.
- •Do not apply more than 19.2 fl oz (0.45 lb Al/A) of LIBERTY BIFEN-MIDA 2-1 SC as an at-plant application. A maximum of one at-plant application is permitted/year.
- •Do not apply more than 0.5 lb Al/A of Imidacloprid per year, regardless of formulation or method of application.
- •Do not apply at intervals less than 7 days.

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
TUBEROUS AND CORM VEGETABLES: Arracacha; arrowroot; artichoke,Chinese; artichoke,jerusalem; canna, edible; cassava, bitter and sweet; chayote (root); chufa; dasheen (taro); Ginger; Leren; Tanier; Turmeric; Bean, Yam, True yam.	Banded cucumber beetle Black flea beetle Cucumber beetle European corn borer Grasshopper spp. Looper spp. Flea beetle spp. June beetle Sugarcane beetle Sweetpotato flea beetle Sweetpotato weevil Tuberworm Whitefringed beetle Aphid Colorado potato beetle Leafhopper Potato psyllid Whitefly	2.1 – 6.0  (0.03– 0.09 lb bifenthrin & 0.02 – 0.05 lb imidacloprid)  6.0  (0.09 lb bifenthrin & 0.05 lb imidacloprid)	Make applications when pests appear.  Apply in sufficient volume to ensure sufficient coverage of foliage.  Ground application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Aerial application: Apply in a minimum of 2 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area. When applying by air, 1 qt of emulsified oil may be substituted for 1 qt of water in the finished spray.  When foliage is dense and/or pest populations are high, use 5-10 gallons/A by air or 20 gallons/A by ground and higher listed use rates.  Use higher listed rates for increased residual control.

- •Do not apply more than 0.13 lb Al/A of Imidacloprid per year (0.45 lb Al/A after petal fall).
- •Do not apply more than 0.5 lb Al/A of Bifenthrin per year (0.45 lb Al/A after petal fall).
- •Do not apply more than 2 applications per year.
- •Do not apply at intervals less than 7 days.
- Do not apply within 21 days of harvest.
  Do not make more than 10 synthetic pyrethroid applications (of a single product or a combination of pyrethroid containing products) to a potato crop in one year.
- •Do not apply more than 16 fl oz of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	INSTRUCTIONS
		fl oz/A	
TREE NUTS except Almonds	Aphids (except black pecan aphid) Codling moth Filbert worm Hickory shuckworm Leaffooted bug Navel orangeworm Oblique banded leafroller Leafhoppers/Sharpshooters Peach twig borer Pecan leaf casebearer Pecan nut casebearer Phylloxera spp. (leaf infestations) Plantbug spp. Spittlebugs Stink bug spp.  Black pecan aphid European mite Mealybugs San Jose scale Spider mite	fl oz/A  3.2 – 11.2  (0.05– 0.17 lb bifenthrin & 0.02 – 0.09 lb imidacloprid)  5.1 – 11.2  (0.08– 0.17 lb bifenthrin & 0.04 – 0.09 lb imidacloprid)	Make applications when pests appear.  Apply in sufficient volume to ensure sufficient coverage of foliage.  Ground application: Apply by ground as a dilute (minimum of 200 gallons of finished spray per acre) or concentrate (50 gallons of finished spray per acre) spray in sufficient water to provide through coverage.  Aerial application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Use higher listed rates for increased residual control.  Applications for control of San
	Walnut husk fly	3.2 -11.2 (0.05– 0.17 lb bifenthrin & 0.02 – 0.09 lb imidacloprid)	Jose scale should be timed according to crawler stage, treating each successive generation.

- •Do not apply more than 0.36 lb Al/A of Imidacloprid per year.
- •Do not apply more than 0.5 lb Al/A of Bifenthrin per year.
- •Do not apply at intervals less than 15 days.
- •Do not apply within 7 days of harvest. (Pecan PHI 21 days)
- •Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.
- •Do not apply more than 32 fl oz of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	
		fl oz/A	INSTRUCTIONS
LEGUME VEGETABLES DRIED BEANS AND PEAS except Soybeans Including: sweet lupin, dried cultivar of pea (Pisum white lupin, and white sweet lupin, includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, Itpary 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.	Alfalfa caterpillar Aphid spp. Armyworm spp.* Bean leaf beetle Cloverworm Corn earworm (adult) Cucumber beetle Cutworm spp. European corn borer Flee beetle spp. Grasshopper Japanese beetle (adult) June beetle (adult) Leafhopper spp. Looper spp. Mexican bean beetle Pea leaf weevil Pea weevil Sap beetle (adult) Saltmarsh caterpillar Silverspotted skipper Thrips (adult) (foliage feeding) Webworm  Banks grass mite Beet armyworm Carmine Mite Lygus spp. Twospotted spider mite	2.1 – 5.6 (0.03– 0.09 lb bifenthrin & 0.02 – 0.04 lb imidacloprid)  5.12 – 5.6 (0.08– 0.09 lb bifenthrin & 0.04 lb imidacloprid)	Make applications when pests appear.  Apply in sufficient volume to ensure sufficient coverage of foliage.  Ground application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Aerial application: Apply in a minimum of 2 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area. When applying by air, 1 qt of emulsified oil may be substituted for 1 qt of water in the finished spray.  Use higher listed rates for increased residual control.
	Whitefly		

- •\*All armyworm except Beet Armyworm
- •Do not apply more than 0.13 lb Al/A of Imidacloprid per year.
- •Do not apply more than 0.2 lb Al/A for peas and 0.3 lb Al/A for beans of Bifenthrin per year.
- •Do not apply at intervals less than 7 days.
- •Do not apply within 14 days of harvest.
- •Do not apply more than 12.8 fl oz of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	
		fl oz/A	INSTRUCTIONS
SUCCULENT BEANS AND PEAS except soybeans: 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	Alfalfa caterpillar Bean leaf beetle 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 Yellowstriped armyworm Banks grass mite Beet armyworm Carmine Mite Lygus spp. Twospotted spider mite Whitefly	2.1 – 5.6 (0.03– 0.09 lb bifenthrin & 0.02 – 0.04 lb imidacloprid)  5.12 – 5.6 (0.08– 0.09 lb bifenthrin & 0.04 lb imidacloprid)	Make applications when pests appear.  Apply in sufficient volume to ensure sufficient coverage of foliage.  Ground application: Apply in a minimum of 5 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Aerial application: Apply in a minimum of 1 gallon per acre or sufficient spray volume to obtain full coverage of the foliage or target area. When applying by air, 1 qt of emulsified oil may be substituted for 1 qt of water in the finished spray.  Use higher listed rates for increased residual control.
seed), Sword bean			

- •Do not apply more than 0.13 lb Al/A of Imidacloprid per year.
- •Do not apply more than 0.2 lb Al/A of Bifenthrin per year.
- •Do not apply at intervals less than 7 days.
- •Do not apply within 3 days of harvest.
- •Do not apply more than 12.8 fl oz of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	
		fl oz/A	INSTRUCTIONS
SOYBEANS	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 Kudzu bug Leafhoppers Leafminer Loopers 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 Yellowstriped armyworm Lygus spp. Twospotted spider mite Whitefly		INSTRUCTIONS  Make applications when pests appear  Apply in sufficient volume to ensure sufficient coverage of foliage.  Ground application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Aerial application: Apply in a minimum of 2 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Use higher listed rates for increased residual control.

- •Do not apply more than 0.14 lb Al/A of Imidacloprid per year.
- •Do not apply more than 0.3 lb Al/A of Bifenthrin per year.
- •Do not apply at intervals less than 30 days.
- •Do not apply within 21 days of harvest.
- •Do not apply more than 18 fl oz (0.42 lb Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.
- •\*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.

CROP	TARGET PESTS	RATE	
		fl oz/A	INSTRUCTIONS
TOBACCO	Aphid Armyworm spp. *	2.56 – 6.4	Make applications when pests appear.
	Chinch bugs Cutworm spp. Flea beetle (Adults)	(0.04– 0.10 lb bifenthrin & 0.02 – 0.05 lb imidacloprid)	Apply in sufficient volume to ensure sufficient coverage of foliage.
	Grasshoppers Japanese beetles Stalkborers Stink bug spp. Thrips		Ground application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.
	·		Aerial application: Apply in a minimum of 5 gallon per acre or sufficient spray volume to obtain full coverage of the foliage or target area. When applying by air, 1 qt of
	Beet armyworm Lygus spp. Spider mites Whitefly	6.4 (0.10 lb bifenthrin & 0.05 lb imidacloprid)	emulsified oil may be substituted for 1 qt of water in the finished spray.  Use higher listed rates for increased residual control.

- \*Including all armyworm pests except beet armyworm.
- •Do not apply more than 0.28 lb Al/A of Imidacloprid per year as a foliar application.
- •Do not apply more than 0.5 lb Al/A of Imidacloprid per year regardless of formulation or method of application.
- •Do not apply more than 0.3 lb Al/A of Bifenthrin per year.
- •Do not apply at intervals less than 7 days.
- •Pre-harvest Interval (PHI): 14 days.
- •Do not apply more than 2 applications per year.
- •Do not apply more than 19.2 fl oz (0.45 lb Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.

CROP	TARGET PESTS	RATE	
		fl oz/A	INSTRUCTIONS
TOMATO	Aphid app. Armyworm spp. Bean leaf beetle Cabbageworm Cloverworm Corn earworm Corn rootworm Cucumber beetle Cutworms Diamondback moth European corn borer Flea beetle Flea hopper Grasshopper Japanese beetle (adult) Leaf hopper Loopers Lygus spp. Melonworm Pea leaf weevil Pea weevil Pickleworm Rindworm Saltmarsh caterpillar Sap beetle Seedpod weevil Squash bug Stink bug spp. Thrips	2.1- 5.2  (0.03– 0.08 lb bifenthrin & 0.02 – 0.04 lb imidacloprid)	Ground application: Apply in a minimum of 10 gallons per acre or sufficient spray volume to obtain full coverage of the foliage or target area.  Aerial application: Apply in a minimum of 2 gallon per acre or sufficient spray volume to obtain full coverage of the foliage or target area. When applying by air, 1 qt of emulsified oil may be substituted for 1 qt of water in the finished spray.  Make applications when pests appear. Apply in sufficient volume to ensure sufficient coverage of foliage. Use higher rates for increased residual control
	Twospotted spider mite Colorado potato beetle Pepper weevil	5.12 – 6.4 (0.08– 0.10 lb bifenthrin & 0.04 – 0.05 lb imidacloprid)	

- •Do not apply more than 0.24 lb Al/A of Imidacloprid per year as a foliar application.
- •Do not apply more than 0.5 lb Al/A of Imidacloprid per year, regardless of formulation or method of application.
- •Do not apply more than 0.4 lb Al/A of Bifenthrin per year.
- •Do not apply at intervals less than 10 days.
- •Pre-harvest Interval (PHI): 1 day.
- •Do not apply more than 25.6 fl oz (0.6 lb Al/A) of LIBERTY BIFEN-IMIDA 2-1 SC per year.

#### STORAGE AND DISPOSAL

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

#### **PESTICIDE STORAGE:**

DO NOT ALLOW PRODUCT TO FREEZE. Do not store below 40 °F. If crystals are observed, warm material to above 60 °F by placing container in warm location. Shake or roll container periodically to redissolve solids. Keep out of reach of children and animals. Store in original containers only.

Store in a cool, dry place and avoid excess heat. 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. Open dumping is prohibited.

#### **CONTAINER HANDLING:**

Nonrefillable Container (five gallons or less): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. If recycling is not available, puncture or dispose of in a sanitary landfill or incineration or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Nonrefillable Container (greater than five gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. 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. If recycling is not available, puncture or dispose of in a sanitary landfill or incineration or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### 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.

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 LIBERTY CROP PROTECTION LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold LIBERTY CROP PROTECTION LLC and Seller harmless for any claims relating to such factors.

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