

 <p>U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (7505C) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460</p> <p>NOTICE OF PESTICIDE: <u> X </u> Registration <u> </u> Reregistration (under FIFRA, as amended)</p>	EPA Reg. Number: 34704-888	Date of Issuance: OCT 12 2005
	Term of Issuance: Conditional	
	Name of Pesticide Product: Bifenthrin 7.9 FL Nursery Insecticide/Miticide	
Name and Address of Registrant (include ZIP Code): Loveland Products, Inc. P.O. Box 1286 Greeley, CO 80632-1286		
<p>Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.</p> <p>On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.</p> <p>Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.</p> <p>This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:</p> <ol style="list-style-type: none"> 1. Submit and/or cite all data required for registration/ reregistration of your product when the Agency requires all registrants of similar products to submit data; and submit acceptable responses required for reregistration of your product under FIFRA section 4. 2. Make the labeling changes listed below before you release the product for shipment: <ol style="list-style-type: none"> a. Add the phrase "EPA Registration No. 34704-888". b. Relocate the paragraph beginning "Some materials that are chemical-resistant...." to appear directly under the heading Personal Protective Equipment c. Under the Turf Application Rate table, in the second New York state directions revise "do not make a single application" to read "do make a single application". 		
Signature of Approving Official:	Date: OCT 12 2005	

c. In the Warranty statement, replace "In no event shall Loveland Products, Inc., the manufacturer or seller be liable..." with "To the extent permitted by law, Loveland Products, Inc., the manufacturer or seller shall not be liable....".

3. Submit two (2) copies of your final printed labeling before you release the product for shipment

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

A stamped copy of the label is enclosed for your records.

RESTRICTED USE PESTICIDE

Toxic to fish and aquatic organisms.

For retail sale to and use only by certified applicators, or persons under their direct supervision and only for the uses covered by the certified applicator's certification.



ACCEPTED
with COMMENTS
In EPA Letter Dated
BIFENTHRIN 7.9% FL NURSERY
OCT 12 2005
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.
~~24704-2988~~



BIFENTHRIN 7.9% FL NURSERY
INSECTICIDE/MITICIDE

**For Commercial Non-Food Use on Indoor and Outdoor
Ornamentals, Greenhouses, Nurseries, Turf on Golf
Courses and Sod Farms.**

ACTIVE INGREDIENT:	BY WEIGHT
Bifenthrin*	7.9%
OTHER INGREDIENTS:	92.1%
TOTAL	100.0%

*Cis isomers 97% minimum, trans isomers 3% maximum.
BIFENTHRIN 7.9% FL Nursery contains 2/3 pounds active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID

If swallowed:	<ul style="list-style-type: none"> • Call a Poison Control Center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor.
If inhaled:	<ul style="list-style-type: none"> • Remove person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. • Call a poison control center or doctor for further 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 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN: This product is a pyrethroid. If large amounts have been ingested, the stomach and intestine should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL:
1-800-301-7978.**

**EPA REG. NO. 34704-
EPA EST. NO. 34704-MS-1
NET CONTENTS _____ LBS. (_____ KG)**

IHT 07/05

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling.

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category C on an EPA chemical resistance category selection chart.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers (other than mixers and loaders) must wear: Long-sleeved shirt and long pants, chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or viton, and shoes plus socks.
Mixers and Loaders must wear: Long-sleeved shirt and long pants, chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or viton, shoes plus socks, and protective eyewear.

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

USER SAFETY RECOMMENDATIONS

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

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or in intertidal areas below the mean high water mark. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow to drift to blooming crops if bees are visiting the treatment area.

DIRECTIONS FOR USE
RESTRICTED USE PESTICIDE

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.

Do not apply by any kind of irrigation system.

AGRICULTURE 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 intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.
Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: Coveralls, chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinyl chloride 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 and greenhouses.
Do not allow people or pets on treated surfaces until the spray has dried.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal.
PESTICIDE STORAGE: Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use replace lids and close tightly. Do not put concentrate or dilute material into food or drink container.
In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.
TO CONFINE SPILL: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.
PESTICIDE DISPOSAL: Pesticide wastes are toxic. Do not contaminate water, food or feed by storage or disposal. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. Dispose of excess or waste pesticide by use

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Storage & Disposal cont'd.:

according to label directions, or contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Plastic Container: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or 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.

Returnable/Refillable Sealed Container: Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase. For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300.

7.9% FL Nursery may vary with different sources of pesticide products, and local cultural practices. Any tank mixture which has not been previously tested should be prepared on a small scale (pint or quart jar), using the proper proportions of chemicals and water to ensure the physical compatibility of the mixture.

The following procedure is recommended for preparation of a new tank mix, unless specified otherwise in label directions: (1) Add wettable powders to tank water, (2) Agitate, (3) Add liquids and flowables, (4) Agitate, (5) Add emulsifiable concentrates, and (6) Agitate. If a mixture is found to be incompatible following this order of addition, try reversing the order of addition, or increase the volume of water. Note: If the tank-mixture is found to be compatible after increasing the amount of water, then the sprayer will need to be re-calibrated for a higher volume application. Do not allow tank mix to stand overnight.

Maximum rates: Do not apply more than 0.2 lb ai/acre (40 fl. ozs. of BIFENTHRIN 7.9% FL Nursery) in a single application or per year for outdoor applications.

Resistance: Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state pest management authorities for details.

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

GENERAL APPLICATIONS INSTRUCTIONS

BIFENTHRIN 7.9% FL Nursery formulation mixes readily with water and other aqueous carriers, and controls a wide spectrum of insects and mites on trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in greenhouses and outdoor nurseries, and turf on golf courses and sod farms. Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity during the season of application.

BIFENTHRIN 7.9% FL Nursery may be tank-mixed with other products, including insect growth regulators. When tank mixing BIFENTHRIN 7.9% FL Nursery with other products, observe all precautions and limitations on each separate product label. The addition of spreader stickers is not necessary. The physical compatibility of BIFENTHRIN

BIFENTHRIN 7.9% FL Nursery Dilution Chart

Application Volume Gallons Per Acre	Application Rate: Lbs ai per Acre	Fluid Ounces* of BIFENTHRIN 7.9% FL Nursery Diluted to these Volumes of Finished Spray			
		1 gallon	25 gallons	50 gallons	100 gallons
50	0.025	0.1	2.5	5.0	10.0
50	0.05	0.2	5.0	10.0	20.0
50	0.1	0.4	10.0	20.0	40.0
50	0.2	0.8	20.0	40.0	80.0
100	0.025	0.05	1.25	2.5	5.0
100	0.05	0.1	2.5	5.0	10.0
100	0.1	0.2	5.0	10.0	20.0
100	0.2	0.4	10.0	20.0	40.0
150	0.025	0.03	0.83	1.67	3.3
150	0.05	0.07	1.67	3.33	6.7
150	0.1	0.13	3.33	6.67	13.3
150	0.2	0.27	6.67	13.33	26.7
200	0.025	0.025	0.63	1.25	2.5
200	0.05	0.05	1.25	2.5	5.0
200	0.1	0.1	2.5	5.0	10.0
200	0.2	0.2	5.0	10.0	20.0
250	0.025	-	0.5	1.0	2.0
250	0.05	-	1.0	2.0	4.0
250	0.1	-	2.0	4.0	8.0
250	0.2	-	4.0	8.0	16.0
300	0.025	-	0.42	0.83	1.7
300	0.05	-	0.83	1.67	3.3
300	0.1	-	1.67	3.33	6.7
300	0.2	-	3.33	6.67	13.3

*To convert to milliliters, multiply by 29.57
1 fl. oz. = 29.57 ml = 2 tablespoons = 6 teaspoons
Do not use household utensils to measure BIFENTHRIN 7.9% FL Nursery

Formula for determining the active ingredient content of the finished spray mixture: The following formula may be used to determine the percent active ingredient that is in the spray tank after mixing BIFENTHRIN 7.9% FL Nursery.

$$\frac{(7.9) (\text{fl. oz. of BIFENTHRIN 7.9\% FL added to tank})}{(\text{Gallons of finished spray mix}) (128)} = \text{Percent active ingredient of spray mix}$$

APPLICATION RECOMMENDATIONS

Ornamentals In Greenhouses, Lath Houses*, Shade Houses* and Outdoor Nurseries*, Including Non-Bearing Fruit and Nut Trees

Apply 0.025 to 0.2 lbs ai/A (5 to 40 fl. ozs.) of BIFENTHRIN 7.9% FL Nursery. BIFENTHRIN 7.9% FL Nursery may be diluted and applied in various volumes of water providing that the maximum label rate (0.2 lbs. ai/A or 40 fl. ozs.) is not exceeded (refer to Dilution Chart for specific instructions). BIFENTHRIN 7.9% FL Nursery may be applied through low volume application equipment by dilution with water or other carriers and providing that the maximum label rate (0.02 lbs ai/A or 40 fl. ozs.) is not exceeded.

*Not for use in Arizona.

ORNAMENTAL APPLICATION RATES

The application rates listed in the following table will provide control of the respective pests under typical conditions. However, at the discretion of the applicator, BIFENTHRIN 7.9% FL Nursery may be applied at up to 0.2 lbs. ai/A (40 fl. ozs.) to control each of the pests listed in this table.

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APPLICATION RECOMMENDATIONS

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Turf (Golf Courses and Sod Farms)

NOT FOR USE ON SOD FARMS IN THE STATE OF NEW YORK OR ARIZONA
Apply BIFENTHRIN 7.9% FL Nursery as a surface or sub-surface treatment. Use application volumes of up to 10 gallons of solution per 1,000 square feet to get uniform coverage when treating dense and/or long grass foliage.

For low volume applications, less than 2 gallons/1,000 square feet, immediate irrigation of treated area with at least 0.25 inches of water following application to ensure efficacy of sub-surface pests such as, but not limited to, mole crickets is recommended.

TURF (Golf Courses and Sod Farms) APPLICATION RATES

The application rates listed in the following table will provide control of the respective pests under typical conditions. However, at the discretion of the applicator, BIFENTHRIN 7.9% FL Nursery may be applied at up to 0.1 lb ai/A (20 fl. ozs.) to control each of the pests listed in this table. (0.2 lb ai/A or 40 fl. ozs. of BIFENTHRIN 7.9% FL Nursery for ants, imported fire ants and mole crickets).

Pest	Application Rate of BIFENTHRIN 7.9% FL Nursery	
	Lbs. ai/A	Fl. Oz. per 1,000 square feet
Aphids Bagworms ¹ Cutworms Elm Leaf Beetles Fall Webworms Lace Bugs Leaf Feeding Caterpillars Plant Bugs (Including <i>Lygus</i> spp.) Tent Caterpillars	0.025 - 0.05	0.125 - 0.25
Beet Armyworm Black Vine Weevil (Adults) Brown Soft Scales Broad Mites Budworms California Red Scale (Crawlers) ² Centipedes Citrus Thrips Clover Mites Crickets Diaprepes (Adults) Earwigs European Red Mite Flea Beetles Fungus Gnats (Adults) Grasshoppers Gypsy Moth Caterpillars Leafhoppers Leafrollers Mealybugs Millipedes Mites Orchid Weevil Pillbugs Pine Needle Scales (Crawlers) ² San Jose Scales (Crawlers) ² Sowbugs Spider Mites Spiders Thrips Tip Moths Twig Borers ² Weevils Whiteflies	0.05 - 0.1	0.25 - 0.5
Ants Imported Fire Ants ** Japanese Beetle (Adult) Leafminers Pecan Leaf Scorch Mite Pine Shoot Beetle (Adults)	0.1 - 0.2	0.5 - 1.0

Pest	Active ingredient lbs. per acre	Application Rate BIFENTHRIN 7.9% FL Nursery	
		10 fl. oz. per acre	0.25 fl. oz. per 1000 sq.ft.
Armyworms ¹ Cutworms ¹ Sod Webworm ¹	0.05 lbs ai per acre	10 fl. oz. per acre	0.25 fl. oz. per 1000 sq.ft.
Annual Bluegrass Weevil (<i>Hyperodes</i>) (Adults) ² Ants Billbugs (Adult) ³ Black Turfgrass Ataenus (Adult) ⁴ Centipedes Chinch Bugs ⁵ Crickets Earwigs Fleas (Adult) Grasshoppers Leafhoppers Leafhoppers Mealybugs Millipedes Mites ⁶ Mole Cricket (Adult) ⁷ Mole Cricket (Nymph) ⁸ Pillbugs Sowbugs	0.05 - 0.1 lbs ai per acre	10 - 20 fl.oz. per acre	0.25 - 0.5 fl.oz. per 1000 sq.ft.
Fleas (Larvae) ⁹ Imported Fire Ants Japanese Beetle (Adult)	0.1 lbs ai per acre	20 fl. oz. per acre	0.5 fl.oz. per 1000 sq.ft.
Ants Imported Fire Ants ¹¹ Mole Crickets	0.2 lbs ai ¹⁰ per acre	40 fl. oz. ¹⁰ per acre	1 fl. oz. ¹⁰ per 1000 sq.ft.

In New York State, this product may NOT be applied to any grass or turf area within 100 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).

In New York State, do not make a single repeat application of BIFENTHRIN 7.9% FL Nursery if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

Comments

¹ **Armyworms, Cutworms and Sod Webworms:** To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. If the turf area is being maintained at a mowing height of greater than 1 inch, then higher application rates (Up to 0.1 lb ai/A or 20 fl. ozs. of BIFENTHRIN 7.9% FL Nursery) may be required during periods of high pest pressure.

² **Annual Bluegrass Weevil (*Hyperodes*) adults:** Applications should be timed to control adult weevils as they leave their over-wintering sites and move into turf areas. This movement generally begins when *Forsythia* is in full bloom, and concludes when flowering dogwood (*Comus florida*) is in bloom. Consult your State Cooperative Extension Service for more information regarding application timing.

³ **Billbug adults:** Applications should be made when adult billbugs are first observed during April and May. Degree day models have been developed to optimize application timing. Consult your State Cooperative Extension Service for information specific to your region.

In temperate regions, spring applications targeting billbug adults will also provide control of over-wintered chinch bugs.

⁴ **Black Turfgrass Ataenius adults:** Applications should be made during May and July to control the first and second generation of black turfgrass ataeenius adults, respectively. The May application should be timed to coincide with the full bloom stage of Vanhoutte spiraea (*Spiraea vanhouttei*) and horse chestnut (*Aesculus hippocastanum*). The July application should be timed to coincide with the blooming of Rose of Sharon (*Hibiscus synacus*).

¹ **Bagworms:** Apply when larvae begin to hatch and spray larvae directly. Applications when larvae are young will be most effective.

² **Scale Crawlers and Twig Borers:** Treat trunks, stems and twigs in addition to plant foliage.

** For foraging ants.

Certain cultivars may be sensitive to the final spray solution. A small number of plants should be treated and observed for one week prior to application to the entire planting.

Apply with ground equipment only.

Do not apply when wind direction favors downwind drift towards nearby water bodies.

Do not apply when wind velocity exceeds 10 mph.

Avoid application when wind gusts approach 10 mph.

Do not apply when a temperature inversion exists.

Apply using the largest nozzle size compatible with adequate coverage.

Do not apply if rain is expected within 12 hours (or whatever time is necessary for the spray to dry).

Do not apply by ground equipment within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds. When treating tall trees (>15 feet) from the ground with high pressure sprays or during any application with air assisted equipment (mist blower) do not apply within 150 feet of aquatic areas.

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5 Chinch Bugs: Chinch bugs infest the base of turf plants and are often found in the thatch layer. Irrigation of the turf area before treatment will optimize the penetration of the insecticide to the area where the chinch bugs are located. Use higher volume applications if the thatch layer is excessive or if a relatively long mowing height is being maintained. Chinch bugs can be one of the most difficult pests to control in grasses and the higher application rates (Up to 0.1 lb ai/A or 20 fl. ozs. of BIFENTHRIN 7.9% FL Nursery) may be required to control populations that contain both nymphs and adults during the middle of the summer.

6 Mites: To ensure optimal control of eriophyid mites, apply in combination with the labeled application rate of a surfactant. A second application, five to seven days after the first may be necessary to achieve control.

7 Mole Cricket adults: Achieving control of adult mole crickets is difficult because preferred turf areas are subject to continuous invasion during the early spring by this extremely active stage. Applications should be made as late in the day as possible and should be watered in with up to 0.5 inches of water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized. Turf areas that receive pressure from adult mole crickets should be treated at peak egg hatch to ensure optimum control of subsequent nymph populations (see below).

8 Mole Cricket nymphs: Turf areas that received intense adult mole cricket pressure in the spring should be treated immediately prior to peak egg hatch. Optimal control is achieved at this time because young nymphs are more susceptible to insecticides and they are located near the soil surface where the insecticide is most concentrated. Control of larger, more damaging, nymphs later in the year may require higher application rates and more frequent applications to maintain acceptable control. Applications should be made as late in the day as possible and should be watered in with up to 0.5 inches of water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized.

9 Flea larvae: Flea larvae develop in the soil of shaded area that are accessible to pets or other animals. Use a higher volume application when treating these areas to ensure penetration of the insecticide into the soil. **Note:** If the lawn area being treated with BIFENTHRIN 7.9% FL Nursery at 0.05 lb ai/A (10 fl. ozs.) for adult flea control, then the larval application rate may be achieved by doubling the application volume.

10 Note: For large infestations of ants, imported fire ants, and mole crickets, a single application of 0.2 lb ai/A acre (40 fluid ounces of BIFENTHRIN 7.9% FL Nursery) may be applied once per year.

11 Imported Fire Ants: Control will be optimized by combining broadcast applications that will control foraging workers and newly mated fly-in queens with mound drenches that will eliminate existing colonies. If the soil is not moist, then it important to irrigate before application or use a high volume application. Broadcast treatments should apply 0.2 lb ai/A (40 fl. ozs. of BIFENTHRIN 7.9% FL Nursery). Mounds should be treated by diluting 1 teaspoon of BIFENTHRIN 7.9% FL Nursery per gallon of water and applying 1 to 2 gallons of finished spray per mound. The mounds should be treated with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. A four-foot diameter circle around the mound should be also be treated. For best results, apply in cool weather (65-80° F) or in early morning or late evening hours. **Note:** A spray rig that is calibrated to apply 0.2 lb ai/A (40 fl. ozs.) of BIFENTHRIN 7.9% FL Nursery in 5 gallons per 1,000 square feet contains the approximate dilution (1 teaspoon per gallon) that is required for fire ant mound drenches in the spray tank.

Apply with ground application equipment only (and apply with nozzles not more than two feet above the turf).

Do not apply when wind direction favors downward drift to nearby water bodies.

Do not apply when wind velocity exceeds 10 mph.

Avoid application when wind gusts approach 10 mph.

Do not apply when a temperature inversion exists.

Apply using nozzles that provide the largest droplet size compatible with adequate coverage.

Do not apply for surface feeding pests if rain is expected within 12 hours (or whatever time is necessary for the spray to dry).

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

Do not apply when turf grass areas are water-logged or soil is saturated with water (i.e. will not accept irrigation).

IMPORTED FIRE ANT QUARANTINE TREATMENT

Against Imported Fire Ants (IFA) in Potting Media (including balled and containerized nursery grown ornamental trees, shrubs, plants, flowers, conifers, bushes, Christmas trees, and non-bearing fruit and nut-trees). BIFENTHRIN 7.9% FL Nursery is approved and can be used in accordance with the USDA Imported Fire Ant Quarantine Program. BIFENTHRIN 7.9% FL Nursery may be applied either soil incorporated, as a topical application, or as a high volume drench treatment.

Soil Incorporation: Incorporate the appropriate volume of BIFENTHRIN 7.9% FL Nursery (see table below) per cubic yard of potting media by diluting it in water (typically 1 quart to 1 gallon per cubic yard of media) and sprinkling or spraying it onto the media. The applications are based on the dry bulk density of the potting media. When used in accordance with USDA guidelines, this application will provide a 6-month certification period.

Recommended Soil Incorporation Rate of BIFENTHRIN 7.9% FL Nursery for Control of IFA in Potting Media.

Potting Media Bulk Density (lbs. cubic yard)	Fluid ounces of BIFENTHRIN 7.9% FL Nursery in one cubic yard
200	1.9
400	3.8
600	5.7
800	7.6
1000	9.5
1200	11.4
1400	13.3

Use proportional amounts of BIFENTHRIN 7.9% FL Nursery for potting media with bulk densities not listed.

Topical Application*: Mix BIFENTHRIN 7.9% FL Nursery in 1,000 ounces of water based on container size and bulk density of the potting media (see table below). Apply one (1) ounce of the mix to each container evenly distributed over the surface of the potting media. Irrigate all treated containers with 1.5 inches of water following application. When used in accordance with USDA guidelines, this application will provide a 6-month certification period.

Recommended Topical Drench Application Rate of BIFENTHRIN 7.9% FL Nursery for Control of IFA in Potting Media.

Potting Media Bulk Density (lbs. cubic yard)	Fluid ounces of BIFENTHRIN 7.9% FL Nursery per 1,000 ounces of water	
	3 Qt. Container	4 Qt. Container
200	3.6	5.2
400	7.2	10.4
600	10.8	15.6
800	14.4	20.8
1000	18.0	26.0
1200	21.6	31.2
1400	25.2	36.4

Use proportional amounts of BIFENTHRIN 7.9% FL Nursery for potting media with bulk densities not listed.

*Not for use in Arizona.

High Volume Drench: Apply BIFENTHRIN 7.9% FL Nursery as a high volume drench by mixing the appropriate amount of product based on the bulk density in 100 gallons of water (see table below). Apply mix to individual containers to the point of saturation. The amount of mix used for each plant is generally 1/5 volume of the container. When used in accordance with USDA guidelines, this application will provide a 6-month certification period.

Recommended High Drench Application Rate of BIFENTHRIN 7.9% FL Nursery for Control of IFA in Potting Media

Potting Media Bulk Density (lbs. cubic yard)	Fluid ounces of BIFENTHRIN 7.9% FL Nursery in 100 Gallons
200	2.4
400	4.8
600	7.2
800	9.6
1000	12.0
1200	14.4
1400	16.8

Use proportional amounts of BIFENTHRIN 7.9% FL Nursery for potting media with bulk densities not listed.

Larval Control in Potting media of Containerized Plants

Black Vine Weevil Larval Control - Preventative Treatment Topical Drench: For preventative control of black vine weevil larvae containerized plants, dilute BIFENTHRIN 7.9% FL Nursery at the rate of 10 to 40 fl. ozs. (0.05 to 0.2 lb. AI) per 100 gallons and apply as a drench at the rate of 4 to 8 fluid ounces of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container. Diluting 10 fluid ounces of BIFENTHRIN 7.9% FL Nursery per 100 gallons and applying 8 fluid ounces of finished spray per 6 inch (diameter) container will provide black vine weevil larval control for one growing season when the application is made in the spring. Diluting 20 to 40 fluid ounces of BIFENTHRIN 7.9% FL Nursery per 100 gallons and applying 8 fluid ounces of finished spray per 6 inch (diameter) container will provide black vine weevil larval control for two growing seasons when the application is made in the spring.

White Grub Control - Preventative Treatment - Topical Drench: For preventative control of white grubs (including, but not limited to, Japanese beetle, oriental beetle and European chafer) in containerized plants, dilute BIFENTHRIN 7.9% FL Nursery at the rate of 40 to 80 fluid ounces (0.2 to 0.4 AI) per 100 gallons and apply as a drench at the

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BIFENTHRIN 7.9% FL NURSERY

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rate of 4 to 8 fluid ounces of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container. Use the higher application rate for a longer period of control.

Black Vine Weevil and White Grub Larval Control – Preventative Treatment – Media Incorporation: For preventative control of black vine weevil and white grub larvae in containerized plants, incorporate the appropriate volume of BIFENTHRIN 7.9% FL Nursery (see table below) per cubic yard of potting media by diluting it in water (typically 1 quart to 1 gallon per cubic yard of media) and sprinkling or spraying it onto the media. Use the higher application rates for longer periods of control.

Potting Media Bulk Density (lbs. cubic yard)	Fluid ounces of BIFENTHRIN 7.9% FL Nursery in one cubic yard			
	10 PPM	15 PPM	20 PPM	25 PPM
200	0.4	0.6	0.8	1.0
300	0.6	0.9	1.2	1.5
400	0.8	1.2	1.6	2.0
500	1.0	1.5	2.0	2.5
600	1.2	1.8	2.4	3.0
700	1.4	2.1	2.8	3.5
800	1.6	2.4	3.2	4.0
900	1.8	2.7	3.6	4.5
1000	2.0	3.0	4.0	5.0

The application rates listed above are based on the dry bulk density of the potting media. Use proportional volumes of BIFENTHRIN 7.9% FL Nursery for potting media with dry bulk densities that are not listed above.

Black Vine Weevil Larval Control – Curative Treatment – Topical Drench: To control black vine weevil larvae infesting containerized plants, dilute BIFENTHRIN 7.9% FL Nursery at the rate of 10 to 40 fl. ozs. (0.05 to 0.2 lb. AI) per 100 gallons and apply as a drench at the rate of 8 to 16 fluid ounces of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.

Bare-root Treatment for Preventative Root Weevil Larval Control: To protect treated roots of field grown nursery stock from feeding by root weevil larvae, dilute one gallon of BIFENTHRIN 7.9% FL Nursery in 100 gallons of water and treat the bare roots of plants that are being transplanted into the field either by dipping the roots into the insecticide solution for ten seconds or by spraying the insecticide solution onto the roots.

Diaprepes Weevil Larval Control – Curative Treatment – Topical Drench: To control Diaprepes weevil larvae infesting containerized plants, dilute BIFENTHRIN 7.9% FL Nursery at the rate of 10 to 40 fl. ozs. (0.05 to 0.2 lb. AI) per 100 gallons and apply as a drench at the rate of 8 to 16 fluid ounces of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.

Fungus Gnat Larval Control – Preventative Treatment – Topical Drench: For preventative control of fungus gnat larvae in containerized plants, dilute BIFENTHRIN 7.9% FL Nursery at the rate of 20 to 40 fl. ozs. (0.1 to 0.2 lb. AI) per 100 gallons and apply as a drench at the rate of 4 to 8 fl. ozs. of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container. Use the higher application rate for a longer period of control.

Fungus Gnat Larval Control - Curative Treatment – Topical Drench: To control fungus gnat larvae infesting containerized plants, dilute BIFENTHRIN 7.9% FL Nursery at the rate of 10 to 40 fl. ozs. (0.05 to 0.2 lb. AI) per 100 gallons and apply as a drench at the rate of 8 to 16 fluid ounces of finished spray per 6 inch (diameter) container. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.

Dealers Should Sell in Original Packages Only

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