

34704-893

8/8/2012

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



OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

AUG 08 2012

Premjit Halarnkar, Ph.D.
Loveland Products
P.O. Box 1286
Greeley, CO 80632

Dear Dr. Halarnkar,

Subject: Amendment to add "me too" use for turf and ornamentals
Widow Insecticide
EPA Registration No. 34704-893
Submission dated March 27, 2012

The labeling referred to above submitted in connection with the Federal Insecticide, Fungicide and Rodenticide Act, as amended is acceptable.

Please submit one final printed copy of the labeling before releasing the product for shipment. A stamped copy of the labeling is enclosed for your records. If you have any questions regarding this label, please contact Autumn Metzger at (703) 305-5314 or metzger.autumn@epa.gov.

Sincerely,

A handwritten signature in blue ink that reads "Venus Eagle".

Venus Eagle
Product Manager 01
Insecticide-Rodenticide Branch
Registration Division (7505P)

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For uses in pest management and suppression of listed insects that may vector plant diseases and maintenance of plant health

ACTIVE INGREDIENT

Imidacloprid 1 [(6 Chloro 3 pyridinyl)methyl] N nitro 2 imidazolidinimine

21.4%

OTHER INGREDIENTS

78.6%

TOTAL

100.0%

Contains 2.0 pounds of Imidacloprid per gallon

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

SHAKE WELL BEFORE USING

FIRST AID	
If Swallowed	<ul style="list-style-type: none">• Call a poison 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 to 20 minutes• Remove contact lenses if present after the first 5 minutes then continue rinsing eye• Call a poison control center or doctor for treatment advice
If on Skin or Clothing	<ul style="list-style-type: none">• Take off contaminated clothing• Rinse skin immediately with plenty of water for 15 to 20 minutes• Call a poison control center or doctor for treatment advice
Have a 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 No specific antidote is available Treat the patient symptomatically	

EPA REG NO 34704 893

EPA EST NO 34704 MS 001

NET CONTENTS 1.0 GAL (3.78 L)

ACCEPTED

AUG 08 2012

EXP 02/12 T&O

Under the Federal Insecticide, Fungicide,
and Rodenticide Act as amended for the
pesticide registered under

EPA Reg No 34704-893

WIDOW® INSECTICIDE
EPA REG NO 34704 893

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, or clothing.

Applicators and other handlers must wear

- Long sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton, and
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENTS

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

User should

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

ENVIRONMENTAL HAZARDS

Do not apply directly to water, areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

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

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. 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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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.

Exception: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Chemical resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC), or viton, and
- Shoes plus socks

NON AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep children and pets off treated areas until dry.

FOLLOW THE RESTRICTIONS BELOW WHEN MIXING AND APPLYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES, RESERVOIRS, RIVERS, PERMANENT STREAMS, MARSHES, OR NATURAL PONDS, ESTUARIES, AND COMMERCIAL FISH FARM PONDS.

Runoff Management

Do not cultivate within 10 feet of the aquatic areas to allow growth of a vegetative filter strip. When using Widow® Insecticide on erodible soils, employ the Best Management Practices for minimizing runoff. Consult your local Natural Resources Conservation Service for recommendations in your use area.

No Spray Zone Requirements for Soil/Foliar Applications

Do not apply within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes, or natural ponds, estuaries, and commercial fish farm ponds.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

Importance of Droplet Size

An important factor influencing drift is droplet size. Small droplets (<150 – 200 microns) drift to a greater extent than large droplets. Within typical equipment specifications, make applications to deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may be minimized by appropriate nozzle selection.

Wind Speed Restrictions

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph.

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However many factors including droplet size canopy and equipment specifications determine drift potential at any given wind speed Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area

Restrictions During Temperature Inversions

Do not make ground applications during temperature inversions Drift potential is high during temperature inversions Temperature inversions restrict vertical air mixing which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind They begin to form as the sun sets and often continue into the morning Their presence can be indicated by ground fog however if fog is not present inversions can also be identified by the movement of smoke from a ground source Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical mixing

Mixing and Loading Requirements

To avoid potential contamination of groundwater the use of a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment is strongly encouraged If containment pad is not used maintain a minimum distance of 25 feet between mixing and loading area and potential surface groundwater conduits such as field sumps uncased well heads sinkholes or field drains

ENDANGERED SPECIES NOTICE

Under the Endangered Species Act it is a Federal Offense to use any pesticide in a manner that results in the death of a member of an endangered species Consult your local county bulletin County Extension Agent or Pesticide State Lead Agency for information concerning endangered species in your area

RESISTANCE MANAGEMENT

Some insects are known to develop resistance to insecticides after repeated use As with any insecticide the use of this product should conform to resistance management strategies established for the use area

Widow Insecticide contains a Group 4A insecticide Insect biotypes with acquired or inherent resistance to Group 4A may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species

The active ingredient in Widow Insecticide belongs to the neonicotinoid chemical class Insect pests resistant to other chemical classes have not shown cross resistance to Imidacloprid In order to maintain susceptibility to this class of chemistry in insect species with high resistance development potential it is recommended that for each crop season 1) only a single soil application of Widow Insecticide be made 2) foliar applications of products from this same class not be made following a long residual soil application of Widow Insecticide or other neonicotinoid products

Other Group 4A neonicotinoid products used as foliar treatments include Actara® Assail® Calypso® Centric® Intruder® Leverage® Provado® and Trimax™

Other Group 4A neonicotinoid products used as soil treatments include Platinum®

Contact your local extension specialist certified crop advisor and/or product manufacturer for additional insect resistance management recommendations Also for more information on Insect Resistance Management (IRM) visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.irac-online.org/>

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APPLICATION INSTRUCTIONS

Apply Widow Insecticide as a directed or broadcast foliar spray using properly calibrated ground application equipment as allowed in the specific application section. For insecticidal efficacy, thorough coverage of all target foliage with runoff is necessary. To obtain thorough coverage, use adequate spray volumes, properly calibrated application equipment and a spray adjuvant if necessary. Failure to provide adequate coverage and retention of this product on leaves and fruit, if present, may result in loss of insect control or delay in onset of activity. Minimum spray volumes, unless otherwise specified on crop specific application sections, are 10.0 gallons per acre by ground. This product may be applied by chemigation (See Chemigation section) if allowed in the specific application section.

Restrictions

Do not apply with aerial application equipment.

Do not apply more than 0.50 pound active ingredient per acre per year regardless of formulation or method of application, unless specified within a crop specific Application Instructions section for a given crop.

Apply Widow Insecticide directly into the seed or root zone of crop. Failure to place Widow Insecticide into root zone may result in loss of control or delay in onset of activity. Apply Widow Insecticide with ground or chemigation equipment. Broadcast foliar applications are only to be used for seedling flats or trays or where product is intended to be washed from foliage to soil prior to drying on foliage.

Optimum activity of Widow Insecticide results from applications to the root zone of plants to be protected. The earlier Widow Insecticide is available to a developing plant, the earlier the protection begins. Widow Insecticide is continuously taken into the roots over a long period of time and the systemic nature of Widow Insecticide allows movement from roots through the xylem tissue to all vegetative parts of the plant. This results in extended residual activity of Widow Insecticide, the control of insects and the prevention and/or reduction of virus transmission or symptom expression, and plant health benefits. The rate of Widow Insecticide applied affects the length of the plant protection period. Use the higher rate within the specified rate range when infestations occur later in crop development or where pest pressure is continuous. Widow Insecticide will generally not control insects infesting flowers, blooms or fruit. Additional crop protection may be required for insects feeding in or on these plant parts and for insects not listed in the crop specific pests controlled sections of this label. Additional specific Widow Insecticide application instructions are also provided in the crop specific sections of this label.

Suppression or less than complete control of certain diseases and insect pests including reduced feeding may also result from a Widow Insecticide application. Residual control of these pests/diseases may require supplemental control measures.

Widow Insecticide use on crops grown for production of true seed intended for private or commercial planting is not permitted unless it is allowed under State specific supplemental labeling. As with any insecticide, care must be taken to minimize exposure of Widow Insecticide to honey bees and other pollinators. Additional information on Widow Insecticide uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants or local Loveland Products, Inc. representatives.

Pre-mix Widow Insecticide with water or other appropriate diluent prior to application. Keep Widow Insecticide and water suspension agitated to avoid settling.

Mixing Instructions

To prepare the application mixture, add a portion of the required amount of water to the tank and with agitation add Widow Insecticide. Complete filling tank with balance of water needed. Maintain sufficient agitation during both mixing and application. Widow Insecticide may also be used with other pesticides and/or fertilizer solutions. Please see Compatibility section below. When tank mixtures of Widow Insecticide and other pesticides are involved, prepare the tank mixture as specified above and follow the Mixing Order described below.

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Mixing Order

When pesticide mixtures are needed add wettable powders first Widow Insecticide and other flowable (suspension concentrate) products second and emulsifiable concentrates last Ensure good agitation as each component is added Do not add an additional component until the previous is thoroughly mixed If a fertilizer solution is added a fertilizer/pesticide compatibility agent may be needed Maintain constant agitation during both mixing and application to ensure uniformity of spray mixture

Compatibility

Test compatibility of the intended mixture before adding Widow Insecticide to the spray or mix tank Add proportionate amounts of each ingredient in the appropriate order to a pint or quart jar cap shake for 5 minutes and let set for 5 minutes Poor mixing or formation of precipitates that do not readily redisperse indicates an incompatible mixture **DO NOT USE** For further information contact your local Loveland Products Inc representative

CHEMIGATION – DIRECTIONS FOR USE

Widow Insecticide may be applied at rates specified on this label either alone or in tank mixture with other pesticides and chemicals registered for application through irrigation systems The normal dilution ratio is 1 100 to 1 200 depending on the system Always meter the product into the irrigation water during the first part of the irrigation cycle The product may be mixed separately prior to injection Agitation may be necessary if the mixture is allowed to stand more than 24 hours

- **DO NOT** connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place
- Apply this product only through micro irrigation (individual spaghetti tube) drip irrigation overhead irrigation and ebb and flood or hand held or motorized calibrated irrigation equipment and only as specified in the use directions **DO NOT apply this product through any other type of irrigation system** Crop injury or lack of effectiveness can result from non uniform distribution of treated water Be sure to remove scale pesticide residue and other foreign matter from the tank and entire irrigation system prior to application If you have any questions about calibration you should contact State Extension Service specialists equipment manufacturers or other experts

Types of Irrigation Systems

Chemigation applications of Widow Insecticide may only be made to crops through chemigation systems as specified in crop specific Application sections and only through low pressure systems unless specifically instructed for a given crop Do not apply Widow Insecticide through any other type of irrigation system

Uniform Water Distribution and System Calibration

The irrigation system must provide uniform distribution of treated water Crop injury lack of effectiveness or illegal pesticide residues in the crop can result from non uniform distribution of treated water The system must be calibrated to uniformly apply the rates specified If you have questions about calibration you should contact State Extension Service specialists equipment manufacturers or other experts

Chemigation Monitoring

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

Drift

Do not apply when wind speed favors drift beyond the area intended for treatment

Required System Safety Devices

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

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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.

Using Water from Public Water Systems

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional reduced pressure zone back flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional automatic quick closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must 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 or in cases where there is no water pump, 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.

ROTATIONAL CROPS*

Treated areas may be replanted with any crop specified on a Widow Insecticide label or any crop for which a tolerance exists for the active ingredient as soon as practical following the last application. For crops not listed on a Widow Insecticide label or for crops for which no tolerances for the active ingredient have been established, a 12 month plant back interval must be observed.

IMMEDIATE PLANT BACK

All crops on this label plus the following crops not on this label: barley, canola, corn (field, pop & sweet), rapeseed, sorghum, sugar beet and wheat.

30 DAY PLANT BACK

Cereals (including buckwheat, millet, oats, rice, rye, and triticale), soybeans and safflower.

12 MONTH PLANT BACK

All Other Crops

*Cover crops for soil building or erosion control may be planted any time but do not graze or harvest for food or feed.

HERBS

Angelica, Balm (lemon balm), Basil (fresh and dried), Borage, Burnet, Camomile, Catnip, Chervil (dried), Chinese chive, Chive, Clary, Coriander (cilantro or Chinese parsley leaves), Costmary, Culantro (leaf), Curry (leaf), Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (leaf), Marigold, Marjoram, Nasturtium, Parsley (dried), Pennyroyal, Rosemary, Rue, Sage, Savory (summer and winter), Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood.

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Herbs cont d

Pests Controlled	Rate Fl Ozs/Acre
Aphids	16 0 to 24 0
Flea beetles	
Leafhoppers	
Whiteflies	

Pests/Diseases Suppressed#

Thrips (foliage feeding thrips only)	16 0 to 24 0
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Restrictions

Pre Harvest Interval (PHI) **14 days**

Maximum Widow Insecticide allowed per crop season **24 0 fl ozs/acre** (0 38 lb AI/acre)

#Controls pests that may vector plant diseases

Instructions

Apply specified dosage in one of the following methods

- 1 In furrow spray during planting directed on or below seed
- 2 In furrow spray or transplant water drench during setting or transplanting
- 3 Shanked into or below eventual seed line
- 4 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment

Not all crops and/or varieties listed above have been tested for phytotoxic effects. Without specific knowledge about a particular crop and variety, Loveland Products, Inc. strongly recommends that only small areas or numbers of plants of each be treated and evaluated prior to commercial use.

FIELD CROPS

Application Instructions – Widow Insecticide

COTTON

Pests Controlled	Rate Fl Ozs/1000 row feet	Rate Fl Ozs/Acre
Cotton aphid		
Plant bugs	1 3	17 0 to 21 1
Thrips		(Depending on row spacing)
Whiteflies		

Restrictions

Maximum Widow Insecticide allowed per crop season **21 1 fl ozs/acre** (0 33 lb AI/acre)

Regardless of formulation or method of application, apply no more than 0.5 pound active ingredient of Widow Insecticide, Provado, Trimax or Leverage per acre per year, including seed treatment as Gaucho® soil and foliar uses. Do not apply more than a total of 6 applications of the active ingredient per season. Do not graze treated fields after any application of Widow Insecticide. Please see Resistance Management section of this label.

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods

- 1 In furrow spray during planting directed on or below seed
- 2 In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting
- 3 Chemigation into root zone through low pressure drip or trickle irrigation

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POTATO

Pests Controlled	Rate Fl Ozs/1000 row feet	Rate Fl Ozs/Acre
Aphids		
Colorado potato beetle		
Flea beetles	0.9 to 1.3	13.0 to 20.0
Leafhoppers		
Potato psyllid		

Pests/Diseases Suppressed#

Symptoms of		
Potato leaf roll virus (PLRV)		
Potato yellows	0.9 to 1.3	13.0 to 20.0
Net necrosis (PLRV)		
Wireworms (with in furrow spray at planting)		

Restrictions

Maximum Widow Insecticide allowed per crop season **20.0 fl ozs/acre** (0.31 lb AI/acre)

#Controls pests that may vector plant diseases

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods

- 1 In furrow spray during planting directed on seed pieces or seed potatoes
 - 2 Subsurface side dress on both sides on the row covered with 3 or more inches of soil
 - 3 Narrow band spray at ground cracking directly over the row during hilling covered with 3 or more inches of soil
 - 4 Narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting
- For effective pest control or suppression Widow Insecticide applications must be placed below soil surface and in contact with seed piece or within root zone. For potatoes grown on highly permeable soils with shallow water table at plant applications of Widow Insecticide may be made in a 2 to 4 inch band (width of planter shoe opening) and completely covered.

POTATO*

(Seed Piece Treatment)

Pests Controlled	Rate Fl Oz/100 lbs seed	Rate Fl Ozs/Acre**
Aphids		
Colorado potato beetle		
Flea beetles	0.4 to 0.8	8.0 to 16.0
Leafhoppers		
Potato psyllid		
Wireworms (seed piece protection)		

Pests/Diseases Suppressed#

Symptoms of		
Potato leaf roll virus (PLRV)		
Potato yellows	0.8	16.0
Net necrosis (PLRV)		

Restrictions

Maximum Widow Insecticide allowed per crop season **20.0 fl ozs/acre** (0.31 lb AI/acre)

Do not use treated seed pieces for food feed or fodder. Do not apply any subsequent application of Widow Insecticide (in furrow) Gaucho Leverage or Provado following a Widow Insecticide seed piece treatment.

#Controls pests that may vector plant diseases

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Potato*
(Seed Piece Treatment) cont d

Instructions

Apply specified dosage as a diluted spray onto seed pieces using a shielded spray system. Dilute with 3 parts water or less to 1 part Widow Insecticide. Agitate or stir spray solution as needed. Fungicidal or inert absorbent dusts may be applied after Widow Insecticide application. Apply only in areas with adequate ventilation or in areas that are equipped to remove spray mist or dust. Plant seed pieces as soon as possible after treating avoiding prolonged exposure of Widow Insecticide treated seed pieces to sunlight and in accordance with the directions of your local Extension specialist.

Consult your local Loveland Products, Inc. representative or crop protection product dealer for information relevant to your area.

*Use not permitted in CA unless otherwise directed by supplemental labeling

* Based on a seeding rate of 2000 pounds per acre

TOBACCO

Pests Controlled	Rate	Rate
	Fl Ozs/1000 plants (as seedling tray drench)	Fl Ozs/1000 plants (in furrow or transplant water)
Aphids		
Flea beetles	1.0	1.4
Mole crickets		
Whiteflies	1.4 to 2.8	1.8 to 2.8
Wireworms		
Pests/Diseases Suppressed#		
Cutworms		
Symptoms of	1.4 to 2.8	1.8 to 2.8
Tomato spotted wilt virus (TSWV)		

Restrictions

Pre Harvest Interval (PHI) **14 days**

Maximum Widow Insecticide allowed per crop season **32.0 fl ozs/acre** (0.50 lb AI/acre)

#Controls pests that may vector plant diseases

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods:

1. Uniform broadcast foliar spray to seedlings in trays (tray drench) not more than 7 days prior to transplanting followed immediately by overhead irrigation to wash Widow Insecticide from foliage into potting media. Failure to wash Widow Insecticide from foliage may result in reduction in pest control. Transplants must be handled carefully during setting to avoid dislodging treated potted media from roots.
2. In furrow spray or transplant water drench during setting.
3. Chemigation into root zone through low pressure drip, trickle, micro sprinkler or equivalent equipment.

Note: Proper tray drench applications of Widow Insecticide have been shown to be the most efficacious method of application. However, the specified rate of Widow Insecticide may be applied as a combination of the tray drench in the planthouse and/or transplant water drench in field. Adverse growing conditions may cause a delay in uptake of Widow Insecticide into the plant and a delay in control.

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VEGETABLE and SMALL FRUIT CROPS
Application Directions – Widow Insecticide

Restrictions

Not for use on crops grown for seed unless allowed by state specific supplemental labeling

CUCURBIT VEGETABLES

Including Chayote (fruit) Chinese waxgourd (Chinese preserving melon) Citron melon Cuban pumpkin Cucumber Gherkin Gourd (edible includes hyotan cucuzza hechima Chinese okra) Momordica spp (includes balsam apple balsam pear bitter melon Chinese cucumber) Muskmelon (hybrids and/or cultivars of Cucumis melo including true cantaloupe cantaloupe casaba Crenshaw melon golden pershaw melon honeydew melon honey balls mango melon Persian melon pineapple melon Santa Claus melon snake melon and Winter melon) Pumpkin Squash (includes summer squash types such as butternut squash cal abaza crookneck squash Hubbard squash scallop squash straightneck squash vegetable marrow and zuc chini and winter squash types such as acorn squash and spaghetti squash) Watermelon (includes hybrids and/or varieties of Citrullus lanatus)

Field application instructions See details below for additional planthouse instructions

Pests Controlled

Rate
Fl Ozs/Acre

Aphids	
Cucumber beetles	
Leafhoppers	16.0 to 24.0
Thrips (foliage feeding thrips only)	
Whiteflies	

Pests/Diseases Suppressed#

Bacterial wilt (as vectored by various cucumber beetles)	
Leaf silvering resulting from whitefly feeding	16.0 to 24.0

Restrictions

Pre Harvest Interval (PHI) **21 days**

Maximum Widow Insecticide allowed per application **24.0 fl ozs/acre** (0.38 lb AI/acre)

#Controls pests that may vector plant diseases

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods

- 1 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment
- 2 In furrow spray directed on or below seed
- 3 Narrow (2" or less) surface band spray over seed line during planting incorporated to a depth of 1 to 1 1/2" with sufficient irrigation within 24 hours of application
- 4 Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting
- 5 Post seeding drench transplant water drench or hill drench
- 6 Subsurface side dress on both sides of each row Widow Insecticide must be incorporated into root zone

Planthouse Application Instructions

Pests Controlled

Rate
Fl Oz/1000 Plants

Aphids	
Whiteflies	0.1

Restrictions

Maximum amount of Widow Insecticide applied in the planthouse **0.1 fl oz** (0.00156 lb AI) **per 1000 plants**

Maximum number Widow Insecticide applications in planthouse **1**

Instructions

Apply specified dosage to seedlings in trays in the planthouse targeting soil media (tray drench) not more than 7 days prior to transplanting in one of the following manners

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Cucurbit Vegetables cont d

- 1 Uniform broadcast high volume foliar spray followed immediately by sufficient overhead irrigation to wash Widow Insecticide from foliage into potting media without loss of gravitational liquid from the bottom of the tray Failure to wash Widow Insecticide from foliage may result in reduced pest control
- 2 Injection into overhead irrigation system using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray

The application made in the planthouse will only provide short term protection and is not intended as a substitution for a field application An additional field application must be made within 2 weeks following transplanting to provide continuous protection DO NOT apply higher rates or increased number of applications in planthouse Transplants must be handled carefully during setting to avoid dislodging treated potting media from roots

Not all varieties of cucurbit vegetables have been tested for tolerance to Widow Insecticide applied to seedling flats Therefore treat a small number of plants and confirm tolerance for 7 days prior to treating entire plant house

GREENHOUSE VEGETABLES

(Mature plants in production greenhouses)

Cucumber, Tomato, only

Pests Controlled

Rate
Fl Ozs/1000 plants

Aphids

Whiteflies

1.4

Restrictions

Pre Harvest Interval (PHI) **0 days**

Maximum number of Widow Insecticide applications per crop season **1**

Instructions

Apply specified dosage in a minimum of 16.0 gallons of water for tomatoes and 21.0 gallons of water for cucumbers using soil drenches micro irrigation drip irrigation or hand held or motorized calibrated irrigation equipment Do not apply to immature plants since phytotoxicity may occur

Apply when infestation pressure surpasses threshold and beneficials are not able to maintain pest populations below damage thresholds Repellency of bumble bee pollinators and negative effects on some beneficials (*Orius* sp.) can occur when Widow Insecticide is applied

Many varieties of vegetables have been tested for tolerance to Widow Insecticide and show good safety However certain varieties may show more sensitivity to Widow Insecticide Therefore treat a few plants before treating the whole greenhouse

WIDOW® INSECTICIDE
EPA REG NO 34704 893

FRUITING VEGETABLES

Including Eggplant Ground cherry Okra Pepper (including bell chili cooking pimento and sweet) Tomato Pepinos Tomatillo

Field application instructions See details below for additional planthouse instructions

Pests Controlled	Rate FI Ozs/Acre
Aphids	
Colorado potato beetle	Okra and Pepper
Flea beetles	16 0 to 32 0
Leafhoppers	
Thrips (foliage feeding thrips only)	Other Crops
Whiteflies	16 0 to 24 0
Pests/Diseases Suppressed#	
Symptoms of	Okra and Pepper
Tomato mottle virus	16 0 to 32 0
Tomato spotted wilt virus	Other Crops
Tomato yellow leaf curl virus	16 0 to 24 0

Restrictions

Pre Harvest Interval (PHI) **21 days**

Maximum Widow Insecticide allowed on pepper and okra crops per application **32 0 fl ozs/acre** (0 50 lb AI/acre)

Maximum Widow Insecticide allowed on other fruiting crops per application **24 0 fl ozs/acre** (0 38 lb AI/acre)

#Controls pests that may vector plant diseases

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods

- 1 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment
- 2 In furrow spray directed on or below seed
- 3 Narrow (2 or less) surface band spray over seed line during planting incorporated to a depth of 1 to 1 1/2 with sufficient irrigation within 24 hours of application
- 4 Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting
- 5 Post seeding drench transplant water drench or hill drench
- 6 Subsurface side dress on both sides of each row Widow Insecticide must be incorporated into root zone

Planthouse Application Instructions

Pests Controlled	Rate FI Oz/1000 plants
Aphids	
Whiteflies	0 1

Restrictions

Maximum amount of Widow Insecticide applied in the planthouse **0 1 fl oz** (0 00156 lb AI) **per 1000 plants**

Maximum number Widow Insecticide applications in planthouse **1**

Instructions

Apply specified dosage to seedlings in trays in the planthouse targeting soil media (tray drench) not more than 7 days prior to transplanting in one of the following manners

- 1 Uniform broadcast high volume foliar spray followed immediately by sufficient overhead irrigation to wash Widow Insecticide from foliage into potting media without loss of gravitational liquid from the bottom of the tray Failure to wash Widow Insecticide from foliage may result in reduced pest control
- 2 Injection into overhead irrigation system using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray

WIDOW® INSECTICIDE
EPA REG NO 34704 893

Fruiting Vegetables cont d

The application made in the planthouse will only provide short term protection and is not intended as a substitution for a field application. An additional field application must be made within 2 weeks following transplanting to provide continuous protection.

DO NOT apply higher rates or increased number of applications in planthouse. Transplants must be handled carefully during setting to avoid dislodging treated potted media from roots.

Not all varieties of fruiting vegetables have been tested for tolerance to Widow Insecticide applied to seedling flats. Therefore treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.

Use not permitted in CA unless otherwise directed by supplemental labeling.

HEAD and STEM BRASSICA VEGETABLES

Including Broccoli, Broccoli raab (rapini), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (gai lan) broccoli, Chinese (bok choy) cabbage, Chinese (napa) cabbage, Chinese mustard (gai choy) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens, Turnip tops (leaves).

AND

LEAFY VEGETABLES

Including Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (Roquette), Chervil, Chrysanthemum (edible leaved and garland), Cilantro, Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Raddicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian Spinach)), Watercress (commercial production only, applications must not be made to native cress growing in streams or other bodies of water), Watercress (upland).

Pests Controlled

Rate
Fl Ozs/Acre
(on 36 inch rows)

Aphids

Whiteflies

10.0 to 24.0

Restrictions

Pre Harvest Interval (PHI) **21 days**

Maximum Widow Insecticide allowed per application **24.0 fl ozs/acre** (0.38 lb AI/acre)

Not for use on crops grown for seed unless allowed by state specific supplemental labeling.

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods:

1. Chemigation into root zone through low pressure drip, trickle, micro sprinkler or equivalent equipment.
2. In furrow spray directed on or below seed.
3. Narrow (2" or less) surface band spray over seed line during planting incorporated to a depth of 1 to 1 1/2" with sufficient irrigation within 24 hours of application.
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting.
5. Post seeding drench, transplant water drench, or hill drench.
6. Subsurface side dress on both sides of each row. Widow Insecticide must be incorporated into root zone.

WIDOW® INSECTICIDE
EPA REG NO 34704 893

LEAFY PETIOLE VEGETABLES

Including Cardoon Celery Celtuce Chinese celery (fresh leaves and stalk only) Florence fennel (including sweet anise, sweet fennel, Finocchio), Rhubarb, Swiss chard

Pests Controlled	Rate Fl Ozs/Acre
Aphids	
Leafhoppers	10.0 to 24.0
Whiteflies	

Restrictions

Pre Harvest Interval (PHI) **45 days**

Maximum Widow Insecticide allowed per application **24.0 fl ozs/acre** (0.38 lb AI/acre)

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods

- 1 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment
- 2 In furrow spray directed on or below seed
- 3 Narrow (2" or less) surface band spray over seed line during planting incorporated to a depth of 1 to 1 1/2" with sufficient irrigation within 24 hours of application
- 4 Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting
- 5 Post seeding drench transplant water drench or hill drench
- 6 Subsurface side dress on both sides of each row Widow Insecticide must be incorporated into root zone

LEGUME VEGETABLES except soybean dry

Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean

Bean (Lupinus spp. includes grain lupin sweet lupin white lupin and white sweet lupin)

Bean (Phaseolus spp. includes field bean kidney bean lima bean navy bean pinto bean runner bean snap bean tepary bean wax bean)

Bean (Vigna spp. includes adzuki bean asparagus bean blackeyed pea catjang Chinese longbean cowpea Crowder pea moth bean mung bean rice bean Southern pea urd bean yardlong bean)

Pea (Pisum spp. includes dwarf pea edible pod pea English pea field pea garden pea green pea snow pea sugar snap pea)

Other Beans and Peas [Broad bean (fava) Chickpea (garbanzo bean) Guar Jackbean Lablab bean (hyacinth bean) Lentil Pigeon pea Soybean (immature seed) Sword bean]

Pests Controlled	Rate Fl Ozs/Acre
Aphids	
Leafhoppers	
Thrips (foliage feeding thrips only)	16.0 to 24.0
Whiteflies	

Pests/Diseases Suppressed#

Symptoms of	
Bean common mosaic virus (BCMV)	
Bean golden mosaic virus (BGMV)	16.0 to 24.0
Beet curly top tobamovirus (BCTV)	

Restrictions

Pre Harvest Interval (PHI) **21 days**

Maximum Widow Insecticide allowed per crop season **24.0 fl ozs/acre** (0.38 AI/acre)

#Controls pests that may vector plant diseases

WIDOW® INSECTICIDE
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Legume Vegetables except soybean, dry cont d

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods

- 1 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment
- 2 In furrow spray at planting directed on or below seed
- 3 In a narrow (2" or less) surface band over seed line during planting incorporated to a depth of 1 to 1 1/2" with sufficient irrigation within 24 hours following application
- 4 In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting
- 5 As a post seeding drench, transplant drench, or hill drench

ROOT VEGETABLES

Including Beet (garden)¹ Burdock (edible)¹ Carrot¹ Celeriac¹ Chervil (turnip rooted)¹ Chicory¹ Ginseng Horseradish Parsley (turnip rooted) Parsnip¹ Radish¹ Oriental radish (diakon)¹ Rutabaga¹ Salsify (oyster plant), Salsify (black)¹, Salsify (Spanish), Skirret and Turnip¹

Pests Controlled	Rate Fl Ozs/1000 row feet	Rate Fl Ozs/Acre
Aphids		
Flea beetles	0.7 to 1.7	10.0 to 24.0
Leafhoppers		
Whiteflies		

Restrictions

Pre Harvest Interval (PHI) **21 days**

Maximum Widow Insecticide allowed per crop season **24.0 fl ozs/acre** (0.38 lb AI/acre)

Maximum Widow Insecticide applications per crop season **1**

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods

- 1 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment
- 2 In furrow spray (rate specified per 1000 row feet) or shanked in 1 to 2 inches below seed depth during planting
- 3 In a narrow (2 inches or less) band directly (1 to 2 inches) below the eventual seed row in a bedding operation 14 or fewer days before planting

Note The rate applied affects the length of control. Use higher rates where infestations occur later in crop development or where pest pressure is continuous. Widow Insecticide rates less than 0.7 fluid ounce per 1000 row feet will not provide adequate residual pest control. Widow Insecticide treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

¹Tops or greens from these crops may be utilized for food or feed

TUBEROUS and CORM VEGETABLES

Including Arracacha Arrowroot Artichoke (Chinese and Jerusalem) Canna (edible Queensland arrowroot) Cassava (bitter & sweet)¹ Chayote (root) Chufa Dasheen (taro)¹ Ginger Leren Sweetpotato Tanier (cocoyam)¹ Turmeric Yam bean (jicama manioc pea) Yam (true)¹ (For application instructions on potato see Field Crops section)

Pests Controlled	Rate Fl Ozs/1000 row feet	Rate Fl Ozs/Acre
Aphids		
Flea beetles	0.7 to 1.7	10.0 to 24.0
Leafhoppers		
Whiteflies		

WIDOW® INSECTICIDE
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Tuberous and Corm Vegetables cont d

Restrictions

Pre Harvest Interval (PHI) from planting application **3 days** (leaves) **125 days** (corms)
 Maximum Widow Insecticide allowed per crop season **24 0 fl ozs/acre** (0 38 lb AI/acre)
 Maximum Widow Insecticide applications per crop season **1**

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods
 1 In furrow spray (rate specified/1000 row feet) over planting material (hulis) or shanked in 1 to 2 inches below hulis depth at planting
 2 Side dress not more than 0 6 fluid ounce per 1000 row feet no later than 45 days after planting Observe same PHI as above

Important The rate applied affects the length of control Use higher listed rates where infestations occur later in crop development or where pest pressure is continuous Widow Insecticide rates less than 0 7 fluid ounce per 1000 row feet may not provide adequate residual pest control Widow Insecticide treated crops grown on very high organic matter soils (muck) may also require additional pest management control

¹Tops or greens from these crops may be utilized for food or feed

STRAWBERRY¹

Annual And Perennial Crops

Pests Controlled

Rate
Fl Ozs/A

Aphids

Whiteflies

24 0 to 32 0

Restrictions

Pre Harvest Interval (PHI) **14 days**
 Maximum Widow Insecticide allowed per crop season **32 0 fl ozs/acre** (0 50 lb AI/acre)

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods
 1 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment after plants are established or on perennial crops in early spring prior to bud opening
 2 As a plant material or plant hole treatment just prior to or during transplanting

The rate applied affects the length of control Use higher rates where infestations may occur later in crop development or where pest exposure is continuous

¹Widow Insecticide can not be used pre and post harvest on the same crop with any other imidacloprid treatment

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SUGAR BEET

(for use only in CA)

Pests Controlled	Rate Fl Ozs/Acre
Aphids	
Leafhoppers	6 0 to 12 0
Whiteflies	
Flea beetles	

Pests/Diseases Suppressed#

Symptoms of	
Western yellows/Beet curly top hybrigeminivirus (BCTV)	6 0 to 12 0

Restrictions

Maximum Widow Insecticide allowed per crop season **12 0 fl ozs/acre** (0 18 lb AI/acre)

Maximum imidacloprid allowed per season **0 18 lb AI/acre** (from any formulation) on any row spacing

#Controls pests that may vector plant diseases

Instructions

Apply specified dosage of Widow Insecticide in the following method

- 1 Apply specified dosage in sufficient carrier volume to insure uniform application Apply directly below each seed furrow either during the bedding operation immediately prior to planting or at the time of planting

The lower listed rate may be applied to aid establishment of stands in whitefly areas or for early season control of the other pests listed

Widow Insecticide Conversion Chart for Linear Application

Rate Fl Ozs/Acre	Rate Fl Ozs/1000 row feet Based on average row spacing (in inches)							
	10	15	20	25	30	35	40	45
10	0 19	0 29	0 38	0 48	0 57	0 67	0 76	0 86
12	0 23	0 34	0 46	0 57	0 69	0 80	0 92	1 03
14	0 27	0 40	0 54	0 67	0 80	0 94	1 07	1 21
16	0 31	0 46	0 61	0 77	0 92	1 07	1 22	1 38
18	0 34	0 52	0 69	0 86	1 03	1 21	1 38	1 55
20	0 38	0 57	0 76	0 96	1 15	1 34	1 53	1 72
22	0 42	0 63	0 84	1 05	1 26	1 47	1 68	1 89
24	0 46	0 69	0 92	1 15	1 38	1 61	1 84	2 07
26	0 50	0 75	0 99	1 24	1 49	1 74	1 99	2 24
28	0 54	0 80	1 07	1 34	1 61	1 87	2 14	2 41
30	0 57	0 86	1 15	1 43	1 72	2 01	2 29	2 58
32	0 61	0 92	1 22	1 52	1 84	2 14	2 45	2 75

Important The Widow Insecticide rate applied affects the length of control and to a considerable extent the degree of control or effect Row spacing X Widow Insecticide rate combinations in italics may not provide ade

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quate residual pest control and are not suitable for long term residual control Use higher labeled rates where infestations may occur later in crop development or where pest pressure is continuous Loveland Products Inc offers no warranty for use of Widow Insecticide at rates below 0.7 fluid ounce per 1000 row feet

TREE BUSH and VINE CROPS

Application Directions – Widow Insecticide

BANANA AND PLANTAIN

Pests Controlled	Rate Fl Ozs/Acre
Aphids	16.0 to 32.0
Leafhoppers	
Pests/Diseases Suppressed#	
Scales	16.0 to 32.0

Restrictions

Pre Harvest Interval (PHI) **0 day**

Maximum Widow Insecticide allowed per crop season **32.0 fl ozs/acre** (0.5 lb AI/acre)

#Controls pests that may vector plant diseases

Instructions

Apply specified dosage of this product in the following method

- 1 Chemigation into root zone through low pressure drip, trickle, micro sprinkler or equivalent equipment

BUSHBERRY

Including Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Ligonberry, Salal

Pests Controlled	Rate Fl Ozs/Acre
Japanese beetle (adults feeding on foliage)	
White grub complex (grubs of Asiatic garden beetle European and Masked chafer, Japanese beetle and Oriental beetle)	16.0 to 32.0

Restrictions

Pre Harvest Interval (PHI) **7 days**

Maximum Widow Insecticide allowed per season **32.0 fl ozs/acre** (0.50 lb AI/acre)

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods

- 1 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment
- 2 18 inch band on each side of the row followed with 0.25 inch of irrigation immediately after application

For optimal grub control apply Widow Insecticide to control 1st or 2nd instar larvae Application may be made post bloom up to 7 days prior to harvest or post harvest until October 1 For optimum control of Japanese beetle larvae make applications from June 1 to July 15 Do not apply during bloom

Application to grass covered rows row middles drive lanes headlands and other grassy areas in and around the berry field will control resident grub populations Applications directed to the root zone will help protect berry plant roots from grub feeding

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Apply Widow Insecticide to moist soil. If necessary, apply 1 hour of irrigation water immediately before application of Widow Insecticide. To facilitate movement of Widow Insecticide into the soil and root zone, 1/2 to 1 inch of irrigation water or rainfall must be applied or received within 24 hours of application.

CITRUS (Containerized)

Including Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo, and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Tangelo, Satsuma mandarin, White sapote (Casimiroa spp.), and other cultivars and/or hybrids of these.

Pests Controlled

Rate
mL/ft³ Container Media

Aphids
 Asian citrus psyllid
 Black fly
 Citrus leafminer
 Leafhoppers/Sharpshooters
 Mealybugs
 Scales
 Whiteflies

0.75

Citrus root weevil (larval complex) 1.25 to 2.50

Pests/Diseases Suppressed#

Citrus thrips 2.50

Instructions

Determine volume of container and calculate dosage necessary to treat container. Apply calculated dosage of Widow Insecticide per container as a soil drench or through low pressure drip or trickle irrigation water. Use sufficient carrier volume to ensure thorough uniform distribution throughout the media without loss of gravitational water from the container. For optimal results, treatment should be made at planting prior to insect infestation. Retreat if necessary. For control of larvae of the citrus root weevil complex, application should be made prior to neonate larvae entering potting media. Utilize higher dosage for heavy infestations.

#Controls pests that may vector plant diseases

CITRUS (Field)

Including Calamondin, Citrus, Citron, Citrus hybrids (includes chironja, tangelo, and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Tangelo, Satsuma mandarin, White sapote (Casimiroa spp.), and other cultivars and/or hybrids of these.

Pests Controlled

Rate
Fl Ozs/Acre

Aphids
 Asian citrus psyllid
 Black fly
 Citrus leafminer
 Leafhoppers/Sharpshooters
 Mealybugs
 Scales
 Termites (FL only)
 Whiteflies

16.0 to 32.0

Pests/Diseases Suppressed#

Symptoms of
 Citrus tristeza virus CTV through vector control
 Citrus yellows 32.0
 Thrips (foliage feeding thrips only)

Restrictions

WIDOW® INSECTICIDE
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Pre Harvest Interval (PHI) **0 day**

Maximum Widow Insecticide allowed per season **32 0 fl ozs/acre** (0 50 lb AI/acre)

#Controls pests that may vector plant diseases

Citrus (Field) cont d

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods

- 1 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment
For optimum results apply to newly planted trees or those previously trained to drip trickle or micro sprinkler irrigation To break soil surface tension lightly pre wet soil prior to applications of Widow Insecticide Chemigation application can be made separate to normal irrigation but followed by 10 to 20 minutes of additional watering to move Widow Insecticide into root zone Allow 24 hours before initiating subsequent irrigations
- 2 Soil surface band spray on both sides of the tree Overlap bands at the base of the tree to create a continuous band within the drip line area of the tree to be followed immediately with light sprinkler irrigation sufficient to move the product into the upper portion of the root zone This method is suitable for very coarse soils with 0 75% organic matter or less
- 3 Drench to base of tree not exceeding one quart total solution per tree immediately around trunk of tree and extending outward covering the entire fibrous root system of the tree Only suitable for trees up to 8 feet tall
- 4 For control of existing termite infestations apply specified dosage in 1 0 to 4 0 quarts of total solution volume depending on size of tree as a drench application to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk

COFFEE

Pests Controlled

Rate
Fl Ozs/Acre

Aphids	16 0 to 32 0
Leafhoppers	
Leafminer	

Pests/Diseases Suppressed#

Scales	16 0 to 32 0
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Restrictions

Pre Harvest Interval (PHI) **7 days**

Maximum Widow Insecticide allowed per crop season **32 0 fl ozs/acre** (0 5 lb AI/acre)

Do not apply pre bloom or during bloom or when bees are actively foraging

#Controls pests that may vector plant diseases

Instructions

Apply specified dosage in one of the following methods

- 1 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment
- 2 Subsurface side dress shanked into the root zone on both sides of the plants followed by irrigation
- 3 Basal soil drench in sufficient water to insure incorporation into the root zone followed by irrigation

CRANBERRY

Pests Controlled

Rate
Fl Ozs/Acre

Rootgrubs (Scarabaeidae)	
Rootworms (Chrysomelidae)	16 0 to 32 0

Restrictions

WIDOW® INSECTICIDE
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Pre Harvest Interval (PHI) **30 days**

Maximum Widow Insecticide allowed per season **32 0 fl ozs/acre** (0 50 lb AI/acre)

Do not apply during bloom

CRANBERRY cont d

Instructions

Apply Widow Insecticide to moist soil. Apply specified dosage of Widow Insecticide in one of the following methods

1 As a soil spray (ground application) directed to the root and crown area using a minimum of 20 0 gallons of water per acre

2 As a chemigation application with 600 to 1000 gallons water

Immediately upon application Widow Insecticide must be incorporated into root zone by 0 1 to 0 3 inch water per acre either with the chemigation application or through irrigation/rainfall if not applied through chemigation. Inadequate incorporation within 24 hours of application may result in reduced control.

Rootgrubs and Rootworms

Best control may be achieved when application is made post bloom immediately after bees are removed. Applications should target early instar larvae.

Widow Insecticide has not been tested for crop response in tank mixes with other registered fungicides or insecticides. If tank mixing is desired, premix a sample of the Widow Insecticide and the desired fungicide or insecticide partner at labeled rates and apply to a small area. Evaluate crop response within 48 hours and for at least 2 weeks prior to utilizing the tank mix on larger acreage. If crop injury results from the premix test, do not apply the tank mix to larger acreage.

GRAPE

Including American bunch grape, Muscadine grape and Vinifera grape

Pests Controlled

Rate
Fl Ozs/Acre

Mealybugs

Leafhoppers/Sharpshooters

16 0 to 32 0

Phylloxera* spp

Pests/Diseases Suppressed#

Pierce's disease

24 0 to 32 0

Restrictions

Pre Harvest Interval (PHI) **30 days**

Maximum Widow Insecticide allowed per season **32 0 fl ozs/acre** (0 50 lb AI/acre)

#Controls pests that may vector plant diseases

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods

1 Chemigation into root zone through low pressure drip, trickle, micro sprinkler or equivalent equipment

2 Subsurface side dress shanked into the root zone on both sides of the plants followed by irrigation

3 Hill drench in sufficient water to insure incorporation into the root zone followed by irrigation

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For optimum results make application(s) between bud break and the pea berry stage

*Repeated and regular use of Widow Insecticide over several consecutive growing seasons controls existing Phylloxera infestations over time or prevents Phylloxera from becoming established

HOP

Pests Controlled	Rate Fl Ozs/Acre
Aphids	19.2

Restrictions

Pre Harvest Interval (PHI) **60 days**

Maximum Widow Insecticide allowed per season **19.2 fl ozs/acre** (0.3 lb AI/acre)

Use not permitted in California unless otherwise directed by supplemental labeling

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods

- 1 Chemigation into root zone through low pressure drop trickle micro sprinkler or equivalent equipment
- 2 Subsurface side dress shanked into the root zone on both sides of the plants followed by irrigation
- 3 Hill drench in sufficient water to insure incorporation into the root zone followed by irrigation

PECAN

Pests Controlled	Rate Fl Ozs/Acre
Aphids	
Twolined spittlebug	16.0 to 32.0

Pests/Diseases Suppressed#

<i>Pecan scab (from reduction in honeydew deposition)</i>	16.0 to 32.0
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Restrictions

Maximum Widow Insecticide allowed per season **32.0 fl ozs/acre** (0.50 lb AI/acre)

#Controls pests that may vector plant diseases

Applications can be made from May 15 up to July 15 Applications made later in the season may result in reduced efficacy

Apply product to slightly moist soil and allow soil to dry prior to additional irrigation

Instructions

Apply specified dosage of Widow Insecticide in one of the following methods

- 1 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment
- 2 Emitter or spot application in a minimum of 4.0 fluid ounces of mixture per emitter site
- 3 Subsurface side dress shanked into the root zone near emitter line Treat distance wetted by the emitter set of each tree

POME FRUIT

Including Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince

Pests Controlled	Rate Fl Ozs/Acre
Aphids (including woolly apple aphid)	
Leafhoppers	16.0 to 24.0

Restrictions

Pre Harvest Interval (PHI) **21 days**

WIDOW® INSECTICIDE
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Maximum Widow Insecticide allowed per season **24 0 fl ozs/acre** (0 38 lb AI/acre)
 Do not apply pre bloom or during bloom or when bees are actively foraging
 Use not permitted in California unless otherwise directed by supplemental labeling

POME FRUIT cont d

Instructions

Apply specified dosage of Widow Insecticide in the following method

- 1 Chemigation into root zone through low pressure drip, trickle, micro sprinkler or equivalent equipment

POMEGRANATE

Pests Controlled

Rate
Fl Ozs/Acre

Aphids	16 0 to 32 0
Leafhoppers/Sharpshooters	
Whiteflies	

Restrictions

Pre Harvest Interval (PHI) **0 day**

Maximum Widow Insecticide allowed per crop season **32 0 fl ozs/acre** (0 5 lb AI/acre)

Do not apply pre bloom or during bloom or when bees are actively foraging

Instructions

Apply specified dosage of this product in the following method

- 1 Chemigation into root zone through low pressure drip, trickle, micro sprinkler or equivalent equipment

STONE FRUIT

Including Apricot Cherry (including sweet and tart) Nectarine Peach Plum (including Chickasaw Damson and Japanese), Plumcot, Prune (fresh and dried)

In field, Soil Application

Pests Controlled

Rate
Fl Ozs/Acre

Aphids (including woolly apple aphid)	16 0 to 24 0
Leafhoppers	

Restrictions

Pre Harvest Interval (PHI) **21 days**

Maximum Widow Insecticide allowed per season **24 0 fl ozs/acre** (0 38 lb AI/acre)

Do not apply pre bloom or during bloom or when bees are actively foraging

Use not permitted in California unless otherwise directed by supplemental labeling

Instructions

Apply specified dosage of Widow Insecticide in the following method

- 1 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment

Pre plant, Root Dip Application

Pests Controlled

Rate
Fl Ozs/10 0 gals root dip solution

Black peach aphid (infesting roots)	2 0
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Mix Widow Insecticide at 2.0 fluid ounces per 10.0 gallons of water. Thoroughly wet bare root transplant to slightly above the graft union by soaking roots in the Widow Insecticide solution for up to 5 minutes. Allow solution to dry on roots and transplant trees as soon as possible following treatment.

TROPICAL FRUIT

Including Acerola, Atemoya, Avocado, Birida, Black sapote, Canistel, Cherimoya, Custard apple, Feijoa, Guava, Jaboticaba, Llama, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Persimmon, Pulasan, Rambutan, Sapodilla, Soursop, Spanish lime, Star apple, Starfruit, Sugar apple, Wax jambu.

Pests Controlled

Rate
Fl Ozs/Acre

Aphids

Leafhoppers

24.0 to 32.0

Whiteflies

Pests/Diseases Suppressed#

Scales

32.0

Restrictions

Pre Harvest Interval (PHI) **6 days**

Maximum Widow Insecticide allowed per application **32.0 fl ozs/acre** (0.50 lb AI/acre)

Do not apply pre bloom or during bloom or when bees are actively foraging.

Use not permitted in California unless otherwise directed by supplemental labeling.

#Controls pests that may vector plant diseases.

Instructions

Apply specified dosage of Widow Insecticide in the following method:

1. Chemigation through low pressure drip, trickle, micro sprinkler or equivalent equipment.

TREE NUTS

Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut (black and English).

Pests Controlled

Rate
Fl Ozs/Acre

Aphids

16.0 to 32.0

Leafhoppers/Sharpshooters

Mealybugs

Spittlebugs

Termites

Whiteflies

Pests/Diseases Suppressed#

Pecan scab (from reduction in honeydew deposition)

24.0 to 32.0

Thrips (foliage feeding thrips only)

32.0

Restrictions

Pre Harvest Interval (PHI) **7 days**

Maximum Widow Insecticide allowed per crop season **32.0 fl ozs/acre** (0.50 lb AI/acre)

Do not apply pre bloom or during bloom or when bees are actively foraging.

#Controls pests that may vector plant diseases.

Instructions

Apply specified dosage prior to or at onset of pest infestation in one of the following methods:

1. Chemigation into root zone through low pressure drip, trickle, micro sprinkler or equivalent equipment.

Pre-wet soil prior to applications of this product and allow soil to dry following application and prior to subsequent irrigation.

2. Emitter or spot application in a minimum of 4.0 fluid ounces of mixture per emitter site.

3. Shank or subsurface side dress, injected to a depth just above or just within the root zone and between

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the trunk and drip line of the tree canopy Apply product in a minimum of 10 0 gallons per acre using multiple shanks on both sides of trees Ensure product placement is below sod or orchard floor debris Follow with irrigation over entire treated area within 48 hours to promote uptake by root system

TREE NUTS cont d

- 4 For control of termites apply specified dosage to slightly moist soil as a high volume drench to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk Utilize sufficient carrier volume to penetrate the soil to a depth of 18 to 24 inches to obtain optimum control Allow soil to dry following treatment and prior to applying any irrigation

Use the higher listed rates when applied by shank or subsurface side dress used on larger trees soils are high in clay content high plant populations exist and/or where extended control is desired Under some conditions control may not occur for 14 or more days or until two (2) irrigations have been made Applications made later in the season may result in reduced efficacy

CHRISTMAS TREE

Pests Controlled	Rate Fl Ozs/Acre
White grub complex (damage from grubs of Asiatic garden beetle European and Masked chafer Japanese beetle and Oriental beetle)	16 0 to 32 0

Restrictions

Maximum Widow Insecticide allowed per crop season **32 0 fl ozs/acre** (0 5 lb AI/acre)

Instructions

Soil incorporation and movement of this product to the root zone is required for activity This product can be incorporated most readily when applied to moist soil Apply specified dosage in one of the following methods
1 Chemigation into root zone through low pressure drip trickle micro sprinkler or equivalent equipment
2 18 inch band on each side of the row (small trees) to full broadcast application (large trees) followed by rainfall or 0 25 to 1 inch of irrigation within 12 hours after application

For optimal grub control apply this product during adult flight activity or up to mid July when first instar larvae are present

POPLAR/COTTONWOOD

(Includes members of the genus Populus grown for pulp or timber)

Pests Controlled	Rate Fl Ozs/Acre
Aphids Cottonwood leaf beetle	16 0 to 32 0
Pests/Diseases Suppressed#	
Phylloxera popularia	16 0 to 32 0

Restrictions

Maximum Widow Insecticide allowed at plant per crop season **32 0 fl ozs/acre** (0 50 lb AI/acre)
Do not apply pre bloom or during bloom or when bees are actively foraging
Use not permitted in California unless otherwise directed by supplemental labeling
#Controls pests that may vector plant diseases

Instructions

Apply specified dosage of Widow Insecticide in the following method
1 Chemigation through low pressure drip irrigation

For Cottonwood leaf beetle protection against damage will occur when application is made early when the bee

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flies first begin feeding. Larger trees may require earlier treatment as a result of slower uptake.

For Phylloxera, apply early in the year, from break of dormancy through May.

APPLICATION TO TURFGRASS

Use Widow Insecticide for the control of listed soil inhabiting pests of turfgrass including Northern & Southern masked chafers *Cyclocephala borealis*, *C. immaculata* and/or *C. lurida*, Asiatic garden beetle *Maladera castanea*, European chafer *Rhizotrogus majalis*, Green June beetle *Cotinis nitida*, May or June beetle *Phyllophaga* spp, Japanese beetle *Popillia japonica*, Oriental beetle *Anomala orientalis*, Billbugs *Sphenophorus* spp, Annual bluegrass weevil *Listronotus* spp, Black turfgrass ataenius *Ataenius spretulus* and *Aphodius* spp, European crane fly *Tipula paludosa* and mole crickets *Scapteriscus* spp. Use this product for suppression of cutworms and chinch bugs. Use as directed on turfgrass on residential lawns, business and office complexes, shopping complexes, multi family residential complexes, golf courses, airports, cemeteries, parks, play grounds, and athletic fields.

The active ingredient in this product has sufficient residual activity so that applications can be made preceding the egg laying activity of the target pests. Base the need for an application on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods. Make applications prior to egg hatch of the target pests, followed by sufficient irrigation or rainfall to move the active ingredient through the thatch.

RESTRICTIONS

- **DO NOT** make applications when turfgrass areas are waterlogged or the soil is saturated with water. Adequate distribution of the active ingredient cannot be achieved when these conditions exist.
- The treated turf area must be in such a condition that the rainfall or irrigation will penetrate vertically in the soil profile.
- Applications cannot exceed a total of 1.6 pints (0.4 lb AI) per acre per year.

Application Methods

Apply this product in sufficient water to provide adequate distribution in the treated area. The use of accurately calibrated equipment normally used for the application of turfgrass insecticides is required. Use equipment which will produce a uniform coarse droplet spray using a low pressure setting to eliminate off target drift. Check calibration periodically to ensure that equipment is working properly.

TURFGRASS

PEST	USE RATE	REMARKS
Larvae of	1.25 to 1.6 pts/A	For control of grubs, billbugs, annual bluegrass weevil, and European crane fly, make application prior to egg hatch of the target pest.
Annual bluegrass weevil	OR	
Asiatic garden beetle	0.46 to 0.6 fl oz	Read Application Methods section for Application to Turfgrass.
Billbugs	(14 to 17.0 mL)/	
Black turfgrass ataenius	1000 sq ft	
Cutworms (suppression)		
European chafer		
European crane fly		
Green June beetle		
Japanese beetle		
Northern masked chafer		
Oriental beetle		
Phyllophaga spp		
Southern masked chafer		
Chinchbugs (suppression)	1.6 pts/A	For suppression of chinchbugs, make application prior to or during the hatching of the first instar nymphs.
Mole crickets	OR	
	0.6 fl oz (17.0 mL)/	For control of mole crickets, make application prior to or during the peak egg hatch period. When adults or large nymphs are present and actively tunneling, accompany the
	1000 sq ft	

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application of this product with a remedial
insecticide. Follow the most restrictive label
instructions when tank mixing

Consult your local turf state Agricultural Experiment Station or State Extension Service Specialists for more specific information regarding timing of application

RESTRICTIONS

- **DO NOT** apply more than 25.6 fl ozs (1.6 pts) (0.4 lb AI) per acre per year
- **DO NOT** mow turf or lawn area until after sufficient irrigation or rainfall has occurred so that uniformity of application will not be affected
- Irrigation or rainfall must occur within 24 hours after application to move the active ingredient through the thatch

APPLICATION TO LANDSCAPE ORNAMENTALS

Use this product on ornamentals in and around the perimeter of commercial and residential landscapes and interior plantscapes. It is a systemic product and will be translocated upward into the plant system from root uptake. Apply this product to areas where the growing portion of the target plant can absorb the active ingredient. The addition of a nitrogen containing fertilizer where applicable into the solution has been shown to enhance the uptake of the active ingredient. Application can be made by foliar application or soil applications including soil injection, drenches and broadcast sprays. Foliar applications offer locally systemic activity against insect pests.

When making soil applications to plants with woody stems, systemic activity will be delayed until the active ingredient is translocated throughout the plant. In some cases, this translocation delay could take 60 days or longer. For this reason, make applications prior to anticipated pest infestation to achieve control.

Outdoor applications cannot exceed a total of 25.6 fluid ounces (1.6 pints) (0.4 pound of active ingredient) per acre per year.

Ant Management Programs

Use this product to control aphids, scale insects, mealybugs and other sucking pests on ornamentals to limit the honeydew available as a food source for ant populations. Applications can then be supplemented with residual sprays, bait placements or other ant control tactics to further reduce the pest population.

Application Methods

Mix product with the required amount of water and apply as desired dependent upon the selected use pattern. When making foliar applications on hard to wet foliage such as holly, pine or ivy, the addition of a spreader/sticker will improve coverage. If concentrate or mist type spray equipment is used, apply an equivalent amount of product on the area sprayed as would be used in a dilute application. This insecticide has been found to be compatible with commonly used fungicides, miticides, liquid fertilizers and other commonly used insecticides. The physical compatibility of this product may vary with different sources of pesticide products and local cultural practices. Prepare on a small scale (pint or quart jar) any tank mixture which has not been previously tested by using the proper proportions of pesticides and water to ensure the physical compatibility of the mixture.

RESTRICTION DO NOT apply through any irrigation system

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ORNAMENTAL TREES SHRUBS EVERGREENS FLOWERS FOLIAGE PLANTS GROUNDCOVERS INTERIOR PLANTSCAPES (in and around the perimeter of industrial and commercial buildings and residential areas)

FOLIAR APPLICATIONS

PEST	USE RATE	REMARKS
Adelgids	1.7 fl ozs (50.0 mL)	Start treatments prior to establishment of high pest populations and reapply on an as needed basis. For resistance management purposes do not follow an imidacloprid foliar application with a soil application in the same crop.
Aphids	/100 gals of water	
Asian longhorned beetle		
Japanese beetles (adults)		
Lace bugs		
Leaf beetles (including Elm and Viburnum leaf beetles)		
Leafhoppers (including Glassy winged sharpshooter)		
Leafminers		
Mealy bugs		
Sawfly larvae		
Thrips (suppression)		
Whiteflies		

BROADCAST APPLICATIONS

PEST	USE RATE	REMARKS
White grub larvae (such as Japanese beetle larvae, chafers)	0.46 to 0.6 fl oz (14 to 17.0 mL)	Mix required amount of product in sufficient water to uniformly and accurately cover the area being treated. DO NOT use less than 2.0 gals of water/1,000 sq ft. Irrigate thoroughly to incorporate this insecticide into the upper soil profile. Refer to use directions (found below) specific for Flowers and Ground Covers.
Phyllophaga spp. Asiatic garden beetle, Oriental beetle)	/1000 sq ft	

RESTRICTIONS

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- **DO NOT** apply more than 25.6 fl ozs (1.6 pts) (0.4 lbs AI) per acre per year
- **DO NOT** harvest or consume fruits or nuts from trees that have been treated within 1 year of application
- **DO NOT** apply through any irrigation system

ORNAMENTAL TREES SHRUBS FLOWERS AND GROUNDCOVERS (in and around the perimeter of industrial and commercial buildings and residential areas and state national and private wooded and forested areas for the insect pests listed below)

PEST	USE RATE	APPLICATION SITE
	TREES	
Adelgids	For TREES	Soil Injection GRID SYSTEM Holes must be spaced on 2.5 ft centers in a grid pattern extending to the drip line of the tree
Alder borer	Use the following rates as a function of tree diameter at breast height (DBH)	CIRCLE SYSTEM Apply in holes evenly spaced in circles (use more than one circle dependent upon the size of the tree) beneath the drip line of the tree extending in from that line
Aphids	Apply 0.1 to 0.4 fl oz (3.0 to 6.0 mL)/inch of trunk diameter (DBH)	BASAL SYSTEM Space injection holes evenly around the base of the tree trunk no more than 6 to 12 inches out from the base
Armored scales (suppression)	You may use the higher rate (0.3 to 0.4 fl oz) only for trees >15 inches (DBH) to control	Mix required dosage in sufficient water to inject an equal amount of solution in each hole
Black vine weevil larvae	Eucalyptus longhorned borer	Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. Keep the treated area moist for 7 to 10 days. DO NOT use less than 4 holes/tree
Bronze birch borer	Bronze birch borer and Alder borer	NEW YORK SPECIFIC RESTRICTION No Soil Injection Applications Allowed in Nassau or Suffolk Counties of New York
Eucalyptus longhorned borer	RESTRICTION DO NOT apply more than 25.6 fl ozs (0.4 lb AI)/A/year	Soil Drench Uniformly apply the dosage in no less than 10.0 gals of water/1,000 sq ft as a drench around the base of the tree directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone
Flatheaded borers (including Bronze birch and Alder)	Diameter at Breast Height (DBH) is measured at 4.5 ft from the ground	For Control of Specified Borers
Japanese beetles		Application to trees already heavily infested may not prevent the eventual loss of the trees due to existing pest damage and tree stress
Lace bugs		Basal Drench using Slow Release Irrigation Bags (such as Treegator® 15 20 or 50 Gallon capacity) Follow manufacturer's instructions for installation and setup of drip irrigation water bag. Fill bag to 1/4 capacity with irrigation water
Leaf beetles (including Elm and Viburnum leaf beetles)		
Leafhoppers (including Glassy winged sharpshooter)		
Leafminers		
Mealybugs		
Pine tip moth larvae		
Psyllids		
Royal palm bugs		
Sawfly larvae*		
Soft scales		
Thrips (suppression)		
White grub larvae		
Whiteflies		

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Add the specified rate of this product for the tree diameter to which the bag is attached. Add remaining volume of water needed to fill bag.

Ornamental Trees Shrubs Flowers and Groundcovers (in and around the perimeter of industrial and commercial buildings and residential areas and state national and private wooded and forested areas for the insect pests listed below) **cont d**

PEST	USE RATE	APPLICATION SITE
Insect pests listed below/ cont'd		
SHRUBS		
Adelgids	0.1 to 0.2 fl oz (3.0 to	Soil Injection Apply to individual plants using dosage indicated. Mix required dosage in sufficient water to inject an equal amount of solution in each hole. Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. Keep the treated area moist for 7 to 10 days. DO NOT use less than 4 holes/shrub. NEW YORK SPECIFIC RESTRICTION No Soil Injection Applications Allowed in Nassau or Suffolk Counties of New York Soil Drench Uniformly apply the dosage in no less than 10.0 gals of water/1,000 sq ft as a drench around the base of the tree directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone. Basal Drench using Slow Release Irrigation Bags (such as Treegator 15, 20, or 50 Gallon capacity) Follow manufacturer's instructions for installation and setup of drip irrigation water bag. Fill bag to 1/4 capacity with irrigation water. Add the specified rate of this product for the shrub height to which the bag is attached. Add remaining volume of water needed to fill bag.
Alder borer	6.0 mL)/ft of shrub height	
Aphids		
Armored scales		
(suppression)		
Black vine weevil larvae		
Bronze birch borer		
Eucalyptus longhorned borer		
Flatheaded borers (including		
Bronze birch and Alder)		
Japanese beetles		
Lace bugs		
Leaf beetles (including Elm		
and Viburnum leaf beetles)		
Leafhoppers (including		
Glassy winged		
sharpshooter)		
Leafminers		
Mealybugs		
Pine tip moth larvae		
Psyllids		
Royal palm bugs		
Sawfly larvae		
Soft scales		
Thrips (suppression)		
White grub larvae		
Whiteflies		
FLOWERS & GROUNDCOVERS		
	0.46 to 0.6 fl oz (14.0 to	Apply as a broadcast treatment and incorporate into the soil before planting or apply after plants are established. Irrigate immediately following application to established plants.
	17.0 mL)/1000 sq ft	

REMARKS

Pine sawfly larvae feed on mature foliage beginning in early spring. Make treatments in the fall before pine sawfly emergence in spring to allow adequate time for imidacloprid translocation into mature foliage.

RESTRICTIONS

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- **DO NOT** apply more than 25.6 fl ozs (1.6 pts) (0.4 lb AI) per acre per year
- **DO NOT** harvest or consume fruits or nuts from trees that have been treated within 1 year of application
- **DO NOT** apply through any irrigation system

POME FRUITS Apple Crabapple Loquat Mayhaw Pear Pear (oriental) Quince (around perimeter of industrial and commercial buildings and on residential areas)

PEST	USE RATE	
Aphids (except Woolly apple aphid)	1.5 fl ozs (45.0 mL) /100 gals of water	6.0 fl ozs/A ¹
Leafhoppers (including Glassy winged sharpshooter)		
Leafminer		
Mealybugs		
San Jose scale		

REMARKS

Apply specified dosage as foliar spray as needed after petal fall is complete
 For control of Rosy apple aphid apply prior to leafrolling caused by the pest
 For first generation leafminer control make first application as soon as petal fall is complete. Greatest leafminer control will result from the earliest possible application. For second and succeeding generations of leafminer optimal control is obtained from applications made early in the adult flight against egg and early instar larvae. A second application may be required 10 days later if severe pressure continues or if generations are overlapping. A single application may result in suppression only. This product will not control late stage larvae.
 For San Jose Scale time applications to the crawler stage. Treat each generation.
 For late season (preharvest) control of leafhopper species apply this product while most leafhoppers are in the nymphal stage.
 For control of mealybugs insure good spray coverage of the trunk and scaffolding limbs or other resting sites of the mealybugs.
¹The amount of this product required per acre will depend on tree size and volume of foliage present. The rate per acre is based on a standard of 400 gallons of dilute spray solution per acre for large trees.

RESTRICTIONS

- **DO NOT** apply more than 25.6 fl ozs per acre per crop season
 - **DO NOT** apply more than 6.0 fl ozs per acre in a single application
 - **DO NOT** make more than 4 applications per year
 - Allow 10 or more days between applications
 - Allow at least 7 days between last application and harvest
- Not for use in California for control on pears

PECANS* (around perimeter of industrial and commercial buildings and on residential areas)

PEST	USE RATE	
Yellow pecan aphid	1.5 fl ozs (45.0 mL)	6.0 fl oz/A ¹
Black margined aphid	/100 gals of water	
Pecan leaf phylloxera		
Pecan spittlebug		
Pecan stem phylloxera		

REMARKS

Make foliar applications as pests begin to build before populations become extreme. Two applications at a 10 to 14 day interval may be required to achieve control. Scout and retreat if needed. Thorough uniform coverage of foliage is necessary for control. Addition of an organosilicone based spray adjuvant at a rate not to exceed the adjuvant manufacturer's specified use rate may improve coverage.
¹The amount of this product required per acre will depend on tree size and volume of foliage present. The rate per acre is based on a standard of 400 gallons of dilute spray solution per acre for large trees.

RESTRICTIONS

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- Pre Harvest Interval (PHI) **7 days**
- **DO NOT** apply more than a total of 18 0 fl ozs of this product per acre per year
- **DO NOT** make more than 3 applications per year

PECANS* (around perimeter of industrial and commercial buildings and on residential areas) cont d

- Allow 10 or more days between applications
- **DO NOT** apply through any irrigation system

*Use on pecans not permitted in California unless otherwise directed by specific supplemental labeling

GRAPES (around perimeter of industrial and commercial buildings and on residential areas)

PEST	USE RATE	
Leafhoppers (including Glassy winged sharpshooter)	1 5 fl ozs (45 mL) /100 gals of water	3 0 fl oz/A ¹
Mealybugs		

REMARKS

¹Apply specified dosage as a foliar spray using 200 gallons of water per acre

RESTRICTIONS

- **DO NOT** apply more than a total of 6 0 fl ozs of this product per acre per year
- Allow at least 14 days between applications
- Applications may be applied up to and including day of harvest
- **DO NOT** apply through any irrigation system

CITRUS Citrus and Citrus hybrids **Orange (sweet and sour) Calamondin Grapefruit Kumquat Lemon Lime Pummelo Tangerine Tangelo** (around perimeter of industrial and commercial buildings and on residential areas)

PEST	USE RATE	
Aphids	1 5 fl ozs (45 0 mL)	6 0 fl oz/A ¹
Asian citrus psyllid	/100 gals of water	
Black fly		
Citrus leafminer		
Leafhoppers/Sharpshooters		
Mealybugs		
Scales		
Termites (FL only)		
Whiteflies		

REMARKS

Apply specified dosage as foliar spray as needed after petal fall is complete

For first generation leafminer control make first application as soon as petal fall is complete Greatest leafminer control will result from the earliest possible application For second and succeeding generations of leafminer optimal control is obtained from applications made early in the adult flight against egg and early instar larvae A second application may be required 10 days later if severe pressure continues or if generations are overlapping A single application may result in suppression only This product will not control late stage larvae For late season (preharvest) control of leafhopper species apply this product while most leafhoppers are in the nymphal stage

For control of mealybugs insure good spray coverage of the trunk and scaffolding limbs or other resting sites of the mealybugs

¹The amount of this product required per acre will depend on tree size and volume of foliage present The rate per acre is based on a standard of 400 gallons of dilute spray solution per acre for large trees

RESTRICTIONS

- **DO NOT** apply more than 32 0 fl ozs (0 5 lb AI) per acre per season
- **DO NOT** apply more than 6 0 fl ozs per acre in a single application
- **DO NOT** make more than 5 applications per year
- Allow 10 or more days between applications

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- Allow at least 7 days between last application and harvest
- **DO NOT** apply through any irrigation system
- **DO NOT** apply pre bloom or during bloom or when bees are actively foraging

AVOCADO (around perimeter of industrial and commercial buildings and on residential areas)

PEST	USE RATE
Aphids	1.5 fl ozs (450 mL)
Avocado lacebug	6.0 fl oz/A ¹
Leafhoppers	/100 gals of water
Whiteflies	

REMARKS

¹The amount of this product required per acre will depend on tree size and volume of foliage present. The rate per acre is based on a standard of 400 gallons of dilute spray solution per acre for large trees.

RESTRICTIONS

- **DO NOT** apply more than a total of 6.0 fl ozs of this product per acre per year
- Allow at least 14 days between applications
- Allow at least 7 days between application and harvest
- **DO NOT** apply through any irrigation system
- **DO NOT** apply pre bloom or during bloom or when bees are actively foraging

APPLICATION TO GRASSY AREAS IN NURSERIES

This product can be used for the control of listed soil inhabiting pests of grassy areas of nurseries including Northern and Southern masked chafers *Cyclocephala borealis*, *C. immaculata* and/or *C. lurida*, Asiatic garden beetle *Maladera castanea*, European chafer *Rhizotrogus majalis*, Green June beetle *Cotinis nitida*, May or June beetle *Phyllophaga* spp, Japanese beetle *Popillia japonica*, Oriental beetle *Anomala orientalis*, Billbugs *Sphenophorus* spp, Annual bluegrass weevil *Hyperodes* spp, Black turfgrass *Ataenius*, *Ataenius spretulus* and *Aphodius* spp and mole crickets *Scapteriscus* spp. This product can also be used for suppression of cut worms and chinch bugs. This product can be used as directed on nursery grass in sites such as under or around field or container grown plants, on roadways or other grassy areas in or around nurseries. The active ingredient in this product has sufficient residual activity so that applications can be made preceding the egg laying activity of the target pests. The need for an application can be based on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods. When applications are made prior to egg hatch of the target pests, sufficient irrigation or rainfall is needed within 24 hours to allow the movement of the active ingredient through the thatch.

RESTRICTIONS

- **DO NOT** use this product on commercial sod farms
- **DO NOT** make application when grassy areas are waterlogged or the soil is saturated with water
- Adequate distribution of the active ingredient cannot be achieved when these conditions exist
- The treated grassy area must be in such a condition that the rainfall or irrigation will penetrate vertically in the soil profile
- Application cannot exceed a total of 25.6 fl ozs (1.6 pts) (0.4 lb AI) per acre per year

Application Equipment for Use on Grassy Areas in Nurseries

Apply this product in sufficient water to provide adequate distribution in the treated area. The use of accu

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rately calibrated equipment normally used for the application of soil insecticides is required. Use equipment which will produce a uniform course droplet spray using a low pressure setting to eliminate off target drift. Check calibration periodically to ensure that equipment is working properly.

GRASSY AREAS OF FIELD AND FOREST NURSERIES

PEST	USE RATE
Larvae of	19.2 to 25.6 fl ozs/A (1.25 to 1.6 pt/A)
Annual bluegrass weevil	OR
Asiatic garden beetle	0.46 to 0.6 fl oz (14.0 to 17.0 mL)/1000 sq ft
Billbugs	
Black turfgrass atenioides	
Cutworms (suppression)	
European chafer	
European crane fly	
Green June beetle	
Japanese beetle	
Northern masked chafer	
Oriental beetle	
Phyllophaga spp	
Southern masked chafer	
Chinchbugs (suppression)	25.6 fl ozs/A (1.6 pts/A)
Mole crickets	OR
	0.6 fl oz (17.0 mL)/1000 sq ft

REMARKS

For control of grubs, billbugs and annual bluegrass weevil, make application prior to egg hatch of the target pest.

Read **APPLICATION EQUIPMENT** section of this label.

For suppression of chinchbugs, make application prior to or during the hatching of the first instar nymphs.

For control of mole crickets, make application prior to or during the peak egg hatch period. When adults or large nymphs are present and actively tunneling, accompany the application of this product with a remedial insecticide. Follow the most restrictive label instructions when tank mixing.

Consult your local turf, state Agricultural Experiment Station, or State Extension Service Specialists for more specific information regarding timing of application.

Restrictions

- **DO NOT** apply more than 25.6 fl ozs (1.6 pts) (0.4 lb AI) per acre per year. Irrigation or rainfall must occur within 24 hours after application to move the active ingredient through the thatch.
- **DO NOT** mow turf or lawn area until after sufficient irrigation or rainfall has occurred.

APPLICATION TO ORNAMENTALS AND VEGETABLE PLANTS
(Nurseries, Greenhouses, Interior Plantscapes)

This product is for insect control on ornamental and commercial vegetable plants in nurseries and greenhouses and interior plantscapes. This product is a systemic product and will be translocated upward into the plant system. To assure optimum effectiveness, the product must be placed where the growing portion of the target plant can absorb the active ingredient. The addition of a nitrogen containing fertilizer, where applicable, into the solution may enhance the uptake of the active ingredient. Application can be made by foliar application or soil applications, including soil injection, drenches, and broadcast sprays.

When making soil applications to plants with woody stems, systemic activity will be delayed until the active ingredient is translocated throughout the plant. Make application prior to anticipated pest infestation.

RESTRICTION Outdoor applications cannot exceed a total of 25.6 fluid ounces (1.6 pints) (0.4 pound of active ingredient) per acre per year, except for things grown in pots, containers, flats or on benches.

Bark Media Media with 30% or more bark content may confer a shorter period of protection when treated with this product.

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Resistance Some insects are known to develop resistance to insecticides after repeated use. Because the development of resistance cannot be predicted, the use of this product must conform to resistance management strategies established for the use area. Consult your local or state pest management authorities for details.

Application Equipment for Ornamentals and Vegetable Plants

Mix product with the required amount of water and apply as specified for the selected use pattern. When making foliar applications on hard to wet foliage such as holly, pine, or ivy, the addition of a spreader/sticker will improve coverage. If concentrate or mist type spray equipment is used, apply an equivalent amount of product on the area sprayed as would be used in a dilute application.

This product has been found to be compatible with commonly used fungicides, miticides, liquid fertilizers, and other commonly used insecticides. The physical compatibility of this product may vary with different sources of pesticide products and local cultural practices. For any tank mixture that has not been previously tested, prepare on a small scale (pint or quart jar) using the proper proportions of pesticides and water to ensure the physical compatibility of the mixture.

FOLIAR & BROADCAST APPLICATIONS ORNAMENTAL TREES (including non bearing fruit & nut trees) SHRUBS EVERGREENS FLOWERS FOLIAGE PLANTS GROUNDCOVERS INTERIOR PLANTSCAPES VEGETABLE PLANTS* (around field grown nursery and container stock, indoor and outdoor ornamentals (including both greenhouse and interior plantscapes) and ornamentals grown in flats, benches or beds)

FOLIAR APPLICATIONS

PEST	USE RATE	REMARKS
Adelgids	1.7 fl ozs (50.0 mL)	Start treatments prior to establishment of high pest populations and reapply on an as needed basis. For resistance management purposes DO NOT make an imidacloprid foliar application following a soil application in the same crop.
Aphids	/100 gals of water	
Japanese beetles (adults)		
Lace bugs		
Leaf beetles (including Elm and Viburnum leaf beetles)		
Leafhoppers (including Glassy winged sharpshooter)		
Leafminers		
Mealybugs		
Sawfly larvae		
Thrips (suppression)		
Whiteflies		

BROADCAST APPLICATIONS

PEST	USE RATE	REMARKS
White grub larvae (such as Japanese beetle larvae, chafers, Phyllophaga spp., Asiatic garden beetle, Oriental beetle)	0.46 to 0.6 fl oz (14.0 to 17.0 mL) /1000 sq ft	Mix required amount of product in sufficient water to uniformly and accurately cover the area being treated. DO NOT use less than 2.0 gals of water/1,000 square feet. Irrigate thoroughly to incorporate this insecticide into the upper soil profile. Refer to specific use directions (found below) for Flowers and Ground Covers.

RESTRICTIONS

Only for use on the following vegetable plants intended for resale: Broccoli, Chinese Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Collards, Eggplant, Ground Cherry, Kale, Kohlrabi, Lettuce, Mustard Greens, Pepinos, Peppers, Potatoes, Rape Greens, Sorghum, Sugarbeets, Tomatillo, and

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Tomato

Outdoor applications cannot exceed a total of 25.6 fl ozs (1.6 pts) (0.4 lbs AI) per acre per year except for things grown in pots, containers, flats or on benches

SOIL APPLICATIONS NURSERY, GREENHOUSE AND INTERIORESCAPE PLANTS

PEST	USE RATE	APPLICATION SITE
	TREES	
Adelgids	For TREES	Soil Injection GRID SYSTEM Holes must be spaced on 2.5 ft centers in a grid pattern extending to the drip line of the tree
Alder borer	Use the following rates as a function of tree diameter at breast height (DBH)	CIRCLE SYSTEM Apply in holes evenly spaced in circles (use more than one circle dependent upon the size of the tree) beneath the drip line of the tree extending in from that line
Aphids	Apply 0.1 to 0.4 fl oz (3.0 to 6.0 mL) /inch of trunk diameter (DBH)	BASAL SYSTEM Space injection holes evenly around the base of the tree trunk no more than 6 to 12 inches out from the
Armored scales (suppression)	You may use the higher rate (0.3 to 0.4 fl oz) only for trees >15 inches (DBH) to control	
Black vine weevil larvae	Eucalyptus longhorned borer	
Bronze birch borer	Bronze birch borer and Alder base borer	
Eucalyptus longhorned borer		
Flatheaded borers (including Bronze birch and Alder)		
Japanese beetles		
Lace bugs		
Leaf beetles (including Elm and Viburnum leaf beetles)	RESTRICTION DO NOT apply more than 25.6 fl ozs (0.4 lb AI)/A/year Diameter at Breast Height (DBH) is measured at 4.5 ft from the ground	Mix required dosage in sufficient water to inject an equal amount of solution in each hole. Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. Keep the treated area moist for 7 to 10 days. DO NOT use less than 4 holes/tree
Leafhoppers (including Glassy winged sharpshooter)		NEW YORK SPECIFIC RESTRICTION No Soil Injection Applications Allowed in
Leafminers		Nassau or Suffolk Counties of New York
Mealybugs		Soil Drench Uniformly apply the dosage in no less than 10.0 gals of water/1,000 sq ft as a drench around the base of the tree directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone
Pine tip moth larvae		For Control of Specified Borers
Psyllids		Application to trees already heavily infested may not prevent the eventual loss of the trees due to existing pest damage and tree stress
Royal palm bugs		Basal Soil Drench using Slow Release Irrigation Bags (such as Treegator® 15, 20, or 50 Gallon capacity) Follow manufacturer's instructions for installation and setup of drip irrigation water bag. Fill bag to 1/4 capacity with irrigation water. Add the specified rate of
Sawfly larvae		
Soft scales		
Thrips (suppression)		
White grub larvae		
Whiteflies		

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this product for the tree diameter to which the bag is attached. Add remaining volume of water needed to fill bag.

Soil Applications Nursery, Greenhouse and Interior Plants cont d		
PEST	USE RATE	APPLICATION SITE
SHRUBS		
Adelgids	0.1 to 0.2 fl oz (3.0 to 6.0 mL)/ft of shrub height	Soil Injection Apply to individual plants using dosage indicated
Alder borer		Mix required dosage in sufficient water to inject an equal amount of solution in each hole. Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. Keep the treated area moist for 7 to 10 days. DO NOT use less than 4 holes/shrub
Aphids		NEW YORK SPECIFIC RESTRICTION: No Soil Injection Applications Allowed in Nassau or Suffolk Counties of New York.
Armored scales (suppression)		Soil Drench Uniformly apply the dosage in no less than 10.0 gals of water/1,000 sq ft as a drench around the base of the tree directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone.
Black vine weevil larvae		Basal Soil Drench Using Slow Release Irrigation Bags (such as Treegator 15 20 or 50 Gallon capacity) Follow manufacturer's instructions for installation and setup of drip irrigation water bag. Fill bag to 1/4 capacity with irrigation water. Add the specified rate of this product for the shrub height to which the bag is attached. Add remaining volume of water needed to fill bag.
Bronze birch borer		
Eucalyptus longhorned borer		
Flatheaded borers (including Bronze birch and Alder)		
Japanese beetles		
Lace bugs		
Leaf beetles (including Elm and Viburnum leaf beetles)		
Leafhoppers (including Glassy winged sharpshooter)		
Leafminers		
Mealybugs		
Pine tip moth larvae		
Psyllids		
Royal palm bugs		
Sawfly larvae		
Soft scales		
Thrips (suppression)		
White grub larvae		
Whiteflies		
FLOWERS & GROUNDCOVERS		
	0.46 to 0.6 fl oz (14.0 to 17.0 mL) /1000 sq ft	Apply as a broadcast treatment and incorporate into the soil before planting or apply after plants are established. Irrigate immediately following application to established plants.

REMARKS

*Pine sawfly larvae feed on mature foliage beginning in early spring. Make treatments in the fall before pine sawfly emergence in spring to allow adequate time for imidacloprid translocation into mature foliage.

RESTRICTIONS

- Outdoor applications cannot exceed a total of 25.6 fl ozs (1.6 pts) (0.4 lbs AI) per acre per year except for things grown in pots, containers, flats or on benches.

SOIL APPLICATIONS FIELD AND FOREST NURSERIES

PESTS	FL OZS/1,000 FT of ROW	FL OZS/1,000 SQ FT
For control of White grub larvae ¹ (such as Japanese beetle)	1.7 fl oz (50.0 mL)	0.6 fl oz (17.0 mL) 25.6 fl ozs/A

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Masked chafers European
 chafer Oriental beetle
 Asiatic garden beetle)

Soil Applications Field and Forest Nurseries cont d

APPLICATION METHODS

Apply as a uniform band on either side of the row using a band width six (6) inches wider than the actual root ball diameter to be dug **DO NOT** allow bands in adjacent rows to overlap

REMARKS

Mowing of the vegetation in the area to be treated to a height of 3 inches or less prior to application will improve the consistency of control

Apply May through July Time the treatment so that rainfall or irrigation occurs within 24 hours following the application

¹For grub control in areas of turf apply as a broadcast application using 0.46 to 0.60 fl oz (14.0 to 17.0 mL)/1,000 sq ft (19.6 to 25.6 fl ozs/acre)

RESTRICTIONS

DO NOT use less than 2.0 gallons of spray volume per 1000 sq ft (85 GPA)

DO NOT exceed 25.6 fl ozs per acre per year (1.6 pts) (0.4 lbs AI/acre)

EBB & FLOOD APPLICATIONS

This product may be applied through Ebb and Flood applications to Ornamental and Vegetable Plants (intended for resale only) grown in containers To assure accurate uptake prior to treatment bring a minimum of 10 plants up to a known field capacity and allow to dry out for one or two days Re wet these plants to determine how much water on average each plant will absorb to bring it back at field capacity Use the volume absorbed per plant (keeping pot sizes uniform) multiplied by the number of pots being treated Add to this volume a required minimum to flood your smallest treatment area This will minimize the return back to the storage tank Re use the returned volume with subsequent irrigation or nutrients on the same plants

EBB & FLOOD APPLICATIONS ORNAMENTAL AND VEGETABLE PLANTS GROWN IN CONTAINERS

PEST	Container Size (inches)	Herbaceous species including vegetable plants (1 or 2 plants/pot) mL/100 plants	Woody perennials Herbaceous species including vegetable plants (3 or more/pot)
Adelgids	2	1.6	2.5
Aphids	3	2.5	3.7
Armored scales	4	3.3	5.0
(suppression)	5	4.2	6.3
Fungus gnats	6	5.0	7.7
(larvae only) ¹	7	5.9	9.1
Japanese beetles	8	6.6	10.0
(adults)	9	7.4	11.1
Lacebugs	10	8.3	12.5
Leaf Beetles	11	9.0	14.3
(including Elm and Viburnum)	12	10.0	16.7
Leafhoppers/ Sharpshooters			
Leafminers			
Mealybugs			
Psyllids			
Root mealybugs ²			
Root weevil complex			

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(such as Apopka
 Black vine
 Citrus root)³

Ebb & Flood Applications Ornamental and Vegetable Plants Grown in Containers cont d

PEST	Container Size (inches)	Herbaceous species including vegetable plants (1 or 2 plants/pot)	Woody perennials Herbaceous species including vegetable plants (3 or more/pot)
mL/100 plants			

Soft scales
 Thrips
 (suppression)⁴
 Whiteflies
 White grub larvae
 (such as Japanese
 beetle Masked
 chafers European
 chafer Oriental
 beetle Asiatic
 garden beetle)

REMARKS

¹**Fungus gnat larvae** in the soil will be controlled by drench or incorporation **No adult Fungus gnat control**
 Other foliar insect control is achieved by the uptake of this product from a healthy root system translocating
 the active ingredient up into the plant

²**Root mealybug** control will require a thorough drenching of containerized media Coverage is essential for
 control while minimizing the amount of leachate Rate 2 0 fl ozs (60 0 ml) in 150 gallons of water

³**Citrus root weevil** For use on non bearing citrus nursery stock

⁴**Thrips** suppression on foliage only Thrips in buds and flowers will not be suppressed

RESTRICTION

Only for use on the following vegetable plants intended for resale Broccoli Chinese broccoli Broccoli raab
 Brussels sprouts Cabbage Chinese cabbage Cauliflower Collards Eggplant Ground cherry Kale Kohlrabi
 Lettuce Mustard greens Pepinos Peppers Potatoes Rape greens Sorghum Sugarbeets Tomatillo and
 Tomato

DRENCH & IRRIGATION APPLICATIONS

This product may be applied through Drench and Flood applications See instructions above **For Application
 Through Irrigation Systems** Apply only to greenhouse and nursery grown ornamentals vegetable plants
 (intended for resale only) and interiorscape plants using soil drenches mirco irrigation drip irrigation over
 head irrigation ebb and flood irrigation or hand held or motorized calibrated irrigation equipment

**DRENCH & IRRIGATION APPLICATIONS ORNAMENTAL AND VEGETABLE PLANTS GROWN IN SMALL
 CONTAINERS, IN FLATS, ON BENCHES, OR IN BEDS**

PEST	CONTAINERIZED PLANTS (small containers)		
	Container Size (inches)	Herbaceous species including vegetable plants (1 or 2 plants/pot)	Woody perennials Herbaceous species including vegetable plants (3 or more/pot)
# of Containers treated with 2 0 fl ozs (60 0 mL)			
Adelgids	2	3000	2000
Aphids	3	2000	1350
Fungus gnats	4	1500	1000
(larvae only) ¹	5	1200	800

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Japanese beetles	6	1000	650
(adults)	7	850	550
Lacebugs	8	750	500

Drench & Irrigation Applications Ornamental and Vegetable Plants Grown in Small Containers in Flats on Benches, or in Beds cont d

PEST	CONTAINERIZED PLANTS (small containers)		
	Container Size (inches)	Herbaceous species including vegetable plants (1 or 2 plants/pot) # of Containers treated with 2 0 fl ozs (60 0 mL)	Woody perennials Herbaceous species including vegetable plants (3 or more/pot)
Leaf Beetles	9	675	450
(including Elm and	10	600	400
Viburnum leaf	11	550	350
beetles)	12	500	300
Leafhoppers			
(including			
Glassy winged			
sharpshooter)			
Leafminers			
Mealybugs			
Psyllids			
Root mealybugs ²			
Root weevil complex			
(such as Apopka			
Black vine Citrus			
root weevils) ³			
Soft scales			
Thrips			
(suppression) ⁴			
Whiteflies			
White grub larvae			
(such as Japanese			
beetle Masked			
chafers European			
chafer Oriental			
beetle Asiatic			
garden beetle)			

APPLICATION METHODS

Use sufficient volume to wet most of the potting medium without loss of liquid from the bottom of the container. Apply according to label directions. Follow application with moderate irrigation. Irrigate carefully during the next 10 days in order to prevent loss of active ingredient due to leaching.

PLANTS IN FLATS ON BENCHES OR IN BEDS

0.67 fl oz (20.0 mL)/1000 sq ft

APPLICATION METHODS

Mix required amount in sufficient water to uniformly cover the area being treated. **DO NOT** use less than 2.0 gallons of mixture per 1000 square feet. Apply as a broadcast treatment and incorporate into the medium before planting or apply after plants are established. Lightly water the treated areas if application is made to established plants. Allow no leaching or runoff for 10 days after application.

REMARKS

¹**Fungus gnat larvae** in the soil will be controlled by drench or incorporation. **No adult Fungus gnat control**. Other foliar insect control is achieved by the uptake of this product from a healthy root system translocating the active ingredient up into the plant.

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²**Root mealybug** control will require a thorough drenching of containerized media. Coverage is essential for control while minimizing the amount of leachate. Rate 2.0 fl ozs (60.0 mL) in 150 gallons of water.

³**Citrus root weevil** For use on non bearing citrus nursery stock

Drench & Irrigation Applications Ornamental and Vegetable Plants Grown in Small Containers in Flats on Benches, or in Beds cont d

⁴**Thrips** suppression on foliage only. Thrips in buds and flowers will not be suppressed.

RESTRICTIONS

- Outdoor applications cannot exceed a total of 25.6 fl ozs (1.6 pts) (0.4 lb of AI) per acre per year except for things grown in pots, containers, flats or on benches.
- Only for use on the following vegetable plants intended for resale: Broccoli, Chinese broccoli, Broccoli raab, Brussels sprouts, Cabbage, Chinese cabbage, Cauliflower, Collards, Eggplant, Ground cherry, Kale, Kohlrabi, Lettuce, Mustard greens, Pepinos, Peppers, Potatoes, Rape greens, Sorghum, Sugarbeets, Tomatillo, and Tomato.

**DRENCH AND IRRIGATION APPLICATIONS ORNAMENTAL AND
VEGETABLE PLANTS GROWN IN LARGE CONTAINERS**

Application instructions: Use 2.0 fl ozs (60.0 mL) of product in an appropriate amount of water to prevent leaching. 2.0 fl ozs (60.0 mL) will treat the number of containers specified below, based on container size.

Pests	Container Size (gals)	# of Containers treated with 2.0 fl ozs (60.0 mL)
Adelgids	1	340 to 244
Aphids	2	280 to 210
Fungus gnats	3	220 to 185
(larvae only) ¹	5	160 to 110
Japanese beetles (adults)	7	100 to 75
Lacebugs	10	60 to 45
Leaf Beetles (including Elm and Viburnum leaf beetles)	15	40 to 30
Leafhoppers (including Glassy winged sharpshooter)	20	20 to 15
Leafminers		
Mealybugs		
Psyllids		
Root mealybugs ²		
Root weevil complex (such as Apopka, Black vine Citrus root) ³		
Soft scales		
Thrips (suppression) ⁴		
Whiteflies		
White grub larvae (such as Japanese beetle Masked chafers, European chafer, Oriental beetle Asiatic garden beetle)		

APPLICATION METHODS

Apply in sufficient water to wet the potting medium. Make applications prior to egg hatch of the target pest. Irrigate moderately after application to move the active ingredient into the root zone.

REMARKS

¹**Fungus gnat larvae** in the soil will be controlled by drench or incorporation. **No adult Fungus gnat control.** Other foliar insect control is achieved by the uptake of this product from a healthy root system translocating the active ingredient up into the plant.

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²**Root mealybug** control will require a thorough drenching of containerized media. Coverage is essential for control while minimizing the amount of leachate. Rate 2.0 fl ozs (60.0 mL) in 150 gallons of water.

³**Citrus root weevil** For use on non bearing citrus nursery stock

⁴**Thrips** suppression on foliage only. Thrips in buds and flowers will not be suppressed.

Drench and Irrigation Applications Ornamental and Vegetable Plants Grown in Large Containers cont d
RESTRICTION

Only for use on the following vegetable plants intended for resale: Broccoli, Chinese broccoli, Broccoli raab, Brussels sprouts, Cabbage, Chinese cabbage, Cauliflower, Collards, Eggplant, Ground cherry, Kale, Kohlrabi, Lettuce, Mustard greens, Pepinos, Peppers, Potatoes, Rape greens, Sorghum, Sugarbeets, Tomatillo, and Tomato.

RESTRICTIONS FOR ALL USES

DO NOT graze treated areas or use clippings from treated areas for feed or forage.

Prevent runoff or puddling of irrigation water following application.

DO NOT apply this product to soils which are water logged or saturated, which will not allow penetration into the root zone of the plants.

Keep children and pets off treated area until dry.

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.acrecycle.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.

Triple rinse as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

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

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Storage & Disposal cont d

remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. 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

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

BEFORE BUYING OR USING THIS PRODUCT: read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD AS IS, AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS,

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DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT
TO THE EXTENT CONSISTENT WITH APPLICABLE LAW LOVELAND PRODUCTS INC AND THE SELLER SHALL NOT BE
LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL SPECIAL OR INDIRECT DAMAGES
OR DAMAGES IN THE NATURE OF A PENALTY

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