3125-549 7-19-2000 1/10

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060. Approval expires 05-31-98

EPA

United States
Environmental Protection Agency
Washington, DC 20460

- [ ] Registration
- [ ] Amendment
- [X] Other

OPP Identifier Number: 257765

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
3125-549	Dani Daniel	[X] None [ ] Restricted
4. Company/Product Name	**PM#**	
Merit 2 Greenhouse & Nursery Insecticide	64	

5. Name and Address of Applicant *(Include ZIP Code)*
Bayer Corporation
8400 Hawthorn Road, P.O. Box 4913
Kansas City, MO 64120-0013

[ ] *Check. If this is Is a new address*

6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:
EPA Reg. No. _____
Product Name _____

Section - II

- [ ] Amendment - Explain below.
- [ ] Resubmission in response to Agency letter dated _____
- [X] Notification - Explain below.
- [ ] Final printed labels in response to Agency letter dated _____
- [ ] "Me Too" Application.
- [ ] Other - Explain below.

NOTIFICATION
JUL 19 2000

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

See Attached Add Pest

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging		Water Soluble Packaging		2. Type of Container
[ ] Yes* [ ] No	[ ] Yes [ ] No		[ ] Yes [ ] No		[ ] Metal [ ] Plastic [ ] Glass [ ] Paper [ ] Other (Specify)
* *Certification must be submitted*	If "Yes" Unit Packaging wgt..	No. Per Container	If "Yes" Package wgt.	No. Per Container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
[ ] Label [ ] Container		[ ] On Label [ ] On Labeling accompanying product

6. Manner in Which Label is Affixed to Product [ ] Lithograph [ ] Paper Glued [ ] Stenciled [ ] Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (include Area Code)
Charles W. Boyd	Senior Registration Scientist	(816) 242-2457

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title
	Manager, Federal Regulatory Affairs
4. Typed Name	**5. Date**
Julie M. Spagnoli	June 26, 2000

Section II - Explanation

Bayer Corporation is submitting a **Notification** to add the following pests to the Merit® 2 Greenhouse and Nursery Insecticide label: green june beetle in turf grasses; leafhoppers (including glassy-winged sharpshooter) in all of the ornamental plants and vegetable plants currently on the label. Leaf beetle (including elm and viburnam leaf beetles) replace elm leaf beetle throughout the label. Chinchbug replaces hairy chinchbug throughout the label.

Enclosed is one copy of the product label, draft number M - 9415a.

This notification is consistent with the provision of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

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Merit® 2

Greenhouse and Nursery Insecticide

For foliar and systemic insect control on ornamentals, fruit and nut trees, and vegetable plants in greenhouses, nurseries, and interior plantscapes.

ACTIVE INGREDIENT:

Imidacloprid,1-[(6-Chloro-3-pyridinyl)methyl]- -*N*-nitro-2-imidazolidinimin	21.4%
OTHER INGREDIENTS	78.6%
	100.0%

Contains 2 pounds of imidacloprid per gallon

SHAKE WELL BEFORE USING

EPA Reg. No. 3125-549 Net Contents: __Ounces

STOP - Read the label before use.
Keep out of reach of children.

CAUTION

PRECAUCION AL USUARIO: Si usted no puede leer o entender inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

(TO THE USER: If you cannot read or understand English, do not use this product until the label has been fully explained to you.)

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Keep children or pets off treated area until spray is dry.

Personal Protective Equipment:

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks.

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.

STATEMENTS OF PRACTICAL TREATMENT

If swallowed: Call a physician or Poison Control Center. Drink one or two glasses of water and induce vomiting by touching back of throat with finger, or, if available, by administering syrup of ipecac. If syrup of ipecac is available, administer 1 tablespoonful (15 mL) of syrup of ipecac followed by 1 to 2 glasses of water. If vomiting does not occur within 20 minutes, repeat the dose once. Do not induce vomiting or give anything by mouth to an unconscious person. **If on skin:** Wash thoroughly with soap and water. Get medical attention if irritation occurs. **If in eyes:** Hold eyelids open and flush with plenty of water.

To Physician: No specific antidote is available. Treat the patient symptomatically.

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

Important: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and Other Handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

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

This product is highly toxic to aquatic invertebrates. Do not apply directly to water, or to 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 chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

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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.

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 following application. Earlier entry by exception.

Exception: If the product is drenched, soil-injected or soil-incorporated, workers may enter the treated area at any time 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
- Waterproof gloves
- Shoes plus socks

IMPORTANT: Read these entire DIRECTIONS FOR USE, GENERAL INFORMATION, AND CONDITIONS OF SALE before using MERIT 2-Insecticide.

CONDITIONS OF SALE: THE DIRECTIONS ON THIS LABEL WERE DETERMINED THROUGH RESEARCH TO BE APPROPRIATE FOR THE CORRECT USE OF THIS PRODUCT. THIS PRODUCT HAS BEEN TESTED UNDER DIFFERENT ENVIRONMENTAL CONDITIONS BOTH INDOORS AND OUTDOORS UNDER CONDITIONS SIMILAR TO THOSE THAT ARE ORDINARY AND CUSTOMARY WHERE THE PRODUCT IS TO BE USED. INSUFFICIENT CONTROL OF PESTS OR PLANT INJURY MAY RESULT FROM THE OCCURRENCE OF EXTRAORDINARY OR UNUSUAL CONDITIONS, OR FROM FAILURE TO FOLLOW LABEL DIRECTIONS. IN ADDITION, FAILURE TO FOLLOW LABEL DIRECTIONS MAY CAUSE INJURY TO ANIMALS, MAN, AND DAMAGE TO THE ENVIRONMENT. BAYER OFFERS, AND THE BUYER ACCEPTS AND USES, THIS PRODUCT SUBJECT TO THE CONDITIONS THAT EXTRAORDINARY OR UNUSUAL ENVIRONMENTAL CONDITIONS, OR FAILURE TO FOLLOW LABEL DIRECTIONS ARE BEYOND THE CONTROL OF BAYER AND ARE, THEREFORE, THE RESPONSIBILITY OF THE BUYER.

Do not formulate this product into other end-use products.

APPLICATION TO GRASSY AREAS IN NURSERIES

MERIT 2 Insecticide can be used for the control of soil inhabiting pests of grassy areas of nurseries, such as Northern and Southern masked chafers, *Cyclocephala borealis, C. immaculata*, and/or *C. lurida*; Asiatic garden beetle, *Maladera castanea*; European chafer, *Rhizotroqus majalis;* Green June beetle, *Cotinis nitida*; May or June beetle, *Phyllophaga* spp.; Japanese beetle, *Popillia japonica*; Oriental beetle, *Anomala orientalis;* Billbugs, *Spherophorus* spp.; Annual bluegrass weevil, *Hyperodes* spp.; Black turfgrass ataenius, *Ataenius spretulus* and *Aphodius* spp. and mole crickets, *Scapteriscus spp.* MERIT 2 Insecticide can also be used for suppression of cutworms and chinchbugs. MERIT 2 Insecticide can be used as directed on nursery grass in sites such as under or around field or container grown plants, on roadways or other grassy areas in or around nurseries. MERIT 2 Insecticide cannot be used on commercial sod farms.

The active ingredient in MERIT 2 Insecticide has sufficient residual activity so that applications can be made preceding the egg laying activity of the target pests. High levels of control can be achieved when applications are made preceding or during the egg laying period. The need for an application can be based on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods. Optimum control will be achieved when applications are made prior to egg hatch of the target pests, followed by sufficient irrigation or rainfall to move the active ingredient through the thatch.

Applications should not be made when grassy areas are waterlogged or the soil is saturated with water. Adequate distribution of the active ingredient cannot be achieved when these conditions exist. The treated grassy area must be in such a condition that the rainfall or irrigation will penetrate vertically in the soil profile. Application cannot exceed a total of 1.6 pints (0.4 lb of active ingredient) per acre per year.

Application Equipment for Use on Grassy Areas in Nurseries

Apply MERIT 2 Insecticide in sufficient water to provide adequate distribution in the treated area. The use of accurately calibrated equipment normally used for the application of soil insecticides is required. Use equipment which will produce a uniform, course droplet spray, using a low pressure setting to eliminate off target drift. Check calibration periodically to ensure that equipment is working properly.

APPLICATION TO ORNAMENTALS AND VEGETABLE PLANTS

MERIT 2 Insecticide is for insect control on ornamental and vegetable plants in nurseries and greenhouses and interior plantscapes. MERIT 2 Insecticide is a systemic product and will be translocated upward into the plant system. To assure optimum effectiveness, the product must be placed where the growing portion of the target plant can absorb the active ingredient. The addition of a nitrogen containing fertilizer, where applicable, into the solution may enhance the uptake of the active ingredient. Application can be made by foliar application or soil applications; including soil injection, drenches, chemigation and broadcast sprays.

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When making soil applications to plants with woody stems, systemic activity will be delayed until the active ingredient is translocated throughout the plant. For this reason, applications should be made prior to anticipated pest infestation to achieve optimum levels of control.

For outdoor ornamentals, broadcast applications cannot exceed a total of 1.6 pints (0.4 lb of active ingredient) per acre per year.

Bark Media: Media with 30% or more bark content may confer a shorter period of protection when treated with MERIT 2.

RESISTANCE: 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. Consult your Cooperative Extension Service for resistance management strategies and recommended pest management practices for your area.

Application Equipment For Ornamentals And Vegetable Plants

MERIT 2 Insecticide mixes readily with water and may be used in many types of application equipment. Mix product with the required amount of water and apply as desired dependent upon the selected use pattern.

When making foliar applications on hard to wet foliage such as holly, pine, or ivy, the addition of a spreader/ sticker is recommended. If concentrate or mist type spray equipment is used, an equivalent amount of product should be used on the area sprayed, as would be used in a dilute application.

MERIT 2 Insecticide has been found to be compatible with commonly used fungicides, miticides, liquid fertilizers, and compatibility using the correct proportion of products in a small jar test if local experience is unavailable.

APPLICATION THROUGH IRRIGATION SYSTEMS

MERIT 2 may be applied at rates recommended on the label either alone or in tank mixtures with other pesticides and chemicals registered for application through irrigation systems. The normal dilution ratio is 1:100 to 1:200, depending on the system. Always meter the product into the irrigation water during the first part of the irrigation cycle. The product may be mixed separately prior to injection. Agitation may be necessary if the mixture is allowed to stand more than 24 hours.

Remove scale, pesticide residue and other foreign matter from the tank and entire irrigation system.

Apply MERIT 2 only through micro irrigation (individual spaghetti tubes), drip irrigation, overhead irrigation, ebb and flood, or hand-held or motorized calibrated irrigation equipment.

Do not apply this product through any other type of irrigation system. Crop injury or lack of effectiveness can result from non uniform distribution of treated water.

If you have any questions about calibration, contact your State Extension Service specialist, equipment manufacturers or other experts in this area.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or a person who is under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

SAFETY DEVICES FOR IRRIGATION SYSTEMS CONNECTED TO PUBLIC WATER SUPPLIES:

If the source of water for your irrigation system is a public water supply, follow the instructions below:

1. 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.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. 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.
6. 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.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

SAFETY DEVICES FOR IRRIGATION SYSTEMS NOT CONNECTED TO A PUBLIC WATER SUPPLY:

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. 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.

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4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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 the pesticide distribution is adversely affected.
6. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of material that is compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

RECOMMENDED APPLICATIONS

CROP	PEST	DOSAGE
Grassy areas of Field & Forest Nurseries	**Larvae of:** Annual bluegrass weevil Asiatic garden beetle Billbugs Black turfgrass ataenius Cutworms (suppression) European chafer Green June beetle Japanese beetle Northern masked chafer Oriental beetle *Phyllophaga* spp. Southern masked chafer	19.2 to 25.6 oz per acre or 0.45 to 0.6 fl oz (13 to 17 mL) per 1000 sq ft.
	Chinchbugs (suppression) Mole crickets	25.6 oz /A or (17 mL) per 1000 sq. ft.

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

Be sure to read "APPLICATION EQUIPMENT" Section of this label.

For suppression of chinchbugs, make application prior to the hatching of the first instar nymphs. For control of mole crickets make application prior to or during the peak egg hatch period. When adults or large nymphs are present and actively tunneling, MERIT 2 application should be accompanied by a curative insecticide. Follow label instructions for other insecticides when tank-mixing.

Consult your local turf, state Agricultural Experiment Station, or State Extension Service Specialist for more specific information regarding timing of application. NOTE: For optimum control, irrigation or rainfall should occur within 24 hours after application to move the active ingredient through the thatch. Do not apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year. Avoid mowing grass area until after sufficient irrigation or rainfall has occurred so that uniformity of application will not be affected.

RECOMMENDED APPLICATIONS FOR USE ON OR IN ORNAMENTALS

For foliar and systemic insect control in and around field-grown nursery and containers stock, indoor and outdoor ornamentals (including both greenhouse and interior plantscapes) and ornamentals grown in flats benches or beds.

CROP	PEST	DOSAGE
Trees (including non-bearing fruit and nut) **Shrubs** **Evergreens** **Flowers** **Foliage plants** **Ground covers** **Interior plantscapes** **Vegetable plants***	Adelgids **Aphids** Japanese beetles (adults) Lacebugs Leaf beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Leafminers Mealybugs Sawfly larvae Thrips (suppression) Whiteflies	1.7 fl. oz. (50mL) per 100 gal of water
	Foliar Applications: Start treatments prior to establishment of high pest populations and reapply on an as needed basis. For resistance management purposes, a MERIT foliar application following a soil application in the same crop is not recommended.	
	White grub larvae (such as Japanese beetle larvae, Chafers, *Phyllophaga* spp. Asiatic garden beetle, Oriental beetle)	0.45 to 0.6 fl oz (13 to 17 mL) per 1000 sq. ft.
	Broadcast Applications: Mix required amount of product in sufficient water to uniformly and accurately cover the area being treated. Do not use less than 2 gallons of water per 1000 sq. ft. For optimum control, irrigate thoroughly to incorporate MERIT 2 Insecticide into the upper soil profile. Refer to REMARKS section for use directions specific for "Flowers and Ground Covers" concerning additional use directions. * Only for use on vegetable plants intended for resale including: Broccoli, Chinese Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Collards, Eggplant, Ground Cherry, Kale, Kohlrabi, Lettuce, Mustard Greens, Pepinos, Peppers, Potatoes, Rape Greens, Sorghum, Sugarbeets, Tomatillo, and Tomato.	

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RECOMMENDED APPLICATIONS FOR NURSERY, GREENHOUSE AND INTERIORSCAPE PLANTS		
Adelgids	Japanese beetles (adults)	Pine Tip moth larvae
Aphids	Lacebugs	Psyllids
Armored scales (suppression)	Leaf beetles (including elm and viburnum leaf beetles)	Royal palm bugs
Black vine weevil larvae	Leafhoppers (including glassy-winged sharpshooter)	Sawfly larvae
Eucalyptus longhorned borers	Leafminers	Soft scales
Flatheaded borers (including bronze birch and alder borers)	Mealybugs	Thrips (suppression)
		White grub larvae
		Whiteflies

Trees	0.1 to 0.2 fl. oz. (3 to 6 mL) per inch of trunk diameter (D.B.H.)

Soil Injection: GRID SYSTEM: Holes should be spaced on 2.5 foot centers, in a grid pattern, extending to the drip line of the tree. CIRCLE SYSTEM: Apply in holes evenly spaced in circles, (use more than one circle dependent upon the size of the tree) beneath the drip line of the tree extending in from that line. BASAL SYSTEM: Space injection holes evenly around the base of the tree trunk no more than 6 to 12 inches out from the base.

Mix required dosage in sufficient water to inject an equal amount of solution in each hole. Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. For optimum control, keep the treated area moist for 7 to 10 days. Do not use less than 4 holes per tree.

Soil Drench: Uniformly apply the dosage in no less than 10 gallons of water per 1000 square feet as a drench around the base of the tree, directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone.

For Control of Specified Borers: Application to trees already heavily infested may not prevent the eventual loss of the trees due to existing pest damage and tree stress.

Shrubs	0.1 to 0.2 fl. oz. (3 to 6 mL) per foot of shrub height

Soil Injection: Apply to individual plants using dosage indicated.

Mix required dosage in sufficient water to inject an equal amount of solution in each hole. Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. Keep the treated area moist for 7 to 10 days. Do not use less than 4 holes per shrub.

Soil Drench: Uniformly apply the dosage in no less than 10 gallons of water per 1000 square feet as a drench around the base of the tree, directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone.

Flowers and Ground Covers	0.45 to 0.6 fl oz (13 to 17 mL) per 1000 sq. ft.

Apply as a broadcast treatment and incorporate into the soil before planting or apply after plants are established. If application is made to established plants, optimum control will be attained if area is irrigated thoroughly after application

MERIT 2 Insecticide - Ebb & Flood Application

MERIT 2 Insecticide may be applied through Ebb and Flood applications. To assure accurate uptake it is recommended that prior to treatment, a minimum of 10 plants be brought up to a known field capacity and allowed to dry out for one or two days. Re-wet these plant to determine how much water on average each plant will absorb to bring it back at field capacity. Use the volume absorbed per plant (keeping pot sizes uniform) multiplied by the number of pots being treated. Add to this volume a required minimum to flood your smallest treatment area. This should minimize the return back to the storage tank. Re-use the returned volume with subsequent irrigation or nutrients on the same plants.

MERIT 2 INSECTICIDE EBB & FLOOD APPLICATIONS		
Adelgids	Leafhoppers (including glassy-winged sharpshooter)	Soft Scales
Aphids	Leafminers	Thrips (suppression)[4]
Armored scales (suppression)	Mealybugs	Whiteflies
Fungus Gnats (larvae only)[1]	Psyllids	White Grub larvae (such as Japanese Beetle, Masked Chafers, European Chafer, Oriental Beetle, Asiatic Garden Beetle)
Japanese Beetles (adults)	Root mealybugs[2]	
Lacebugs	Root Weevil Complex: (such as Apopka Weevil, Black Vine Weevil, Citrus Root Weevil[3])	
Leaf beetles (including elm and viburnum leaf beetles)		

Pot sizes (inches)	Herbaceous species including vegetable plants[5] (one or two plants per pot)	Woody perennials, Herbaceous species including vegetable plants[5] (3 or more per pot)
	ML per 100 Plants	ML per 100 Plants
2	1.6 mL	2.5 mL
3	2.5 mL	3.7 mL
4	3.3 mL	5 mL
5	4.2 mL	6.3 mL
6	5 mL	7.7 mL
7	5.9 mL	9.1 mL
8	6.6 mL	10 mL
9	7.4 mL	11.1 mL
10	8.3 mL	12.5 mL
11	9 mL	14.3 mL
12	10 mL	16.7 mL

[1] **Fungus gnat larvae** in the soil will be controlled by drench or incorporation. **No adult Fungus Gnat control**. Other foliar insect control is achieved by the uptake of MERIT 2 from a healthy root system translocating the active ingredient up into the plant.

[2] **Root Mealybug** control will require a thorough drenching of containerized media. Coverage is essential for control, while minimizing the amount of leachate. Rate: 1.7 fl oz (50 mL) in 150 gallons of water.

[3] **Citrus Root Weevil**: For use on non-bearing citrus nursery stock.

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

[5] **Note**: For use on vegetable plants intended for resale only including: Broccoli, Chinese Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Collards, Eggplant, Ground Cherry, Kale, Kohlrabi, Lettuce, Mustard Greens, Pepinos, Peppers, Potatoes, Rape Greens, Sorghum, Sugarbeets, Tomatillo, and Tomato.

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RECOMMENDED DRENCH AND IRRIGATION APPLICATIONS

For use only on greenhouse and, nursery ornamentals, vegetable plants, and interiorscape plants using soil drenches, micro-irrigation, drip irrigation, overhead irrigation, ebb and flood irrigation, or hand-held or motorized calibrated irrigation equipment.

Pest	Use Pattern		Dosage MERIT 2		Remarks
Adelgids Aphids Fungus Gnats[1] (larvae only) Japanese Beetles (adults) Lacebugs Leaf beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Leafminers Mealybugs Psyllids Root mealybugs[2] Root Weevil Complex (Such as Apopka Weevil, Black Vine Weevil, Citrus Root Weevil[3]) Soft Scale Thrips (suppression)[4] Whiteflies White Grub larvae (such as Japanese Beetle, Masked Chafers, European Chafer, Oriental Beetle, Asiatic Garden Beetle)	Plants in Containers	Herbaceous Species – including vegetable plants [5] (one or two plants per pot)	Container size (inches) 2 3 4 5 6 7 8 9 10 11 12	No. pots treated with 1.7 fl oz (50 mL) 3000 2000 1500 1200 1000 850 750 675 600 550 500	Use sufficient volume to wet most of the potting medium without loss of liquid from the bottom of the container. Apply according to label directions. Follow application with moderate irrigation. Irrigate carefully during the next 10 days in order to avoid loss of active ingredient due to leaching.
		Woody Perennials	2 3 4 5 6 7 8 9 10 11 12	2000 1350 1000 8000 650 550 500 450 400 350 300	
		Herbaceous Species including vegetable plants [5] (three or more plants per pot)	Use the above woody perennial rates		
	Ornamental and vegetable plants [5] grown in flats, benches, or beds		1.7 fl oz (50 mL) per 3000 square feet		Mix required amount in sufficient water to uniformly cover the area being treated. Do not use less than 2 gallons of mixture per 1000 sq. ft. Apply as a broadcast treatment and incorporate into the medium before planting or apply after plants are established. If application is made to established plants, optimum control will be attained if areas are lightly irrigated after application. Allow no leaching or runout for 10 days after application

[1] **Fungus gnat larvae** in the soil will be controlled by drench or incorporation. **No adult Fungus Gnat control**. Other foliar insect control is achieved by the uptake of MERIT 2 from a healthy root system translocating the active ingredient up into the plant.

[2] **Root Mealybug** control will require a thorough drenching of containerized media. Coverage is essential for control while minimizing the amount of leachate. Rate: 1.7 fl oz (50 mL) in 150 gallons of water.

[3] **Citrus Root Weevil**: For use on non-bearing citrus nursery stock.

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

[5] **Note**: For use on vegetable plants intended for resale only including: Broccoli, Chinese Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Collards, Eggplant, Ground Cherry, Kale, Kohlrabi, Lettuce, Mustard Greens, Pepinos, Peppers, Potatoes, Rape Greens, Sorghum, Sugarbeets, Tomatillo, and Tomato.

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RECOMMENDED DRENCH AND IRRIGATION APPLICATIONS

For use only on greenhouse and, nursery ornamentals, vegetable plants, and interiorscape plants using soil drenches, micro-irrigation, drip irrigation, overhead irrigation, ebb and flood irrigation, or hand-held or motorized calibrated irrigation equipment.

APPLICATION INSTRUCTIONS: Use 1.7 fl oz (50 mL) of product in an appropriate amount of water to avoid leaching to treat the number of pots based on pot size in the table below.

PEST	USE PATTERN	DOSAGE-MERIT 2		REMARKS
Adelgids Aphids Fungus Gnats Larvae [1] Japanese Beetle (adult) Lacebugs Leaf beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Leafminers Mealybugs Psyllids Root Mealybugs [2] **Root Weevil Complex** (such as: Apopka Weevil, Black Vine Weevil, Citrus Root Weevil[3]) Soft Scale Thrips (suppression) [4] Whiteflies **White Grub larvae** (such as: Japanese Beetle, Masked Chafers, European Chafer, Oriental Beetle, Asiatic Garden Beetle)	Containerized plants including vegetable plants [5]	Container Size 1 gallon 2 gallon 3 gallon 5 gallon 7 gallon 10 gallon 15 gallon 20 gallon	No. pots treated with 1.7 fl oz (50 mL) 340 to 244 280 to 210 220 to 165 160 to 110 100 to 75 60 to 45 40 to 30 20 to 15	Apply in sufficient water to wet the potting medium. For optimum control, make applications prior to egg hatch of the target pest. Irrigate moderately after application to move the active ingredient into the root zone.
White grub larvae (such as Japanese Beetle, Masked Chafers, European Chafer, Oriental Beetle, Asiatic Garden Beetle)	Field Nurseries	Apply as a uniform band on either side of the row using a band width six (6) inches wider than the actual root ball diameter to be dug. Do not allow bands in adjacent rows to overlap. Use 1.7 fl oz (50 mL) per 1000 ft of row or 3,000 sq. ft. For grub control in areas of turf, apply as a broadcast application using 1.35 to 1.7 fl oz (40 to 50 mL) per 3000 sq. ft.		Vegetation in the area to be treated should be mowed to a height of 3 inches or less prior to application. Mowing to the lowest possible height will insure greater consistency of control. Apply May through July. For optimum control, treatment should be followed by rainfall or irrigation. Do not use less than 2 gallons of spray volume per 1000 square feet.

[1] **Fungus gnat larvae** in the soil will be controlled by drench or incorporation. **No adult Fungus Gnat control**. Other foliar insect control is achieved by the uptake of MERIT 2 from a healthy root system translocating the active ingredient up into the plant.

[2] **Root Mealybug** control will require a thorough drenching of containerized media. Coverage is essential for control while minimizing the amount of leachate. Rate: 1.7 fl oz (50 mL) in 150 gallons of water.

[3] **Citrus Root Weevil**: For use on non-bearing citrus nursery stock.

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

[5] **Note**: For use on vegetable plants intended for resale only including: Broccoli, Chinese Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Collards, Eggplant, Ground Cherry, Kale, Kohlrabi, Lettuce, Mustard Greens, Pepinos, Peppers, Potatoes, Rape Greens, Sorghum, Sugarbeets, Tomatillo, and Tomato.

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RESTRICTIONS

Do not graze treated areas or use clippings for treated areas for feed or forage. Avoid runoff or puddling of irrigation water following application. Avoid application of MERIT 2 Insecticide to areas which are water logged or saturated, which will not allow penetration into the root zone to the plant. Do not apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year.

Food Crops:

Treated areas may be replanted with any crop specified on an imidacloprid label, or with any crop for which a tolerance exists for the active ingredient.

For crops not listed on an imidacloprid label, or for crops for which no tolerances for the active ingredient have been established, a 12 month plant-back interval should be observed.

Do not allow leachate run out for the first 10 days after application, in order to retain the product and facilitate full plant uptake of the active ingredient.

Do not apply MERIT 2 Insecticide to areas which are water logged or saturated, which will not allow penetration into the root zone of the plant. Do not apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year. Do not plant any food crop within one year of a treatment with MERIT 2Insecticide.

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 Statement 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. You may contact the Bayer Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Bayer Kansas City Emergency Response Telephone number is 800-414-0244, or contact Chemtrec at 800-424-9300.

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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of the smoke.

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