

34704-893

07/01/2010

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

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Chris Mason
Loveland Products, Inc.
P.O. Box 1286
Greeley, Colorado 80632

JUL 1 2010

Dear Mr. Mason:

Subject: Labeling Amendment; General Revisions
Widow Insecticide
EPA Registration No. 34704-893
Submission Date: June 16, 2010

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the above mentioned label before releasing the product for shipment. If you have any questions regarding this label, please contact Kable Bo Davis at (703) 306-0415 or davis.kable@epa.gov.

Sincerely yours,

A handwritten signature in cursive script that reads "Venus Eagle".

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

Enclosure- Stamped Label



For uses in pest management and suppression of insect vectored 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 pounds of Imidacloprid per gallon.

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

SHAKE WELL BEFORE USING

FIRST AID

ACCEPTED
 JUL 1 2010
 Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 34704-893

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 GAL. (3.78 L)

IHT

EXP 04R10

**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 meet 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.

OBSERVE THE FOLLOWING PRECAUTIONS 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, Best Management Practices for minimizing runoff should be employed. Consult your local Natural Resources Conservation Service for recommendations in your use area.

No-Spray Zone Requirements for Soil 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, applications should be made 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. 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

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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.ircac-online.org/>.

APPLICATION INSTRUCTIONS

Restrictions

Do not apply with aerial application equipment.

Do not apply more than 0.50 lbs active ingredient per acre, per crop season, 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.

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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. Complete 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 generally not permitted but may be 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 Note 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.

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 Note

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 that should not be used. For further information, contact your local Loveland Products, Inc. representative.

CHEMIGATION – DIRECTIONS FOR USE

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.

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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 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 to 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.

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ROTATIONAL CROPS*

Treated areas may be replanted with any crop specified on an 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.

FIELD CROPS

Application Instructions – Widow Insecticide

COTTON

Pests Controlled	Rate fluid ounces/1000 row-feet	Rate fluid ounces/Acre
Cotton aphid		
Plant bugs	1.3	17.0 - 21.1
Thrips		(Depending on row-spacing)
Whiteflies		

Restrictions

Maximum Widow Insecticide allowed per crop season: **21.1 fluid ounces/Acre** (0.33 lb ai/Acre)

Regardless of formulation or method of application, apply no more than 0.5 lb active ingredient of Widow Insecticide, Provado, Trimax or Leverage per acre per season, 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 fluid ounces/1000 row-feet	Rate fluid ounces/Acre
Aphids		
Colorado potato beetle		
Flea beetles	0.9 – 1.3	13.0 – 20.0
Leafhoppers		
Potato psyllid		

Pests/Diseases Suppressed

Symptoms of:

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

Restrictions

Maximum Widow Insecticide allowed per crop season: **20.0 fluid ounces/Acre** (0.31 lb AI/Acre)

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 fluid ounces/100 lbs. seed	Rate fluid ounces/Acre**
Aphids		
Colorado potato beetle		
Flea beetles	0.4 – 0.8	8.0 – 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 fluid ounces/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.

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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 lbs/acre.

TOBACCO

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

Restrictions

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

Maximum Widow Insecticide allowed per crop season: **32.0 fluid ounces/Acre** (0.50 lb AI/Acre)

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.

Important 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, calabaza, crookneck squash, Hubbard squash, scallop squash, straightneck squash, vegetable marrow and zucchini, 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
fluid ounces/Acre**

Aphids	
Cucumber beetles	
Leafhoppers	16.0 – 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 – 24.0

Restrictions

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

Maximum Widow Insecticide allowed per application: **24.0 fluid ounces/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.

Planthouse Application Instructions

Pests Controlled

**Rate
fluid ounces/1000 Plants**

Aphids	
Whiteflies	0.1

Restrictions

Maximum amount of Widow Insecticide applied in the planthouse: **0.1 fluid ounces** (0.00156 lb AI)/1000 plants.

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

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

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Cucurbit Vegetables cont'd.:

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.

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. Applications of higher rates or increased number of applications in planthouse may result in significant plant injury. 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 planthouse.

GREENHOUSE VEGETABLES

(Mature plants in production greenhouses)

Cucumber, Tomato, only

Pests Controlled

	Rate
	fluid ounces/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 gallons of water for tomatoes and 21 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.

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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 fluid ounces/Acre	Rate
Aphids	
Colorado potato beetle	Okra and Pepper
Flea beetles	16.0 – 32.0
Leafhoppers	
Thrips (foliage-feeding thrips, only)	Other Crops
Whiteflies	16.0 – 24.0
Pests/Diseases Suppressed	
Symptoms of:	Okra and Pepper
Tomato mottle virus	16.0 – 32.0
Tomato spotted wilt virus	Other Crops
Tomato yellow leaf curl virus	16.0 – 24.0

Restrictions

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

Maximum Widow Insecticide allowed on pepper and okra crops per application: **32.0 fluid ounces/Acre** (0.50 lb AI/Acre)

Maximum Widow Insecticide allowed on other fruiting crops per application: **24.0 fluid ounces/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.

Planthouse Application Instructions

Pests Controlled	Rate fluid ounces/1000 plants
Aphids	
Whiteflies	0.1

Restrictions

Maximum amount of Widow Insecticide applied in the planthouse: **0.1 fluid ounces** (0.00156 lb AI)/**1000 plants.**

AI)/**1000 plants.**

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

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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Fruiting 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.

Applications of higher rates or increased number of applications in planthouse may result in significant plant injury. 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 lon*) 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)

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
fluid ounces/Acre
(on 36 Inch rows)

Aphids

Whiteflies

10.0 – 24.0

Restrictions

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

Maximum Widow Insecticide allowed per application: **24.0 fluid ounces/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.

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

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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 Fluid ounces/Acre
Aphids	10.0 – 24.0
Leafhoppers	
Whiteflies	

Restrictions

Pre-Harvest Interval (PHI): **45 days**
Maximum Widow Insecticide allowed per application: **24.0 fluid ounces/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 (*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 fluid ounces/Acre
Aphids	16.0 – 24.0
Leafhoppers	
Thrips (foliage feeding thrips, only)	
Whiteflies	

Pests/Diseases Suppressed

Symptoms of:	
Bean common mosaic virus (BCMV)	16.0 – 24.0
Bean golden mosaic virus (BGMV)	
Beet curly top hybrigeminivirus (BCTV)	

Restrictions

Pre-Harvest Interval (PHI): **21 days**
Maximum Widow Insecticide allowed per crop season: **24.0 fluid ounces/Acre** (0.38 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.

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Legume Vegetables except soybean, dry cont'd.:

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/}, Carrot ^{1/}, Celeriac ^{1/}, Chervil (turnip-rooted) ^{1/}, Chicory ^{1/}, Ginseng, Horseradish, Parsley (turnip-rooted), Parsnip ^{1/}, Radish ^{1/}, Oriental radish (diakon) ^{1/}, Rutabaga ^{1/}, Salsify (oyster plant), Salsify (black) ^{1/}, Salsify (Spanish), Skirret and Turnip ^{1/}.

Pests Controlled	Rate fluid ounces/1000 row-feet	Rate fluid ounces/Acre
Aphids		
Flea beetles	0.7 – 1.7	10.0 – 24.0
Leafhoppers		
Whiteflies		

Restrictions

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

Maximum Widow Insecticide allowed per crop season: **24.0 fluid ounces/ 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.

Important 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 ounces/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.

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

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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 fluid ounces/1000 row-feet	Rate fluid ounces/Acre
Aphids		
Flea beetles	0.7 – 1.7	10.0 – 24.0
Leafhoppers		
Whiteflies		

Restrictions

Pre-Harvest Interval (PHI) from planting application: **3 days** (leaves); **125 days** (corms)
Maximum Widow Insecticide allowed per crop season: **24.0 fluid ounces/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 per 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 ounces/1000 row-feet no later than 45 days after planting. Observe same PHI as above.

Important 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 ounces/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.

^{1/}Tops or greens from these crops may be utilized for food or feed.

STRAWBERRY^{1/}

Annual And Perennial Crops

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Whiteflies	24.0 – 32.0

Restrictions

Pre-Harvest Interval (PHI): **14 days**
Maximum Widow Insecticide allowed per crop season: **32.0 fluid ounces/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.

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Strawberry¹/ cont'd.:

Post-harvest Use on Perennial Crops

Pests Controlled fluid ounces/Acre	Rate
White grub complex (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle, Oriental beetle)	16.0 - 24.0

Restrictions

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

Maximum Widow Insecticide allowed per season: **24.0 fluid ounces/Acre** (0.38 lb AI/Acre)

Instructions

Apply a single application **post harvest to coincide with renovation of strawberry fields** and during active egg-laying period of beetles. Apply specified dosage of Widow Insecticide in one of the following methods:

1. As a ground spray via boom or backpack sprayer in a minimum of 20 gallons of water per acre.
2. As a row-band spray using an adjusted amount of product based on the treated row band area in proportion to the amount required per full acre. The bandwidth should be equivalent to the width of the anticipated fruiting bed;
3. As a chemigation application with 600 to 1000 gallons of water followed by 0.10 to 0.25 inches irrigation.

Important: All soil-surface applications must be followed by 0.25 inches of rainfall or overhead irrigation water per acre within 2 hours of application. Failure to adequately incorporate Widow Insecticide into egg-deposition zone may result in decreased activity of beetle grubs.

¹/Do not use both application methods on the same crop in the same season.

SUGAR BEET

(for use only in CA)

Pests Controlled fluid ounces/Acre	Rate
Aphids Leafhoppers Whiteflies Flea beetles	6.0 - 12.0

Pests/Diseases Suppressed

Symptoms of:

Western yellows/Beet curly top byrigeminivirus (BCTV)	6.0 - 12.0
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Restrictions

Maximum Widow Insecticide allowed per crop season: **12.0 fluid ounces/Acre** (0.18 lb AI/Acre)

Maximum imidacloprid allowed per season: **0.18 lb AI/Acre** (from any formulation) on any row spacing

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

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Widow Insecticide Conversion Chart for Linear Application

RATE fluid ounces/Acre	RATE fluid ounces/1000 row-feet Based on <i>average</i> row spacing (in inches):							
	10	15	20	25	30	35	40	45
10	<i>0.19</i>	<i>0.29</i>	<i>0.38</i>	<i>0.48</i>	<i>0.57</i>	<i>0.67</i>	0.76	0.86
12	<i>0.23</i>	<i>0.34</i>	<i>0.46</i>	<i>0.57</i>	<i>0.69</i>	0.80	0.92	1.03
14	<i>0.27</i>	<i>0.40</i>	<i>0.54</i>	<i>0.67</i>	0.80	0.94	1.07	1.21
16	<i>0.31</i>	<i>0.46</i>	<i>0.61</i>	<i>0.77</i>	0.92	1.07	1.22	1.38
18	<i>0.34</i>	<i>0.52</i>	<i>0.69</i>	<i>0.86</i>	1.03	1.21	1.38	1.55
20	<i>0.38</i>	<i>0.57</i>	0.76	0.96	1.15	1.34	1.53	1.72
22	<i>0.42</i>	<i>0.63</i>	0.84	1.05	1.26	1.47	1.68	1.89
24	<i>0.46</i>	<i>0.69</i>	0.92	1.15	1.38	1.61	1.84	2.07
26	<i>0.50</i>	0.75	0.99	1.24	1.49	1.74	1.99	2.24
28	<i>0.54</i>	0.80	1.07	1.34	1.61	1.87	2.14	2.41
30	<i>0.57</i>	0.86	1.15	1.43	1.72	2.01	2.29	2.58
32	<i>0.61</i>	0.92	1.22	1.52	1.84	2.14	2.45	2.75

Important Note: 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 adequate 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 ounces/1000 row-feet.

TREE, BUSH and VINE CROPS
 Application Directions – Widow Insecticide

BUSHBERRY

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

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

Restrictions

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

Maximum Widow Insecticide allowed per season: **32.0 fluid ounces/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 inches 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 1st. 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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Bushberry cont'd.:

Apply Widow Insecticide to moist soil. If necessary, apply one 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 tagor). 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	0.75
Leafhoppers/Sharpshooters	
Mealybugs	
Scales	
Whiteflies	
Citrus root weevil (larval complex)	1.25 – 2.50

Pests/Diseases Suppressed

Citrus thrips	2.50
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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.

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 fluid ounces/Acre	Rate
Aphids	
Asian citrus psyllid	
Black fly	
Citrus leafminer	16.0 – 32.0
Leafhoppers/Sharpshooters	
Mealybugs	
Scales	
Termites (FL only)	
Whiteflies	

Pests/Diseases Suppressed

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

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Citrus (Field) cont'd.:

Restrictions

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

Maximum Widow Insecticide allowed per season **32.0 fluid ounces/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. 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 to 4 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.

CRANBERRY

Pests Controlled

Rate
fluid ounces/Acre

Rootgrubs (Scarabaeidae)

Rootworms (Chrysomelidae)

16.0 – 32.0

Restrictions

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

Maximum Widow Insecticide allowed per season: **32.0 fluid ounces/Acre** (0.50 lb AI/Acre)

Do not apply during bloom.

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 gal of water per acre;
2. As a chemigation application with 600 to 1000 gal water.

Immediately upon application, Widow Insecticide must be incorporated into root-zone by 0.1 - 0.3 inches water/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

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Cranberry cont'd.:

at least two 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 fluid ounces/Acre
Mealybugs	
Leafhoppers/Sharpshooters	16.0 – 32.0
<i>Phylloxera</i> * spp	
Pests/Diseases Suppressed	
Pierce's disease	24.0 – 32.0

Restrictions

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

Maximum Widow Insecticide allowed per season: **32.0 fluid ounces/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. 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.

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 fluid ounces/Acre
Aphids	19.2

Restrictions

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

Maximum Widow Insecticide allowed per season: **19.2 fluid ounces/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.

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PECAN

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Twolined spittlebug	16.0 – 32.0
Pests/Diseases Suppressed	
Pecan scab (from reduction in honeydew deposition)	16.0 – 32.0

Restrictions

Maximum Widow Insecticide allowed per season: **32.0 fluid ounces/Acre** (0.50 lb AI/Acre)

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 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 fluid ounces/Acre
Aphids (including woolly apple aphid)	
Leafhoppers	16.0 – 24.0

Restrictions

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

Maximum Widow Insecticide allowed per season: **24.0 fluid ounces/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.

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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 fluid ounces/Acre
Aphids (including woolly apple aphid)	
Leafhoppers	16.0 – 24.0

Restrictions

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

Maximum Widow Insecticide allowed per season: **24.0 fluid ounces/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 fluid ounces/10 gallons root-dip solution
Black peach aphid (infesting roots)	2.0

Mix Widow Insecticide at 2.0 fluid ounces per 10 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, Avocado, Black sapote, Canistel, Feijoa, Jaboticaba, Guava, Longan, Lychee, Marney sapote, Mango, Papaya, Passionfruit, Persimmon, Pulasan, Rambutan, Sapodilla, Spanish line, Star apple, Starfruit, Wax jambu

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Leafhoppers	24.0 - 32.0
Whiteflies	

Pests/Diseases Suppressed

Scales	32.0
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Restrictions

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

Maximum Widow Insecticide allowed per application: **32.0 fluid ounces/Acre** (0.50 lb AI/A)

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

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POPLAR/COTTONWOOD

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

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Cottonwood leaf beetle	16.0 – 32.0
Pests/Diseases Suppressed	
<i>Phylloxera popularia</i>	16.0 – 32.0

Restrictions

Maximum Widow Insecticide allowed at-plant per crop season: **32.0 fluid ounces/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.

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 beetles 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.

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 ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

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

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Storage & Disposal cont'd.:
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 help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC – 1-800-424-9300.

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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.

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