

34704-1045

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

June 9, 2011

Premjit Halarnkar, Ph.D  
Registration Manager  
Loveland Products Inc.  
3005 Rocky Mountain Avenue  
Loveland, CO 80538

Subject: Amendment: Removal of the Skull and Crossbones  
Swagger  
EPA Reg. No. 34704-1045  
Your Submission Dated May 5, 2011

Dear Dr. Halarnkar

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable. A stamped copy of the label is enclosed for your records.

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

Sincerely,

A handwritten signature in cursive script that reads "Richard Gebken".

Richard Gebken  
Interim Product Manager 13  
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 applicators certification.



**ACCEPTED**  
JUN 9 2011  
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide Registered under EPA Reg. No. 34704-1045

ACTIVE INGREDIENTS:	By Wt.
Bifenthrin: (2-methyl[1,1'-biphenyl]-3-yl) methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylate*	5.70%
Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine	5.70%
OTHER INGREDIENTS:	88.60%
	<b>TOTAL 100.00%</b>

\*CIS isomers 97% minimum, trans isomers 3% maximum.  
This product contains 1/2 lb. each of Bifenthrin and Imidacloprid active ingredient per gallon.

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

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

**FIRST AID**

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

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.  
**For a medical emergency involving this product call: 1-866-944-8565.**  
**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.

**EPA REG. NO. 34704-1045  
EPA EST. NO. 34704-MS-002  
NET CONTENTS 1 GAL. (3.78 L)**

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**SWAGGER™  
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**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
DANGER**

Corrosive. Causes irreversible eye damage. Harmful if absorbed through skin or swallowed. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield or safety glasses). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**Personal Protective Equipment (PPE):**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instruction for Category E on the EPA Chemical resistance category section chart.

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Protective eyewear,
- Chemical-resistant gloves, such as Barrier Laminate or Nitrile Rubber or Neoprene Rubber or Viton, and
- Shoes plus socks.

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

**USER SAFETY RECOMMENDATIONS**

**Users should:**

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

**AGRICULTURAL USE REQUIREMENTS**

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

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls,
- Chemical resistant gloves, 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.

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**RESISTANCE MANAGEMENT**

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

The Group 4A active ingredient in Swagger is a member of the neonicotinoid chemical group. Avoid using a block of more than three consecutive applications of Swagger and/or other Group 4A products having the same or similar mode of action. Following a neonicotinoid block of treatments, LPI strongly encourages the rotation to a block of applications with effective products of different mode before using additional applications of neonicotinoid products. Using a block rotation or windowed approach, along with IPM practices, is considered an effective use strategy for preventing or delaying an insect's ability to develop resistance to this class of chemistry.

Foliar applications of Swagger or other Group 4A products from the neonicotinoid chemical class must not be used on crops previously treated with a long-residual, soil-applied product from the neonicotinoid chemical class.

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(s) may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local LPI company representative or agricultural advisor for the best alternative method of control for your area.

**Application Instructions:**

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

Use adequate spray volumes, properly calibrated application equipment and VADER® spray adjuvant to obtain thorough coverage. To optimize deposition, penetration, and translocation, use 0.25% v/v of VADER. 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 100 feet (using ground equipment) or 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

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

**ROTATIONAL CROPS**

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

**Plant back restrictions:**

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

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

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

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

**MAXIMUM ALLOWABLE USE PER SEASON**

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

**Tank Mixture**

Swagger 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.

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**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 product 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. 21 pp. <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.

**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.

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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. Swagger should be applied continuously for the duration of the water application. Swagger should be diluted in sufficient volume to ensure accurate application over the area to be treated. When using chemigation, a minimum of 0.5 inch per acre of irrigation water is recommended. Agitation generally is not required when a suitable diluent is used. A diluent test should be conducted to ensure that phase separation will not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable control.

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

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
Aphid spp. Artichoke plume moth Cribrate weevil Leafhopper spp.	12.8 to 25.6	0.1 to 0.2

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

Minimum interval between applications: 15 Days

Maximum amount of Swagger allowed/season: 51.2 ozs (0.4 lb AI/A)

Maximum amount of Imidacloprid allowed/season: 0.5 lb AI/A.

Maximum amount of Bifenthrin allowed/season: 0.5 lb AI/A.

**REMARKS:** Apply when pest population reaches damaging threshold and repeat as necessary to maintain control, but not more often than 15-day intervals.

**Application by ground:** Apply a full cover spray in a minimum of 10 gals of finished spray/A.

**Application by air:** Apply specified dosage in a minimum of 2 gals/A.

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

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

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

**Restrictions:** Preharvest Interval (PHI): 7 Days  
 Minimum interval between applications: 7 Days  
 Maximum amount of Swagger allowed/season: 61.44 ozs (0.48 lb AI/A)  
 Maximum amount of Bifenthrin allowed/season: 0.5 lb AI/A.  
 Maximum amount of Imidacloprid allowed/season: 0.24 lb AI/A.  
 Apply Swagger up to 5 applications after bloom.

**REMARKS:** Apply in a minimum of 2 gals of finished spray/acre by air or in a minimum of 10 gals/A with ground equipment. 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. Thorough coverage is essential to achieve control.

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

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

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

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***Brassica (Leafy Greens) cont'd.:***

**Restrictions:** Preharvest Interval (PHI): 7 Days  
 Minimum interval between applications: 7 Days  
 Maximum amount of Swagger allowed/season: 61.44 ozs (0.48 lb AI/A)  
 Maximum amount of Bifenthrin allowed/season: 0.5 lb AI/A.  
 Maximum amount of Imidacloprid allowed/season: 0.24 lb AI/A.  
 Apply Swagger up to 5 applications after bloom.

**REMARKS:** Apply in a minimum of 2 gals of finished spray/A by air or in a minimum of 10 gals/A with ground equipment. 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. Thorough coverage is essential to achieve control.

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

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

**Restrictions:**  
**\*Not for use in California**  
 Do not apply by air or through irrigation systems.  
 Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.  
 Preharvest Interval (PHI): 1 day.  
 Minimum interval between applications: 10 days.  
 Maximum amount of Swagger allowed/season: 64 ozs (0.5 lb AI/A).  
 Maximum amount of Bifenthrin allowed/season: 0.25 lb AI/A.  
 Maximum amount of Imidacloprid allowed/season: 0.25 lb AI/A.

**REMARKS: Citrus**  
 Do not allow any application of the product to contact fruit or foliage.  
 Apply the specified dosage in a minimum of 40 gals of finished spray/A.  
 Scales – time application to the crawler stage. Treat each generation.  
 Where concentrated applications are appropriate, increase the spray solution concentration to apply an equivalent rate/A to that applied in the diluted application. The 64.0 fl ozs/A rate is based on full sized trees. This rate may be reduced proportionally for smaller trees.  
 The use of this product protects citrus tree roots from *Diaprepes* and other citrus root weevil feeding by creating a barrier. As Citrus root weevil eggs hatch, the newly hatched larvae (neonates) fall to the soil surface beneath the tree and come into contact with this product as they attempt to burrow into the root zone. Disturbance of the soil beneath the tree should be minimized.  
 Timing of application is very important. Peak emergence of *Diaprepes* adults varies by citrus growing region, and environmental factors such as soil moisture can affect citrus root emergence.

Usually, two peaks occur for *Diaprepes*, first in the spring then late summer or early fall. Southern blue green and Blue green citrus weevils and Fuller rose beetle usually have a single emergence peak in the spring. Brown and Little leaf notchers usually have three emergence peaks, spring, summer and fall. Since emergence varies by region and season, the best way to time application is



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**Citrus cont'd.:**

observe the adults. By trapping adults when they are most active (in the morning or and late afternoon) during the spring and summer emergence periods, an estimation of numbers can be obtained. Eggs are laid 8 to 10 weeks following the adult emergence from the soil; larvae invasion into the soil will begin 2 to 3 wks following adult emergence. This product must be applied prior to the dropping of the neonates. Consult local university extension personnel for current information to protect citrus trees from Citrus root weevils and other pests.

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

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

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

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

If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, 32 fl ozs 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 ozs formulated product can be applied early season and 16 fl ozs formulated product can be applied later in the season.

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

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

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
Aphid spp.	8.48 to 11.0	0.066 to 0.086
Beet armyworm		
Cabbage looper		
Cutworm spp.		
Flea beetle		
Grasshopper		
Leafhopper spp.		
Leafminer		
Saltmarsh caterpillar		
Spotted cucumber beetle		
Thrips		
Whitefly		

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

Minimum interval between applications: 7 days.

Maximum amount of Swagger allowed/season: 33.28 ozs (0.26 lb AI/A).

Maximum amount of Bifenthrin allowed/season: 0.5 lb AI/A.

Maximum amount of Imidacloprid allowed/season: 0.13 lb AI/A.

**CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED (AT PLANT USE) (PHI 30 DAYS)**

Pest	Use Rates	
	Fl Ozs/1000 linear ft of row	Lbs AI/1000 linear ft of row
Corn rootworm larvae Northern Southern Western	2.4	0.0092
Army cutworm		
Cutworm spp. Grubs Seed corn beetle Seed corn maggot True armyworm or Armyworm spp. Wireworm	1.2 to 2.4	0.0046 to 0.0092

Row Spacings (inches)	40	38	36	30
Swagger (lb AI/A)	0.120	0.128	0.138	0.160
Swagger (formulated fl ozs/A)	15.36	16.38	17.67	20.48

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***Corn (Grain and Silage), Popcorn, Field Corn Grown for Seed (At Plant Use) cont'd.:***

**REMARKS:**

Apply as a 5 to 7 inch T-band treatment over an open seed furrow. Position the spray nozzle behind the planter shoe, in front of the press wheel centered over the row. Use the table below to determine this product's needs/A.

Apply in a minimum of 3 gals of finished spray/A.

Mix this product with water or fertilizer in the following manner: Fill the spray tank approximately one-half full with water or liquid fertilizer, add the proper amount of this product, then add the rest of the water or fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform spray mixture.

Applications of this product alone or in recommended tank mixtures, in conjunction with in-furrow pop-up fertilizers may be used. A jar compatibility test should be performed with appropriate ratio of this product and fertilizer to ensure mixture will stay in solution. Constant agitation should be maintained during mixing and application.

Do not apply to soil where there is greater than 30% cover of crop residue remaining.

Do not apply within 30 days of harvest.

Do not graze livestock in treated area or cut treated crops for feed within 30 days of treatment.

Do not apply more than 0.2 lb A/A/season as an at plant application.

**FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED (PRE & PPI) (PHI 30 DAYS)**

Pest	Use Rates	
	Fl Ozs/A	Lbs A/A
Armyworm spp.	12.03 to 15.87	0.094 to 0.124
Black cutworm	Pre-Plant Incorporated (PPI) <sup>1</sup>	Pre-Plant Incorporated (PPI) <sup>1</sup>
Seedcorn maggot		
Stalkborer		
White grub		
Wireworm		
Armyworm spp.	10.24	0.080
Black cutworm	Pre-Emergence (PRE) <sup>2</sup>	Pre-Emergence (PRE) <sup>2</sup>
Stalkborer		

**REMARKS:**

<sup>1</sup> The 12.03 to 15.87ozs/A rate must be applied as PPI and can be tankmixed and applied with PPI herbicides. Incorporation of this product should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth.

<sup>2</sup> The 2.56 ozs/A rate may be applied PRE and can be tankmixed and applied with PRE herbicides.

**FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED (FOLIAR USE) (PHI 30 DAYS)**

Pest	Use Rates	
	Fl Ozs/A	Lbs A/A
Aphids	8.45 to 25.60	0.066 to 0.20
Army cutworm		
Beet armyworm		
Cereal leaf beetle		
Chinch bug		
Common stalk borer		
Corn earworm		
Corn rootworm adults		
Cucumber beetle adult		
Cutworm spp.		
Southwestern corn borer		
European corn borer		
Fall armyworm		
Flea beetle		
Grasshoppers		
Greenbug		
Japanese beetle adult		
Sap beetle		
Southern armyworm		
Southern corn leaf beetle		
Stink bug		
Tarnished plant bug		
True armyworm or Armyworm spp.		
Webworms		
Western bean cutworm		
Yellowstriped armyworm		

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**Field Corn (Grain and Silage), Popcorn, Field Corn Grown for Seed (Foliar Use) cont'd.:**

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
Banks grass mite	20.48 to 25.60	0.16 to 0.20
Carmine mite		
Twospotted spider mite		

**Restrictions:** Preharvest Interval (PHI): 30 days.  
 Do not apply more than 0.6 lb AI/A/season including PRE & PPI, at plant, plus foliar applications.  
 Use of ultra low volume (ULV) application on corn is prohibited.  
 Do not make aerial or ground applications to corn if heavy rainfall is imminent.  
 Use of this product on corn is prohibited in all coastal counties.  
 Minimum interval between applications: 7 days.  
 Maximum amount of Swagger allowed/season: 76.8 ozs (0.6 lb AI/A)  
 Maximum amount of Bifenthrin allowed/season: 0.3 lb AI/A.  
 Maximum amount of Imidacloprid allowed/season: 0.3 lb AI/A  
 Do not graze livestock in treated areas or cut treated crops for feed within 30 days of the last application.

**REMARKS – CORN:**

**General:** Apply in a minimum of 2 to 5 gals of finished spray/A by aircraft or in a minimum of 10 gals/A with ground equipment. To improve control by aircraft, use 5 gals of finished spray/A particularly when initial populations are heavier than normal. 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. Thorough coverage is essential to achieve control.

**To control ear-attacking pests:** Apply this product just before silking and repeat as necessary to maintain control, but do not exceed maximum application rates and reapplication intervals listed elsewhere in this section.

**Southwestern corn borer, European corn borer:** Make application for corn borer control with initial application at or shortly before egg hatch.

**For control of other insect pests:** Apply when pests first appear and repeat as necessary but do not exceed maximum application rates and reapplication intervals listed elsewhere in this section.

**For control of mites:** Apply for Banks grass mite control when colonies first form prior to leaf damage or discoloration and before dispersal above the bottom third of the plant.

For Twospotted spider mite and Carmine mite control, apply when colonies first form prior to leaf damage or discoloration and before widespread mite dispersal throughout the canopy.

Higher rates will be necessary for heavier initial populations and corn under heat or drought stress. Field experience with dimethoate at 0.5 lb AI/A in tank mixture has demonstrated good control under these conditions.

**For mite control in Texas, New Mexico, Oklahoma, Arizona:** Apply in a minimum of 5 gals of finished spray/A by aircraft or in a minimum of 10 gals/A with ground equipment.

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**SWEET CORN (GRAIN AND SILAGE)**  
**SWEET CORN GROWN FOR SEED (AT PLANT USE) (PHI 1 DAY)**

Pest	Use Rates	
	Fl Ozs/1000 linear ft of row	Lbs AI /1000 linear ft of row
Corn rootworm larvae Northern Southern Western Mexican	1.18	0.0092
Army cutworm Cutworm spp. Grubs Seed corn beetle Seed corn maggot True armyworm or Armyworm spp. Wireworm	0.59 to 1.18	0.0046 to 0.0092

Row Spacings (inches)	40	38	36	30
Swagger (lb AI/A)	0.120	0.128	0.138	0.160
Swagger (formulated fl ozs/A)	15.36	16.38	17.67	20.48

**REMARKS:**

Apply as a 5 to 7 inch T-band treatment over an open seed furrow. Position the spray nozzle behind the planter shoe, in front of the press wheel centered over the row. Use the table below to determine this product's needs/A.  
 Apply in a minimum of 3 gals of finished spray/A.  
 Mix this product with water or fertilizer in the following manner: Fill the spray tank approximately one-half full with water or liquid fertilizer, add the proper amount of this product, then add the rest of the water or fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform spray mixture.  
 Applications of this product alone or in recommended tank mixtures, in conjunction with in-furrow pop-up fertilizers may be used. A jar compatibility test should be performed with appropriate ratio of this product and fertilizer to ensure mixture will stay in solution. Constant agitation should be maintained during mixing and application.  
 Do not apply to soil where there is greater than 30% cover of crop residue remaining.  
 Do not apply within 30 days of harvest.  
 Do not graze livestock in treated area or cut treated crops for feed within 30 days of treatment.  
 Do not apply more than 0.2 lb AI/A/season as an at plant application.

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**SWEET CORN (GRAIN AND SILAGE)**  
**SWEET CORN GROWN FOR SEED (FOLIAR USE) (PHI 1 DAY)**

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
Aphids	8.45 to 25.60	0.066 to 0.20
Army cutworm		
Aster leafhopper		
Beet armyworm		
Cereal leaf beetle		
Chinch bug		
Common stalk borer		
Corn earworm		
Corn rootworm adults		
Corn silk fly		
Cucumber beetle adult		
Cutworm spp.		
European corn borer		
Fall armyworm		
Flea beetle		
Grasshoppers		
Greenbug		
Japanese beetle adult		
Leafhoppers		
Sap beetle		
Southern armyworm		
Southern corn leaf beetle		
Southwestern corn borer		
Stinkbugs		
Tarnished plant bug		
Thrips		
True armyworm or Armyworm spp.		
Webworms		
Western bean cutworm		
Yellowstriped armyworm		
Banks grass mite	20.48 to 25.60	0.16 to 0.20
Carmine mite		
Pacific spider mite		
Twospotted spider mite		

**Restrictions:** Preharvest Interval (PHI): 1 day.  
 Minimum interval between applications: 7 days.  
 Maximum amount of Swagger allowed/season: 51.2 ozs (0.4 lb AI/A).  
 Maximum amount of Bifenthrin allowed/season: 0.2 lb AI/A.  
 Maximum amount of Imidacloprid allowed/season: 0.2 lb AI/A.  
 Do not graze livestock in treated areas or cut treated crops for feed within 1 day of the last application.  
 Use of ultra low volume (ULV) application on corn is prohibited.  
 Do not make aerial or ground applications to corn if heavy rainfall is imminent.  
 Use of this product on corn is prohibited in all coastal counties.

**REMARKS – SWEET CORN:**

**General:** Apply in a minimum of 2 gals of finished spray/A by air or in a minimum of 10 gals/A with ground equipment. 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. Thorough coverage is essential to achieve control.

**To control ear-attacking pests:** Apply this product when silking begins and repeat as necessary to maintain control but do not exceed maximum application rates and reapplication intervals listed elsewhere in this section.

**For control of mites:** Apply for Banks grass mite control when colonies first form prior to leaf damage or discoloration and before dispersal above the bottom third of the plant.

For Twospotted spider mite and Carmine mite control, apply when colonies first form prior to leaf damage or discoloration and before widespread mite dispersal throughout the canopy.

Higher rates will be necessary for heavier initial populations and corn under heat or drought stress.

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**COTTON (PHI 14 DAYS)**

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
Bandedwinged whitefly Boll weevil Cotton aphid Cotton fleahopper Lygus spp. Plant bugs (excludes <i>Lygus hesperus</i> ) Southern garden leafhopper Stink bug spp.	7.6 to 15.4	0.06 to 0.12
Beet armyworm Bollworm Cabbage looper Cotton leaf perforator Cutworm spp. European corn borer Fall armyworm Pink bollworm Saltmarsh caterpillar Tobacco budworm Thrips spp. Whitefly Yellow striped armyworm	10.2 to 15.4	0.08 to 0.12

**Restrictions:** Preharvest Interval (PHI): 14 days.  
 Minimum interval between applications: 7 days.  
 Maximum amount of Swagger allowed/season: 79.36 ozs (0.62 lb AI/A).  
 Maximum amount of Bifenthrin allowed/season: 0.5 lb AI/A.  
 Maximum amount of Imidacloprid allowed/season: 0.16 lb AI/A.  
 Do not graze livestock in treated areas or cut treated crops for feed.  
 Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.

**REMARKS: Cotton**

**Application in Water:** Apply in a minimum of 5 gals/A with ground equipment or 1 gal/A by aircraft. 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 recommended rate of Swagger in refined vegetable oil in a minimum of 1 qt of finished spray/A with aircraft calibrated to give adequate coverage.

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

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

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**FRUITING VEGETABLES: Crops of Crop Group 8 including -  
EGGPLANT, PEPPERS (BELL & NON-BELL), GROUNDCHERRY, PEPINO (PHI 7 DAYS)**

Pest	Use Rates	
	Fl Ozs/A	Lbs A/A
Aphid spp. Leafhopper spp. Lygus spp. Thrips	7.6 to 19.7	0.06 to 0.15
Armyworm spp. Artichoke plume moth Cabbage looper Colorado potato beetle Corn earworm Cucumber beetle Cutworms European corn borer Flea beetle Leafminer Loopers Pepper weevil Stink bug Tomato hornworm Tomato pinworm Whitefly	10.2 to 19.7	0.08 to 0.15

**Restrictions:** Preharvest Interval (PHI): 7 days.  
Minimum interval between applications: 7 days.  
Maximum amount of Swagger allowed/season: 51.2 ozs (0.4 lb A/A).  
Maximum amount of Bifenthrin allowed/season: 0.20 lb A/A.  
Maximum amount of Imidacloprid allowed/season: 0.24 lb A/A.

**REMARKS:** Apply in a minimum of 2 gals of finished spray/A by air or in a minimum of 10 gals/A with ground equipment. 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. Thorough coverage is essential to achieve control.

**GRAPES (PHI 30 DAYS)**

Pest	Use Rates	
	Fl Ozs/A	Lbs A/A
Eastern grape leafhopper Glassywinged sharpshooter Variegated leafhopper Western grape leafhopper	7.6 to 12.8	0.06 to 0.10
Black vine weevil Cutworm spp. Grape berry moth Grapeleaf skeletonizer Japanese beetles (adult) Mealybug	10.2 to 12.8	0.08 to 0.10

**Restrictions:** Preharvest Interval (PHI): 30 days.  
Minimum interval between applications: 14 days.  
Maximum amount of Swagger allowed/season: 12.8 ozs (0.10 lb A/A).  
Maximum amount of Imidacloprid allowed/season: 0.10 lb A/A.  
Maximum amount of Bifenthrin allowed/season: 0.10 lb A/A.

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

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

**Restrictions:** Preharvest Interval (PHI): 14 days.  
 Minimum interval between applications: 14 days.  
 Maximum amount of Swagger allowed/season: 33.3 ozs (0.26 lb AI/A).  
 Maximum amount of Bifenthrin allowed/season: 0.5 lb AI/A.  
 Maximum amount of Imidacloprid allowed/season: 0.13 lb AI/A.

**REMARKS:**

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

Apply foliar treatments in at least 10 gals/A with ground equipment at the rate of 11.2 fl ozs (0.08 lb AI)/A at a minimum of 14 day intervals. Do not feed green immature plants and peanut hay to livestock.

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

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

**Restrictions:** Preharvest Interval (PHI): 7 days.  
 Minimum interval between applications: 7 days.  
 Maximum amount of Swagger allowed/season: 61.44 ozs (0.48 lb AI/A).  
 Maximum amount of Bifenthrin allowed/season: 0.5 lb AI/A.



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**Lettuce (Head and Leaf) cont'd.:**

Maximum amount of Imidacloprid allowed/season: 0.24 lb AI/A.

**REMARKS:** Apply in water as necessary for insect control using a minimum of 10 gals of finished spray/A with ground equipment and 2 gals/A by air. 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. Thorough coverage is essential to achieve control.

**HOPS (PHI 28 days)**

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
Aphid spp.	7.6 to 25.6	0.06 to 0.2
Leafhopper spp.		
Armyworm spp.*	25.6	0.2
Cutworm spp.		
Leafrollers		
Looper spp.		
Root weevil		
Two spotted spider mite		

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

Minimum interval between applications: 21 Days

Maximum amount of Swagger allowed/season: 76.8 ozs (0.6 lb AI/A)

Maximum amount of Bifenthrin allowed/season: 0.30 lb AI/A.

Maximum amount of Imidacloprid allowed/season: 0.30 lb 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.

**SPINACH (PHI 40 DAYS)**

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

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

Minimum interval between applications: 7 days.

Maximum amount of Swagger allowed/season: 61.44 ozs (0.48 lb AI/A).

Maximum amount of Bifenthrin allowed/season: 0.40 lb AI/A.

Maximum amount of Imidacloprid allowed/season: 0.24 lb AI/A.

**REMARKS:** Apply in water as necessary for insect control using a minimum of 10 gals of finished spray/A with ground equipment and 2 gals/A by air. 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. Thorough coverage is essential to achieve control.

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**STRAWBERRY (PHI 7 days)**

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
Aphid spp. Armyworm spp.* Corn earworm Flea beetle spp. Leafhopper spp. Lygus spp. Spittlebug Whitefly	10.2 to 12.28	0.08 to 0.096

**Restrictions:** Preharvest Interval (PHI): 7 Days  
 Minimum interval between applications: 5 Days  
 Maximum amount of Swagger allowed/season: 35.84 ozs (0.28 lb AI/A)  
 Maximum amount of Bifenthrin allowed/season: 0.14 lb AI/A.  
 Maximum amount of Imidacloprid allowed/season: 0.14 lb 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 gals of finished spray/A by air or in a minimum of 50 gals/A with ground equipment. Aerial applications in Florida are prohibited. Thorough coverage is essential to achieve control.

\*Including all armyworm pests except Beet armyworm.

**OKRA (PHI 7 DAYS)**

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
Aphid spp. Lygus spp. Stink bug spp. Thrips	7.6 to 19.6	0.06 to 0.15
Armyworm Corn earworm Cucumber beetle Cutworms European corn borer Flea beetles Leafminer Loopers Japanese beetle (adult) Whitefly	10.2 to 19.6	0.08 to 0.15

**Restrictions:** Preharvest Interval (PHI): 7 days.  
 Minimum interval between applications: 7 days.  
 Maximum amount of Swagger allowed/season: 51.2 ozs (0.4 lb AI/A).  
 Maximum amount of Imidacloprid allowed/season: 0.24 lb AI/A.  
 Maximum amount of Bifenthrin allowed/season: 0.20 lb AI/A.

**REMARKS:** Apply using sufficient water to obtain uniform coverage. Apply as needed. Apply in a minimum of 2 gals of finished spray/A by air or in a minimum of 10 gals/A with ground equipment.

**PEARS (PHI 14 DAYS)**

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
Aphid spp. Leafhopper spp. Lygus spp. Stink bug spp.	7.6 to 25.6	0.06 to 0.2
Codling moth Cutworm spp. Green fruitworm Leafminer Leafroller Plum curculio	10.2 to 25.6	0.08 to 0.2

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

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**Pears cont'd.:**

Maximum amount of Swagger allowed/season: 128 ozs (1.0 lb AI/A) as a foliar application; 115.0 ozs (0.9 lb AI/A) applied after petal fall.

Maximum amount of Bifenthrin allowed/season: 0.5 lb AI/A as a foliar application; 0.45 lb AI/A applied after petal fall.

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

**REMARKS: Application by ground.** Apply as a dilute (minimum of 10 gals of finished spray/A).

**Application by air.** Apply the specified dosage in a minimum of 2 gals of finished spray/A by air.

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

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

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
	<b>Foliar Application</b>	
Aphid spp.	7.6 to 12.28	0.06 to 0.1
Leafhopper spp.		
Banded cucumber beetle	9.6 to 12.28	0.075 to 0.1
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		

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

Minimum interval between applications: 7 Days

Maximum amount of Swagger allowed/season: 51.2 ozs (0.4 lb AI/A)

Maximum amount of Bifenthrin allowed/season: 0.20 lb AI/A.

Maximum amount of Imidacloprid allowed/season: 0.20 lb AI/A.

**Maximum amount of Swagger/Foliar Application:**

12.28 fl ozs/A (0.05 lb AI/A of Bifenthrin and 0.05 lb AI/A of Imidacloprid)

**Maximum amount of Swagger/Season:**

51.2 fl ozs/A (0.20 lb AI/A of Bifenthrin and 0.20 lb AI/A of Imidacloprid). Two applications are permitted/season. It is permitted to make one at-plant application followed by a foliar application later in the same growing season.

**REMARKS: Foliar Application:** Apply in a minimum of 5 gals/A with ground equipment or 1 gal/A by aircraft. When applying by air, 1 qt of emulsified oil may be substituted for 1 qt of water in the finished spray. Thorough coverage is essential to achieve control.

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**POTATO (At-plant)**

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
	<b>At-Plant Application</b>	
Aphid spp. Colorado potato beetle Flea beetle spp. (adult, larvae) Japanese beetle (larvae) Leafhopper spp. Potato psyllid Rootworm spp. White grub Wireworm	32.0 to 51.2	0.25 to 0.4

**Restrictions:** Preharvest Interval (PHI): 21 Days  
 Minimum interval between applications: 7 Days  
 Maximum amount of Swagger allowed/season: 51.2 ozs (0.4 lb AI/A)  
 Maximum amount of Bifenthrin allowed/season: 0.20 lb AI/A.  
 Maximum amount of Imidacloprid allowed/season: 0.20 lb AI/A.  
 A maximum of one at-plant application is permitted/season.

**REMARKS**

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

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

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

**Restrictions:** Preharvest Interval (PHI): 21 days.  
 Minimum interval between applications: 7 days.  
 Maximum amount of Swagger allowed/season: 33.28 ozs (0.26 lb AI/A).  
 Maximum amount of Bifenthrin allowed/season: 0.5 lb AI/A.  
 Maximum amount of Imidacloprid allowed/season: 0.13 lb AI/A.  
 Apply a Maximum of 2 applications/season.

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

**REMARKS: Application in Water:** Apply in a minimum of 10 gals/A with ground equipment or 2 gals/A by aircraft. When applying by air, 1 qt of emulsified oil may be substituted for 1 qt of water in the finished spray.

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**TREE NUTS (PHI 7 DAYS – except Pecan (PHI 21 days))**

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
Aphids (Except Black pecan aphid) Leafhoppers/Sharpshooters Phylloxera spp. (leaf infestations) Spittlebugs Thrips	11.2 to 22.4	0.0875 to 0.175
Black pecan aphid Mealybugs San Jose scale	12.8	0.10

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

Minimum interval between applications: 15 days.

Maximum amount of Swagger allowed/season: 92.6 ozs (0.72 lb AI/A).

Maximum amount of Imidacloprid allowed/season: 0.36 lb AI/A.

Maximum amount of Bifenthrin allowed/season: 0.50 lb AI/A.

**REMARKS:** Minimum application volume (water): 50 GPA – ground application, 200 GPA – aerial application.

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

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

**LEGUME VEGETABLES**

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

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

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

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

Minimum interval between applications: 7 Days

Maximum amount of Swagger allowed/season: 33.6 ozs (0.26 lb AI/A)

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**Legume Vegetables cont'd.:**

**Dried Beans and Peas (PHI 14 DAYS for dried shelled peas or beans)**

**Restrictions cont'd.:**

Maximum amount of Bifenthrin allowed/season: 0.13 lb AI/A.

Maximum amount of Imidacloprid allowed/season: 0.13 lb AI/A.

**REMARKS:** Apply in a minimum of 2 gals of finished spray/A by air or in a minimum of 10 gals/A with ground equipment. 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. Thorough coverage is essential to achieve control.

\*Including all armyworm pests except Beet armyworm.

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

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

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

Minimum interval between applications: 7 days.

Maximum amount of Swagger allowed/season: 33.2 ozs (0.26 lb AI/A).

Maximum amount of Bifenthrin allowed/season: 0.20 lb AI/A.

Maximum amount of Imidacloprid allowed/season: 0.13 lb AI/A.

**REMARKS: Application in Water:** Apply in a minimum of 5 gals/A with ground equipment or 1 gal/A by aircraft. When applying by air, 1 qt of emulsified oil may be substituted for 1 qt of water in the finished spray.

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**SOYBEANS (PHI 18 DAYS)**

Pest	Use Rates	
	Fl Ozs/A	Lbs A/A
Alfalfa caterpillar	7.6 to 12.2	0.06 to 0.095
Aphids		
Aster leafhopper		
Bean leaf beetle		
Beet armyworm*		
Cloverworm		
Corn earworm		
Corn rootworm adult		
Cucumber beetles		
Cutworms		
European corn borer		
Fall armyworm		
Flea beetle		
Grasshoppers		
Imported cabbageworm		
Japanese beetle adult		
Leafhoppers		
Leafminer		
Loopers		
Lygus spp.		
Mexican bean beetle (adult)		
Pea leaf weevil		
Pea weevil		
Plant bug		
Saltmarsh caterpillar		
Sap beetle		
Southern armyworm		
Stink bugs		
Tarnished plant bug		
Thrips		
Tobacco budworm*		
Twospotted spider mite		
Webworms		
Western bean cutworm		
Whitefly		
Yellowstriped armyworm		

**Restrictions:** Preharvest Interval (PHI): 18 days.

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

Apply a maximum of two applications/season.

Minimum interval between applications: 30 days.

Maximum amount of Swagger allowed/season: 24.4 ozs (0.19 lb A/A).

Maximum amount of Bifenthrin allowed/season: 0.14 lb A/A.

Maximum amount of Imidacloprid allowed/season: 0.3 lb A/A.

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**TOBACCO (PHI 14 DAYS)**

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

**Restrictions:** Preharvest Interval (PHI): 14 days.  
Minimum interval between applications: 7 days.  
Maximum amount of Swagger allowed/season: 51.2 ozs (0.4 lb AI/A).  
Maximum amount of Bifenthrin allowed/season: 0.30 lb AI/A.  
Maximum amount of Imidacloprid allowed/season: 0.28 lb AI/A.  
Apply a maximum of 2 applications/season.  
Do not apply later than layby.

**REMARKS: Application in Water:** Apply in a minimum of 10 gals/A with ground equipment or 5 gal/A by aircraft. When applying by air, 1 qt of emulsified oil may be substituted for 1 qt of water in the finished spray.

**TOMATO (PHI 1 DAY)**

Pest	Use Rates	
	Fl Ozs/A	Lbs AI/A
Aphid spp. Flea hopper Leafhopper spp. Lygus spp. Squash bug Stink bug spp. Thrips	7.6 to 19.7	0.06 to 0.15
Armyworm spp. Bean leaf beetle Cabbageworm Cloverworm Colorado potato beetle Corn earworm Corn rootworm Cucumber beetle Cutworms Diamondback moth European corn borer Flea beetle Grasshopper Japanese beetle (adult) Loopers Melonworm Pea leaf weevil Pea weevil Pepper weevil Pickleworm Rindworm Saltmarsh caterpillar Sap beetle Seedpod weevil	10.2 to 19.7	0.08 to 0.15



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***Tomato cont'd.***

**Restrictions:** Preharvest Interval (PHI): 1 day.  
Minimum interval between applications: 10 days.  
Maximum amount of Swagger allowed/season: 61.44 ozs (0.48 lb AI/A).  
Maximum amount of Bifenthrin allowed/season: 0.40 lb AI/A.  
Maximum amount of Imidacloprid allowed/season: 0.24 lb AI/A.

**REMARKS:**

**Application in Water:** Apply in a minimum of 10 gals/A with ground equipment or 2 gals/A by aircraft. When applying by air, 1 qt of emulsified oil may be substituted for 1 qt of water in the finished spray.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL: Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrcycle.org](http://www.acrcycle.org). If not recycled, then puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

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

**For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. 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.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

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

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

**For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC – 1-800-424-9300.**

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