

279-3332

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

January 11, 2011

Andy Eimanis
FMC Corporation
1735 Market Street
Philadelphia, PA 19103

Subject: Amendment – Reformatting the Potato Use Section
Brigadier Insecticide
EPA Reg. No. 279-3332
Your submission dated October 11, 2010

Dear Mr. Eimanis:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable subject to the comments listed below. Two (2) copies of the finished labeling must be submitted prior to releasing the product for shipment. A stamped copy of the label is enclosed for your records.

1. Revise the “Potato (PHI 21 days) (Foliar uses)” section as follows:
 - a. Add, “25.6 fl oz/A (0.2 lb ai/a of imidacloprid and 0.2 lb ai/a of bifenthrin)” to the “Maximum Amount of Brigadier Insecticide per Season” section.
 - b. Add, “Maximum Amount of imidacloprid per Season: 0.20 lbs ai/A”.
 - c. Add, “Maximum Amount of bifenthrin per Season: 0.50 lbs ai/A”.
2. Revise the “Potato (At-plant)” section as follows:
 - a. Replace the rate of application from “16 – 38.4 fl oz/A” with “16 -25.6 fl oz/A”.
 - b. Replace “Maximum Amount of Brigadier Insecticide per Application: 38.4 fl ... etc” with “Maximum Amount of Brigadier Insecticide per Application: 25.6 fl ... etc”.
 - c. Add “Maximum Amount of imidacloprid per Season: 0.20 lbs ai/A”.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

If you have any questions regarding this action, please contact BeWanda Alexander at Alexander.bewanda@epa.gov or (703) 305-7460.

Sincerely,



Richard Gebken
Product Manager
Insecticide Branch
Registration Division (7505P)

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.



EPA Reg. No. 279-3332

EPA Est. No.

Ingredients

Active Ingredient:

	By Wt.
(2 methyl [1,1'-biphenyl]-3-yl) Methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2, 2-dimethyl- cyclopropanecarboxylate*	11.30%
1-[(6-Chloro-3-pyridonyl) methyl]-N-nitro -2-imidazolidinimine.....	11.30%
Other Ingredients:	77.40%
	100.0%

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

This product contains 2lbs. active ingredient per gallon

U.S. Patent No. 4,238,505

ACCEPTED
with COMMENTS
in EPA Letter Dated
JAN 11 2011
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.
279-3332

KEEP OUT OF REACH OF CHILDREN

WARNING

AVISO

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

See other panels for additional precautionary information.

First Aid

If Swallowed:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in Eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.

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.

For Emergency Assistance Call 1-800-321-1FMC (1362).



FMC Corporation
Agricultural Products Group
1735 Market Street
Philadelphia, PA 19103

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Precautionary Statements

Hazards to Humans (and Domestic Animals)

Warning

May be fatal if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.

Personal Protective Equipment:

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- 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.

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

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

Environmental Hazards

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

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

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

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.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Resistance Management

Some insects are known to develop resistance to products with the same chemical class used repeatedly for control. Brigadier contains Group 3 and Group 4A insecticides. Although pest resistance cannot be predicted, a general rule to reduce the onset of resistance pest species to Brigadier is do not consecutively and repeatedly apply Group 3 and/or Group 4A insecticides during a growing season for control particular pest target. Consult your local or state agricultural authorities or your FMC representative for more specific details on insect resistance management strategies.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

Storage and Disposal

Pesticide Storage

If storing this product below freezing, user should shake or roll the container to ensure proper product consistency. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. 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. Call FMC: 1-(800)-331-3148. 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 Disposal

Metal or Plastic Container: Non-refillable container. Do not reuse or refill this container. **Triple rinse as follows:** Empty the contents into application equipment or a mix tank and drain for 10 seconds after flow begins to drip. Fill container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or 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. When completely empty, offer for recycling, if available. If appropriate, puncture and dispose of in a sanitary landfill.

General Instructions

Rate of application is variable according to pest. Use lower rates under light to moderate infestations; higher rates under heavy insect pressure. Arid climates generally require higher rates. 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.

Adjuvants

The use of a spray adjuvant that meets or exceeds CPDA Adjuvant Certification is recommended for optimum performance. Refer to the individual crop recommendation sections of this label for specific adjuvant type and use rates.

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 Brigadier. Crops that have tolerances for imidacloprid and not bifenthrin may be rotated 30 days following the final application of Brigadier. Below is a list of plant back restrictions:

Immediate plant back: Crops on this label, as well as, corn (all), tobacco, tomatoes, eggplant, peppers, bell and non-bell, okra, caneberrries, citrus, artichoke, lettuce (head), grapes, spinach, pears, hops, legume vegetables, (edible podded), root tuberous and corn vegetables (except sugar beets), cilantro and coriander, soybeans, 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 Per Season

Refer to the individual crop sections for maximum allowable Brigadier 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 months period. The 12 month period is to begin upon the initial application to the acre.

Tank-Mixture

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

BUFFER ZONES

Vegetative Buffer Zones

Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing bifenthrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers:

Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21pp.

<http://www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf>.

Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast) – Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

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

Buffer Zone for Non-ULV Aerial Application – Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

Spray Drift Requirements

Wind Direction and Speed

Only apply this product if the wind direction favors on-target deposition. Do not apply when the wind velocity exceeds 15 mph.

Temperature Inversion

Do not make aerial or ground applications into temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Droplet Size

Use only Medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

Additional Requirements for Ground Applications

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

Additional Requirements for Aerial Applications

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

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

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

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

Application Instructions

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 system. Do not apply this product through any other type of irrigation system. Do not connect an irrigation system (including greenhouse system) 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 back flow.

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. Brigadier Insecticide should be applied continuously for the duration of the water application. Brigadier 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.

Cotton (PHI 14 days)

Pests Controlled	Rates of Application
Armyworm spp.* Bollworm Cabbage looper Cotton leafperforator Cutworm spp. European cornborer Pink bollworm Saltmarsh caterpillar Tobacco budworm** Thrips (adult) Whitefly	5.1 – 7.7 fl oz/A (0.08 – 0.12 lbs ai/A)
Cotton aphid Cotton fleahopper Lygus spp. Southern garden leafhopper Stink bug spp.	3.8 – 7.7 fl oz/A (0.06 – 0.12 lbs ai/A)

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Restrictions

- **PHI:** Do not apply within 14 days of harvest.
- **Application Interval:** Do not make applications less than 7 days apart.
- **Maximum Amount of Brigadier Insecticide per Application:** 7.7 fl oz/A (0.06 lb ai/a of imidacloprid and 0.06 lb ai/a of bifenthrin).
- **Maximum Amount of Brigadier Insecticide per Season:** 39.68 fl oz/A (0.31 lb ai/a of imidacloprid and 0.31 lb ai/a of bifenthrin) as a foliar application in all states but California. In California, 38.4 fl oz/A (0.30 lb ai/a of imidacloprid and 0.30 lbs ai/a of bifenthrin) as a foliar application.
- **Maximum Amount of imidacloprid per Season:** 0.31 lbs ai/A as a foliar application.
- **Maximum Amount of bifenthrin per Season:** 0.50 lbs ai/A, except in California. In California, 0.30 lbs ai/A of bifenthrin per season.

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

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

Remarks

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.

*Including all armyworm pests except Beet armyworm.

** Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.

Peanut (PHI 14 days)

Pests Controlled	Rates of Application
Armyworm spp.* Corn earworm Cutworm spp. Grasshopper Green cloverworm Lesser cornstalk borer Looper spp. Rednecked peanut worm Southern corn rootworm Threecornered alfalfa hopper Velvetbean caterpillar	5.6 fl oz/A (0.0875 lbs ai/A)
Aphid spp. Leafhopper spp.	3.8 – 5.6 fl oz/A (0.06 – 0.0875 lbs ai/A)

Restrictions

- **PHI:** Do not apply within 14 days of harvest.
- **Application Interval:** Do not make applications less than 14 days apart.
- **Maximum Amount per of Brigadier Insecticide Application:** 5.6 fl oz/a (0.044 lb ai/a of imidacloprid and 0.044 lb ai/a of bifenthrin)
- **Maximum Amount of Brigadier Insecticide per Season:** 16.64 fl oz (0.13 lb ai/a of imidacloprid and 0.13 lb ai/a of bifenthrin) as a foliar application.
- **Maximum Amount of imidacloprid per Season:** 0.13 lbs ai/A as a foliar application.
- **Maximum Amount of bifenthrin per Season:** 0.50 lbs ai/A

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Do not feed green immature plants and peanut hay to livestock

Remarks

Thorough coverage is essential to achieve control.

*Including all armyworm pests except Beet armyworm.

Potato (PHI 21 days) (Foliar uses)

Pests Controlled	Rates of Application
Foliar Application	
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	4.8 – 6.14 fl oz/A (0.075 – 0.096 lbs ai/A)
Aphid spp. Leafhopper spp.	3.8 – 6.14 fl oz/A (0.06 – 0.096 lbs ai/A)
<p>Restrictions</p> <ul style="list-style-type: none"> • PHI: Do not apply within 21 days of harvest. • Application Interval: Do not make applications less than 7 days apart. <p>Maximum Amount of Brigadier per Foliar Application: 6.14 fl oz/A (0.048lbs imidacloprid ai/a and 0.048 lbs bifenthrin)</p> <ul style="list-style-type: none"> • Maximum Amount of Brigadier Insecticide per Foliar Application: 6.14 fl oz/A (0.048 lb ai/a of imidacloprid and 0.048 lb ai/a of bifenthrin) as a foliar application. • Maximum Amount of Brigadier Insecticide per Season: Two applications are permitted per season. It is permitted to make one at-plant application followed by a foliar application later in the same growing season. <p>Remarks</p> <p>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.</p> <p>Thorough coverage is essential to achieve control.</p>	

*Add
25.6 fl oz/A
0.2 lb ai/a of imidacloprid and 0.2 lb ai/a of bifenthrin*

Potato (At-plant)

Pests Controlled	Rates of Application
At-Plant Application	
Aphid spp. Colorado potato beetle Flea beetle spp. (adult) Flea beetle spp. (larvae) Japanese beetle (larvae) Leaf hopper spp. Potato psyllid Rootworm spp. White grub spp. Wireworm spp.	16 – 38.4 fl oz/A (0.25 – 0.6 lbs ai/A)
<p>Restrictions</p> <ul style="list-style-type: none"> • PHI: Do not apply within 21 days of harvest. • Application Interval: Do not make applications less than 7 days apart. <ul style="list-style-type: none"> • Maximum Amount of Brigadier Insecticide per Application: 38.4 fl 	

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oz/A (0.3 lb ai/a of imidacloprid and 0.3lb ai/a of bifenthrin) as an at-plant application.

• **Maximum Amount of bifenthrin per Season:** 0.30 lbs ai/A as an at-plant application. A total 0.50 lbs ai/A of bifenthrin per season.

A maximum of 1 at plant applications is permitted per season.

Remarks
At plant applications: In-furrow applications: Apply Brigadier Insecticide as an in-furrow spray on to the seed pieces or seed potatoes

Soybeans (PHI 45 days for feeding of dry vines; PHI 18 days for feeding of green vines)

Pests Controlled	Rates of Application
Alfalfa caterpillar Bean leaf beetle Cloverworm Corn earworm Corn rootworm (adult) Cucumber beetle Cutworm spp. European corn borer Fall armyworm Flea 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 Yellowstriped armyworm	5.1 – 6.1 fl oz/A (0.08 – 0.095 lbs ai/A)
Aphid spp. Grasshopper Leafhopper spp. Lygus spp. Thrips (adult) (foliage feeding)	3.8 – 6.1 fl oz/A (0.06 – 0.095 lbs ai/A)
<p>Restrictions</p> <ul style="list-style-type: none"> • PHI: 45 days for feeding of dry vines; PHI 18 days for feeding of green vines. • Application Interval: Do not make applications less than 30 days apart. • Maximum Amount of Brigadier Insecticide per Application: 6.1 fl oz/A (0.048 lb ai/a of imidacloprid and 0.048 lb ai/a of bifenthrin) of Brigadier Insecticide. • Maximum Amount of Brigadier Insecticide per Season: 17.92 lb ai/a (0.14 lb ai/a of imidacloprid and 0.14 lb ai/a of bifenthrin) • Maximum Amount of imidacloprid per Season: 0.14 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.30 lbs ai/A . <p>Remarks Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment. Thorough coverage is essential to achieve control.</p> <p>* Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the the resistance management statement in the DIRECTION FOR USE section of this label.</p>	

Tobacco (PHI 14 days) (At-transplant/Pre-transplant and Foliar Applications)

Pest	Rates of Application
At-transplant/Pre-transplant Application	
Aphid spp.	21.75 – 25.5 fl oz / A

Armyworm spp.* Cutworm spp. Flea beetle spp. (adults) Flea beetle spp. (larvae) Mole cricket White grub Wireworm spp.	1.7 – 2 fl oz / 1000 linear ft 0.34 – 0.40 lbs ai/A
Foliar Application	
Armyworm spp.* Chinch bug Cutworm spp. Flea beetle spp. (adults) Grasshopper spp. Hornworm spp. Japanese beetle Stalkborer Thrips (adults) Tobacco budworm** Whitefly	5.1 – 6.4 fl oz/A (0.08 – 0.1 lb ai/A)
Plantbug spp. Aphid spp. Stink Bug spp.	3.8 – 6.4 fl oz/A (0.06 – 0.1 lbs ai/A)
<p>Restrictions</p> <ul style="list-style-type: none"> • PHI: 14 days • Application Interval: Do not make applications less than 7 days apart. • Maximum Amount of Brigadier Insecticide per Application: Do not apply more than 6.4 fl oz/a (0.05 lb ai/a imidacloprid and 0.05 lb ai/a bifenthrin) per foliar application. 25.5 (0.2 lb ai/a of imidacloprid and 0.2 lb ai/a of bifenthrin) per at-transplant/pre-transplant application. Apply maximum of 2 applications per season. • Maximum Amount of Brigadier Insecticide per Season: 25.6 fl oz (0.2 lb ai/a of imidacloprid and 0.2 lb ai/a of bifenthrin) as an at-transplant/pre-transplant application. 25.6 fl oz/a (0.25 lb ai/a imidacloprid and 0.25 lb ai/a bifenthrin lbs ai/A) as a foliar application. • Maximum Amount of imidacloprid per Season: 0.28 lbs ai/A as an at-transplant/pre-transplant application. 0.28 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.30 lb ai/a as an at-transplant/pre-transplant application. 0.5 lbs ai/A total. <p>Do not apply after layby Apply a maximum of 2 applications per season</p> <p>Remarks:</p> <p>Application in Water: Apply a minimum of 10 gallons per acre with ground equipment or 5 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.</p> <p>Ensure product is mixed thoroughly before application</p> <p>Foliar Application:</p> <p>*Including all armyworm pests except Beet armyworm. ** Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the the resistance management statement in the DIRECTION FOR USE section of this label.</p>	

Artichoke(Globe) (PHI 7 days)

Pests Controlled	Rates of Application
Aphid spp. Artichoke Plume Moth Cribrate Weevil Leafhopper spp.	6.4 – 12.8 fl oz/A (0.1 – 0.2 lbs ai/A)
<p>Restrictions</p> <ul style="list-style-type: none"> • PHI: Do not apply within 7 days of harvest. • Application Interval: Do not make applications less than 15 days apart. • Maximum Amount of Brigadier Insecticide per Application: 12.8 fl oz/a (0.1 lb ai/a of imidacloprid and 0.1 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 25.6 fl 	

oz/a (0.50 lb ai/a of imidacloprid and 0.50 lb ai/a of bifenthrin)

- **Maximum Amount of imidacloprid per Season:** 0.50 lbs ai/A as a foliar application.
- **Maximum Amount of bifenthrin per Season:** 0.50 lbs ai/A

Remarks
Thorough coverage is essential to achieve control.

Brassica Vegetables

Head and Stem Brassica (PHI 7 days)

Head and Stem Brassica Vegetables: Broccoli, Chinese, Broccoli (gallon, white flowering broccoli), Brussels Sprouts, Cauliflower, Cavalo broccoli, Kohlrabi, Cabbage, Chinese Cabbage (napa), and Chinese Mustard Cabbage (gai choy)

Pests Controlled	Rates of Application
Whitefly	6.1 fl oz/A 0.095 lbs ai/A
Aphid spp. Armyworm spp.* Corn earworm Cricket Cucumber beetle Cutworm spp. Diamondback moth** Flea beetle spp. Ground beetle Imported cabbageworm Leafhopper spp. Looper spp. Plantbug spp. Saltmarsh caterpillar Stink bug spp. Thrips (adult) Tobacco budworm** Click beetle (wireworm adults)	3.8 – 6.1 fl oz/A (0.06 – 0.095 lbs ai/A)

Restrictions

- **PHI:** Do not apply within 7 days of harvest.
- **Application Interval:** Do not make applications less than 7 days apart.
- **Maximum Amount of Brigadier Insecticide per Application:** 6.1 fl oz/A (0.048 lb ai/a of imidacloprid and 0.048 lb ai/a of bifenthrin)
- **Maximum Amount of Brigadier Insecticide per Season:** 30.72 fl oz/a (0.24 lb ai/a of imidacloprid and 0.24 lb ai/a of bifenthrin)
- **Maximum Amount of imidacloprid per Season:** 0.24 lbs ai/A as a foliar application.
- **Maximum Amount of bifenthrin per Season:** 0.50 lbs ai/A

Apply Brigadier Insecticide up to 5 applications after bloom.

Remarks
Thorough coverage is essential to achieve control.

*Including all armyworm pests except Beet armyworm.

** Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.

Leafy Brassica (PHI 7 days)

Including: Broccoli Raab, Bok Choy, Collards, Kale, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens.

Pests Controlled	Rates of Application
Whitefly	6.1 fl oz/A (0.095 lbs ai/A)
Aphid spp. Armyworm spp.* Corn earworm Cricket Cucumber beetle Cutworm spp. Diamondback moth** Flea beetle spp. Ground beetle Imported cabbageworm	3.8 – 6.1 fl oz/A (0.06 – 0.095 lbs ai/A)

Leafhopper spp. Looper spp. Plantbug spp. Saltmarsh caterpillar Stink bug spp. Thrips (adults) Tobacco budworm** Click beetle (wireworm adults)	
Restrictions <ul style="list-style-type: none"> • PHI: Do not apply within 7 days of harvest. • Application Interval: Do not make applications less than 7 days apart. Apply Brigadier up to 5 applications after bloom. • Maximum Amount of Brigadier Insecticide per Application: 6.1 fl oz/A (0.048 lb ai/a of imidacloprid and 0.048 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 30.72 fl oz/a (0.24 lb ai/a of imidacloprid and 0.24 lb ai/a of bifenthrin) • Maximum Amount of imidacloprid per Season: 0.24 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.50 lbs ai/A 	
Remarks Thorough coverage is essential to achieve control. *Including all armyworm pests except Beet armyworm. ** Pyrethroid resistance is known for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.	

Cilantro and Coriander (PHI 7 days)

Pests Controlled	Rates of Application
Aphid spp. Cabbage looper Cutworm spp. Flea beetle spp. Grasshopper Leafhopper spp. Saltmarsh caterpillar Spotted cucumber beetle Thrips (adult)	4.24 – 5.5 fl oz/A (0.066 – 0.086 lbs ai/A)
Restrictions <ul style="list-style-type: none"> • PHI: Do not apply within 7 days of harvest. • Application Interval: Do not make applications less than 7 days apart. • Maximum Amount of Brigadier Insecticide per Application: 5.5 fl oz/A (0.043 lb ai/a of imidacloprid and 0.043 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 16.64 fl oz/a (0.13 lb ai/a of imidacloprid and 0.13 lb ai/a of bifenthrin) • Maximum Amount of imidacloprid per Season: 0.13 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.50 lbs ai/A 	
Remarks Thorough coverage is essential to achieve control.	

Eggplant (PHI 7 days)

Pests Controlled	Rates of Application
Armyworm spp.* Colorado potato beetle Corn earworm Cucumber beetle Cutworm spp. European cornborer Flea beetle spp. Leafminer spp. (adults)	5.1 – 9.85 fl oz/A (0.08 – 0.15 lbs ai/A)

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Looper spp. Thrips (adults) Whitefly	
Aphid spp. Leafhopper spp. Lygus spp.	3.8 – 9.85 fl oz/A (0.06 – 0.15 lbs ai/A)
Restrictions <ul style="list-style-type: none"> • PHI: Do not apply within 7 days of harvest. • Application Interval: Do not make applications less than 7 days apart. • Maximum Amount of Brigadier Insecticide per Application: 9.85 fl oz/A (0.075 lb ai/a of imidacloprid and 0.075 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 25.6 fl oz/a (0.20 lb ai/a of imidacloprid and 0.20 lb ai/a of bifenthrin) • Maximum Amount of imidacloprid per Season: 0.24 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.20 lbs ai/A 	
Remarks Thorough coverage is essential to achieve control. *Including all armyworm pests except Beet armyworm.	

Okra (PHI 7 days)

Pests Controlled	Rates of Application
Armyworm spp.* Corn earworm Cucumber beetle Cutworms European corn borer Flea beetle spp. Leafminer (adult) Looper spp. Japanese beetle (adult) Stink bug spp Thrips (adult) Whitefly	5.1 – 9.85 fl oz/A (0.08 – 0.15 lbs ai/A)
Aphid spp. Lygus spp.	3.8 – 9.85 fl oz/A (0.06 – 0.15 lbs ai/A)
Restrictions <ul style="list-style-type: none"> • PHI: Do not apply within 7 days of harvest. • Application Interval: Do not make applications less than 7 days apart. • Maximum Amount of Brigadier Insecticide per Application: 9.85 fl oz/A (0.075 lb ai/a of imidacloprid and 0.075 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 25.6 fl oz/a (0.20 lb ai/a of imidacloprid and 0.20 lb ai/a of bifenthrin) • Maximum Amount of imidacloprid per Season: 0.24 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.20 lbs ai/A 	
Remarks Thorough coverage is essential to achieve control. *Including all armyworm pests except Beet armyworm.	

Peppers (PHI 7 days)

Pests Controlled	Rates of Application
Armyworm spp.* European corn borer Flea beetle spp. Garden webworm Grasshopper spp. Hornworm spp. Leafhopper spp. Meadow spittlebug Pepper maggot (adult) Pepper weevil	5.1 – 9.85 fl oz/A (0.04 – 0.15 lbs ai/A)

Psyllid spp. Southwestern corn borer Stinkbug spp. Vegetable leafminer (adult) Whitefly	
Aphid spp. Leafhopper spp.	3.8 – 9.85 fl oz/A (0.06 – 0.15 lbs ai/A)
<p>Restrictions</p> <ul style="list-style-type: none"> • PHI: Do not apply within 7 days of harvest. • Application Interval: Do not make applications less than 7 days apart. • Maximum Amount of Brigadier Insecticide per Application: 9.85 fl oz/A (0.075 lb ai/a of imidacloprid and 0.075 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 25.6 fl oz/a (0.20 lb ai/a of imidacloprid and 0.20 lb ai/a of bifenthrin) • Maximum Amount of imidacloprid per Season: 0.24 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.20 lbs ai/A <p>Do not graze livestock in treated areas or cut treated crops for feed.</p> <p>Remarks Thorough coverage is essential to achieve control.</p> <p>*Including all armyworm pests except Beet armyworm.</p> <p>** Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.</p>	

Tomato (PHI 1 days)

Pests Controlled	Rates of Application
Aphid spp. Flea hopper Leafhopper spp. Lygus spp. Squash bug Stink bug spp. Thrips (adult) Whitefly	5.1 – 9.85 fl oz/A (0.06 – 0.15 lbs ai/A)
Armyworm spp.* Bean leaf beetle Cabbageworm Cloverworm Colorado potato beetle Corn earworm Corn rootworm Cucumber beetle Cutworm spp. European corn borer Flea beetle spp. Grasshopper Japanese beetle (adult) Looper spp. Salt marsh caterpillar	3.8 – 9.85 fl oz/A (0.04 – 0.15 lbs ai/A)
<p>Restrictions</p> <ul style="list-style-type: none"> • PHI: Do not apply within 1 days of harvest. • Application Interval: Do not make applications less than 10 days apart. • Maximum Amount of Brigadier Insecticide per Application: 9.85 fl oz/A (0.075 lb ai/a of imidacloprid and 0.075 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 30.72 fl oz/a (0.24 lb ai/a of imidacloprid and 0.24 lb ai/a of bifenthrin) • Maximum Amount of imidacloprid per Season: 0.24 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.40 lbs ai/A <p>Do not graze livestock in treated areas or cut treated crops for feed.</p>	

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Remarks
 Apply in a minimum of 1 gallons of finished spray per acre by air or in a minimum of 15 gallons per acre with ground equipment. When applying by air, 1 quarts of emulsified oil may be substituted for 1 quarts of water in the finished spray.

Thorough coverage is essential to achieve control.

*Including all armyworm pests except Beet armyworm

Head Lettuce (PHI 7 days)

Pests Controlled	Rates of Application
Amyworm spp.* Corn earworm Cucumber beetle Cutworm spp. Flea beetle spp. Imported Cabbageworm Looper spp. Salt Marsh caterpillar Stink bug spp. Whitefly	5.1 – 6.1 fl oz/A (0.08 – 0.095 lbs ai/A)
Aphid spp. Leafhopper spp. Lygus spp.	3.8 – 6.1 fl oz/A (0.06 – 0.095 lbs ai/A)

Restrictions

- **PHI:** Do not apply within 7 days of harvest.
- **Application Interval:** Do not make applications less than 7 days apart.
- **Maximum Amount of Brigadier Insecticide per Application:** 6.1 fl oz/A (0.048 lb ai/a of imidacloprid and 0.048 lb ai/a of bifenthrin)
- **Maximum Amount of Brigadier Insecticide per Season:** 30.72 fl oz/a (0.24 lb ai/a of imidacloprid and 0.24 lb ai/a of bifenthrin)
- **Maximum Amount of imidacloprid per Season:** 0.24 lbs ai/A as a foliar application.
- **Maximum Amount of bifenthrin per Season:** 0.50 lbs ai/A

Remarks
 Thorough coverage is essential to achieve control.

*Including all armyworm pests except Beet armyworm.

Spinach (PHI 40 days)

Pests Controlled	Rates of Application
Amyworm* Colorado potato beetle Corn earworm Cucumber beetle Cutworm spp. European corn borer Fire ant spp. Flea beetle spp. Leafminer Looper spp. Thrips (adult) Whitefly	5.1 – 6.14 fl oz/A (0.08 – 0.096 lbs ai/A)
Aphid spp. Lygus spp.	3.8 – 6.14 fl oz/A (0.06 – 0.096 lbs ai/A)

Restrictions

- **PHI:** Do not apply within 40 days of harvest.
- **Application Interval:** Do not make applications less than 7 days apart.
- **Maximum Amount of Brigadier Insecticide per Application:** 6.14 fl oz/A (0.048 lb ai/a of imidacloprid and 0.048 lb ai/a of bifenthrin)
- **Maximum Amount of Brigadier Insecticide per Season:** 30.72 fl oz/a (0.24 lb ai/a of imidacloprid and 0.24 lb ai/a of bifenthrin)
- **Maximum Amount of imidacloprid per Season:** 0.24 lbs ai/A as a

foliar application.

- **Maximum Amount of bifenthrin per Season:** 0.40 lbs ai/A

Remarks

Apply in a minimum of 2.5 gallons of finished spray per acre by air or in a minimum of 5 gallons per acre with ground equipment. When applying by air, 1 quart of emulsified oil may be substituted for 1 quart of water in the finished spray.

Thorough coverage is essential to achieve control.

*Including all armyworm pests except Beet armyworm.

Legume Vegetables

Dried Beans and Peas (14 days for dried shelled peas or beans)

Dry Beans and Peas 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.

Pests Controlled	Rates of Application
Alfalfa caterpillar Armyworm spp.* Bean leaf beetle Cloverworm Corn earworm Corn rootworm (adult) Cucumber beetle Cutworm spp. European corn borer Flea beetle spp. Japanese beetle (adult) June beetle (adult) Looper spp. Mexican bean beetle Pea leaf weevil Pea weevil Sap beetle (adult) Saltmarsh caterpillar Silerspotted skipper Southern armyworm Threecornered alfalfa hopper Webworm Whitely	5.6 fl oz/A (0.0875 lbs ai/A)
Aphid spp. Grasshopper Leafhopper spp. Lygus spp. Thrips (adult) (foliage feeding)	3.8 – 5.6 fl oz/A (0.06 – 0.0875 lbs ai/A)

Restrictions

- **PHI:** Do not apply within 14 days of harvest.
- **Application Interval:** Do not make applications less than 7 days apart.
- **Maximum Amount of Brigadier Insecticide per Application:** 5.6 fl oz/A (0.044 lb ai/a of imidacloprid and 0.044 lb ai/a of bifenthrin)
- **Maximum Amount of Brigadier Insecticide per Season:** 16.64 fl oz/a (0.13 lb ai/a of imidacloprid and 0.13 lb ai/a of bifenthrin)
- **Maximum Amount of imidacloprid per Season:** 0.13 lbs ai/A as a foliar application.
- **Maximum Amount of bifenthrin per Season:** 0.20 lbs ai/A to peas and 0.30 lb ai/a to beans

Remarks

Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1– 2 quarts of emulsified oil may be substituted for 1– 2 quarts of water in the finished spray.

Thorough coverage is essential to achieve control.

*Including all armyworm pests except Beet armyworm.

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Succulent Beans and Peas (PHI 7 days)

Succulent Beans and Peas including: Bean (*Phaseolus* spp.) (includes runneredible-podded bean (*Phaseolus* bean, snap bean, wax bean); bean spp.) and any one succulent (*Vigna* spp.) (includes asparagus bean, cultivar of edible-podded pea Chinese longbean, moth bean, yardlong (*Pisum* spp.).. bean); jackbean; pea (*Pisum* spp.) (includes dwarf pea, edible-pod pea, snow pea, sugar snap pea); pigeon pea; soybean (immature seed); sword bean: lima of bean (*Phaseolus* spp.) and bean (green); broad bean (succulent); garden pea (*Pisum* spp.).. bean (*Vigna* spp.) (includes blackeyed pea, cowpea, southern pea); pea (*Pisum* spp.) (includes English pea, garden pea, green pea); pigeon pea.

Pests Controlled	Rates of Application
Alfalfa caterpillar Armyworm spp.* Bean leaf beetle Cloverworm Corn earworm Corn rootworm (adult) Cucumber beetle Cutworm spp. European corn borer Flea 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	5.5 fl oz/A (0.0875 lbs ai/A)
Aphid spp. Grasshopper Leafhopper spp. Lygus spp. Thrips (adult) (foliage feeding)	3.8 – 5.5 fl oz/A (0.06 – 0.0875 lbs ai/A)
<p>Restrictions</p> <ul style="list-style-type: none"> • PHI: Do not apply within 7 days of harvest. • Application Interval: Do not make applications less than 7 days apart. • Maximum Amount of Brigadier Insecticide per Application: 5.5 fl oz/A (0.044 lb ai/a of imidacloprid and 0.044 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 16.64 fl oz/a (0.13 lb ai/a of imidacloprid and 0.13 lb ai/a of bifenthrin) • Maximum Amount of imidacloprid per Season: 0.13 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.20 lbs ai/A <p>Remarks</p> <p>Apply in a minimum of 1 gallons of finished spray per acre by air or in a minimum of 5 gallons per acre with ground equipment. When applying by air, 1 quarts of emulsified oil may be substituted for 1 quarts of water in the finished spray.</p> <p>Thorough coverage is essential to achieve control.</p> <p>*Including all armyworm pests except Beet armyworm.</p>	

Strawberry (PHI 7)

Pests Controlled	Rates of Application
Aphid spp. Armyworm spp.* Corn earworm Flea beetle spp. Leafhopper spp. Lygus spp. Spittlebug Whitefly	5.1 – 6.14 fl oz/A (0.08 – 0.096 lbs ai/A)
<p>Restrictions</p> <ul style="list-style-type: none"> • PHI: Do not apply within 7 days of harvest. 	

- **Application Interval:** Do not make applications less than 5 days apart.
- **Maximum Amount of Brigadier Insecticide per Application:** 6.14 fl oz/A (0.048 lb ai/a of imidacloprid and 0.048 lb ai/a of bifenthrin)
- **Maximum Amount of Brigadier Insecticide per Season:** 17.92 fl oz/a (0.14 lb ai/a of imidacloprid and 0.14 lb ai/a of bifenthrin)
- **Maximum Amount of imidacloprid per Season:** 0.14 lbs ai/A as a foliar application.
- **Maximum Amount of bifenthrin per Season:** 0.50 lbs ai/A

Do not apply during or within 10 days after bloom or when bees are actively foraging.

Remarks
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.

Tuberous and Corm Vegetables (PHI 21 days)

Tuberous and Corm vegetables (except Radish and Sugarbeet): Sweet potato, Arracacha, Arrowroot, Chinese artichoke, Jerusalem artichoke, Edible canna, Cassava (bitter and sweet), Chayote (root), Chufa, Dasheen (taro), Ginger, Leren, Tanier, Turmer, Yam bean, True yam

Pest	Rate of application
Banded Cucumber beetle Flea beetle spp. Colorado potato beetle Cucumber beetle European corn borer Flea beetle spp. Grasshopper spp. Looper spp. June beetle Psyllid spp. Sugarcane beetle Sweetpotato flea beetle Sweetpotato weevil Whitefly Whitefringed beetle	5.1 – 7.7 fl oz/A (0.08 – 0.12 lbs ai/A)
Aphid spp. Leafhopper spp.	3.8 – 7.7 fl oz/A (0.06 – 0.12 lbs ai/A)
Restrictions	
<ul style="list-style-type: none"> • PHI: Do not apply within 21 days of harvest. • Application Interval: Do not make applications less than 7 days apart. • Maximum Amount of Brigadier Insecticide per Application: 7.7 fl oz/A (0.06 lb ai/a of imidacloprid and 0.06 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 16.64 fl oz/a (0.13 lb ai/a of imidacloprid and 0.13 lb ai/a of bifenthrin) • Maximum Amount of imidacloprid per Season: 0.13 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.50 lbs ai/A <p>Do not graze livestock in treated areas or cut treated crops for feed.</p>	
Remarks Thorough coverage is essential to achieve control.	

Citrus (Bare ground application) (PHI 1 day)

Pests Controlled	Rates of Application
Fire ants (<i>Solenopsis spp.</i>) Asian cockroach (<i>Blattella asahinae</i>)	12.8 - 32 fl oz/A (0.2 - 0.5 lb ai/A)
Diaprepes Root Weevil (<i>Diaprepes abbreviatus</i>)	32 - 64 fl oz/A (0.5 – 1.0 lb ai/A)

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Southern Blue Green Citrus Root Weevil (<i>Pachnaeus litus</i>)	
Blue Green Citrus Root Weevil (<i>Pachnaeus opalus</i>)	
Brown Leaf Notcher (<i>Epicaerus mexicanus</i>)	
Little Leaf Notcher (<i>Artipus floridanus</i>)	

Restrictions

- **PHI** Do not apply within 1 days of harvest
- **Maximum Amount of Brigadier Insecticide per Application:** 64 fl oz/A (0.5 lb ai/a of imidacloprid and 0.5 lb ai/a of bifenthrin)
- **Maximum Amount of Brigadier Insecticide per Season:** 64 fl oz/a (0.50 lb ai/a of imidacloprid and 0.50 lb ai/a of bifenthrin)
- **Maximum Amount of imidacloprid per Season:** 0.50 lbs ai/A as a foliar application.
- **Maximum Amount of bifenthrin per Season:** 0.50 lbs ai/A

Apply by Ground application only.

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 actively foraging.

Do not allow any application of Brigadier Insecticide to contact fruit or foliage.

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

Remarks

Apply Brigadier Insecticide by ground equipment to bare soil beneath citrus trees. Brigadier Insecticide must be uniformly applied from the trunk to the drip line of tree; apply in a minimum of 40 gallons of dilute spray per acre.

Greater spray volume should insure greater uniformity of coverage. A pre- and post-application irrigation may aid in the uniformity of coverage as well.

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

Timing of Brigadier Insecticide applications is critical. Current information suggests that peak emergence of adult Diaprepes Weevil varies by citrus growing region and these emergence peaks can be dramatically affected by environmental factors, such as soil moisture. Typically, two peaks are observed for Diaprepes, first in spring then late summer or early fall. Southern Blue- Green and Blue-Green Citrus Weevils and Fuller Rose Beetle typically exhibit a single emergence peak in the spring. Brown and Little Leaf Notchers typically exhibit three emergence peaks, spring, summer and fall. Since emergence varies seasonally and by location, timing of Brigadier Insecticide 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. It is

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critical to have the Brigadier Insecticide soil barrier in place prior to drop of the neonates.

Brigadier Insecticide is one of several effective tools in an integrated pest management program for Citrus Root Weevils. Application of Brigadier Insecticide 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.

Additional Instructions:

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 fluid ounces formulated product should be used to obtain the longest residual management of Diaprepes root weevil. If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 16 fluid ounces formulated product can be applied early season and 16 fluid ounces formulated product can be applied later in the season.

Grapes (PHI 30 days)

Pests Controlled	Rates of Application
Black vine weevil Cutworm spp. Grape berry moth Grape bud beetle Grape leafroller Grape leafroller Grapeleaf skeletonizer Japanese beetles (adult) Mealybug (crawlers) Omnivorous leafroller Orange tortrix Thrips (adults)	5.1 – 6.4 fl oz/A (0.08 – 0.1 lbs ai/A)
Eastern grape leafhopper Flea beetle spp. Sharpshooter spp. Variegated leafhopper Western grape leafhopper	3.8 – 6.4 fl oz/A (0.06 – 0.1 lbs ai/A)
<p>Restrictions</p> <ul style="list-style-type: none"> • PHI: Do not apply within 30 days of harvest. • Application Interval: Do not make applications less than 14 days apart. • Maximum Amount of Brigadier Insecticide per Application: 6.4 fl oz/A (0.05 lb ai/a of imidacloprid and 0.05 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 12.8 fl oz/a (0.1 lb ai/a of imidacloprid and 0.1 lb ai/a of bifenthrin) • Maximum Amount of imidacloprid per Season: 0.10 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.10 lbs ai/A <p>Remarks Thorough coverage is essential to achieve control.</p>	

Hops (PHI 28 days)

Pests Controlled	Rates of Application
Armyworm spp.* Cutworm spp. Leafrollers	12.8 fl oz/A (0.2 lbs ai/A)

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Looper spp Root weevil Two spotted spide mite	
Aphid spp. Leafhopper spp.	3.8 – 12.8 fl oz/A (0.06 – 0.2 lbs ai/A)
Restrictions <ul style="list-style-type: none"> • PHI: Do not apply within 28 days of harvest. • Application Interval: Do not make applications less than 21 days apart. • Maximum Amount of Brigadier Insecticide per Application: 12.8 fl oz/A (0.1 lb ai/a of imidacloprid and 0.1 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 38.4 fl oz/a (0.30 lb ai/a of imidacloprid and 0.30 lb ai/a of bifenthrin) • Maximum Amount of imidacloprid per Season: 0.30 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.30 lbs ai/A 	
Remarks 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..	

Pears (PHI 14 days)

Pests Controlled	Rates of Application
Codling Moth Cutworm spp. Green Fruitworm Leafminer Leafroller Plum Curculio San Jose scale	5.1 – 12.8 fl oz/A (0.08 – 0.2 lbs ai/A)
Aphid spp. Leafhopper spp. Lygus spp. Stink Bug spp.	3.8 – 12.8 fl oz/A (0.06 – 0.2 lbs ai/A)
Restrictions <ul style="list-style-type: none"> • PHI: Do not apply within 14 days of harvest. • Application Interval: Do not make applications less than 30 days apart. • Maximum Amount of Brigadier Insecticide per Application: 12.8 fl oz/A (0.1 lb ai/a of imidacloprid and 0.1 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 64 fl oz/a (1.0 lb ai/a of imidacloprid and 1.0 lb ai/a of bifenthrin) total and 57.6 fl oz (0.45 lb ai/a of imidacloprid and 0.45 lb ai/a of bifenthrin) after petal fall • Maximum Amount of imidacloprid per Season: 0.50 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.50 lbs ai/A total and 0.45 lb ai/a after petal fall. <p>Do not graze livestock in treated areas or cut treated crops for feed.</p>	
Remarks Thorough coverage is essential to achieve control.	

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Tree Nuts Group (PHI 7 days for crops except Pecan which is 21 days)

(7 Day PHI) including: almond; beech nut; Brazil nut; butternut; cashew; chestnut; chinquapin; filbert (hazelnut); hickory nut; macadamia nut; pistachios and walnut (black and English). (21 Day PHI) Pecan.

Pest	Rates of Application
European mite Spider mite Mealy bug San Jose scale (crawlers)	10.24 – 12.8 fl oz/A (0.16 – 0.2 lbs ai/A)
Aphid spp. (including black pecan aphid) Codling moth Filbert worm Hickory shuckworm Leaffooted bug Navel orangeworm Oblique banded leafroller Peach twig borer Pecan leaf casebearer Pecan nut casebearer Pecan phyloxera Plantbug spp. Stink bug spp.	6.4 – 12.8 fl oz/A (0.1 – 0.2 lbs ai/A)
<p>Restrictions</p> <ul style="list-style-type: none"> • PHI: Do not apply within 7 days of harvest for all Tree nut crops except The PHI for Pecan is 21 days. • Application Interval: Do not make applications less than 15 days apart. • Maximum Amount of Brigadier Insecticide per Application: 12.8 fl oz/A (0.10 lb ai/a of imidacloprid and 0.10 lb ai/a of bifenthrin) • Maximum Amount of Brigadier Insecticide per Season: 46.08 fl oz/a (0.36 lb ai/a of imidacloprid and 0.36 lb ai/a of bifenthrin) • Maximum Amount of imidacloprid per Season: 0.36 lbs ai/A as a foliar application. • Maximum Amount of bifenthrin per Season: 0.50 lbs ai/A <p>Do not apply prebloom or during bloom or when bees are actively foraging.</p> <p>Remarks: 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.</p> <p>Apply by air with a minimum of 10 gallons of finished spray.</p>	

Dealers Should Sell in Original Packages Only.

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