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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

AUG 10 2009

Ms Norma C. Pangilinan Ph.D
Bayer Environmental Science
2 T. W. Alexander Drive,
Research Triangle, NC 27709

Subject: Label Notification(s) for Pesticide Registration Notice 2007-4 and 98-10
Storage & Disposal and Other Changes (Warranty statement)

Dear Registrant:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 and 98-10 dated July 10, 2009 for:

EPA Registration 432-1369 Merit 2 Greenhouse and Nursery Insecticide

The Registration Division (RD) has conducted a review of this request for applicability under PRN 2007-4 and 98-10 and finds that the label change(s) requested falls within the scope of PRN-2007-4 and 98-10. The label has been date-stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on nonrefillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please contact me directly at 703-305-6249 or Banza Djapao of my staff at 703-305-7269.

Sincerely,

Rachel C. Hollowman for

Linda Arrington
Notifications & Minor Formulations Team Leader
Registration Division (7505P)
Office of Pesticide Programs

Please read Instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060. Approval expires 2-28-95

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☑ Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
432-1369	Venus Eagle	☐ None ☐ Restricted
4. Company/Product (Name)	PM#	
Merit 2 Greenhouse and Nursery Insecticide	1	

5. Name and Address of Applicant *(Include ZIP Code)*

Bayer Environmental Science
2 T. W. Alexander Dr.
Research Triangle Park, NC 27709

☐ *Check if this 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. **NOTIFICATION**

AUG 10 2009

Product Name

Section II

☐ Amendment - Explain Below
☐ Resubmission in response to Agency Letter dated _____.
☑ Notification - Explain below.
☐ Final printed labels in response to Agency Letter dated _____.
☐ "Me Too" Application.
☐ Other - explain below.

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

Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the confidential statement of formula for 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 the amrnded label is not consistent with the requirements of 40 CFR CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Section 12 and 14 of FIFRA.

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) _____
	If "yes," Unit Package wgt.	No. per container	If "Yes," Package wgt.	No. per container	

* ***Certification must be submitted.***

3. Location of Net Contents Information	4. Size(s) of Retail Container	5. Location of Label Directions
☑ Label ☐ Container	240 mL (8 fl oz)	☐ 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 applicaiton.)*

Name	Title	Telephone No. (Include Area Code)
Norma C. Pangilinan, Ph.D.	Manager, Registrations	919-549-2428

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 for misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title
	Manager, Registrations
4. Typed Name	5. Date
Norma C. Pangilinan, Ph.D.	July 10, 2009

Bayer Environmental Science

Courier Service Document Processing Desk (NOTIF)
Office of Pesticide Programs (7505P)
U.S. Environmental Protection Agency
One Potomac Yard, Room S-4900
Arlington, VA 22202

Attn: Ms. Linda Arrington
Notifications and Minor Formulations Team Leader

Subject: Label Notification per PR Notice 2007-04; Container Disposal Statement
- Merit 2 Greenhouse and Nursery Insecticide (Reg. No. 432-1369)

Dear Ms. Arrington:

July 10, 2009

Bayer Environmental Science SA
2 T.W. Alexander Drive
Research Triangle Park, NC 27709

Phone: 919 549-2000

Pursuant to PR Notice 2007-04, we hereby notify the Agency of revision to the Merit 2 Greenhouse and Nursery Insecticide label with adoption of EPA prescribed container disposal statement. In support of this notification, the following documents are being submitted:

1. Completed Application for Registration (EPA Form 8570-1),
2. Three copies of each revised product label plus one copy highlighting changes,

Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the confidential statement of formula for 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 the ammded label is not consistent with the requirements of 40 CFR CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Section 12 and 14 of FIFRA.

Please do not hesitate to call (919-549-2428), fax (919-549-3937) or e-mail me (norma.pangilinan@bayercropscience.com), if you have any questions.

Sincerely,

BAYER ENVIRONMENTAL SCIENCE
A Business Group of Bayer CropScience

NORMA C. PANGILINAN, Ph.D,
Registrations Manager

A Business Group of
Bayer CropScience

This notification is consistent with the provisions 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.

Sincerely,

BAYER ENVIRONMENTAL SCIENCE
A Business Group of Bayer CropScience

NORMA C. PANGILINAN, Ph.D,
Registrations Manager

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. 432-1369 — **EPA Est. No. ___**

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 English, do not use this product until the label has been fully explained to you.)

For MEDICAL And TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577
For PRODUCT USE Information Call 1-800-331-2867

FIRST AID	
If swallowed	• 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. • Do not give anything by mouth to an unconscious person.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
If on skin or clothing	• 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.
If in eyes	• 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.
In case of emergency call toll free the Bayer Environmental Science Emergency Response Telephone No. 1-800-334-7577. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.	
Note To Physician: No specific antidote is available. Treat the patient symptomatically.	

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 (PPE):

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
- 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.

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.

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
- 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
- Shoes plus socks

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

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 Environmental Science Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Bayer Environmental Science Emergency Response Telephone No. is 1-800-334-7577, or contact Chemtrec at 1-800-424-9300.

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: Nonrefillable container. Do not reuse or refill this container. Triple 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.

Offer for recycling, if available 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.

APPLICATION TO ORNAMENTALS AND VEGETABLE PLANTS

MERIT 2 Greenhouse and Nursery Insecticide is for insect control on ornamental and vegetable plants in nurseries and greenhouses and interior plantscapes. MERIT 2 Greenhouse and Nursery 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.

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 Greenhouse and Nursery Insecticide.

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 Greenhouse and Nursery 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 Greenhouse and Nursery 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 Greenhouse and Nursery insecticide 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 Greenhouse and Nursery Insecticide 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.
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.

APPLICATION TO GRASSY AREAS IN NURSERIES

MERIT 2 Greenhouse and Nursery 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 Greenhouse and Nursery Insecticide can also be used for suppression of cutworms and chinchbugs. MERIT 2 Greenhouse and Nursery 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 Greenhouse and Nursery Insecticide cannot be used on commercial sod farms.

The active ingredient in MERIT 2 Greenhouse and Nursery 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 Greenhouse and Nursery 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.

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 Greenhouse and Nursery Insecticide 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.		

RECOMMENDED APPLICATIONS FOR NURSERY, GREENHOUSE AND INTERIORSCAPE PLANTS

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

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.

No Soil Injection Application Allowed in Nassau or Suffolk Counties of New York.

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. **No Soil Injection Application Allowed in Nassau or Suffolk Counties of New York.** **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 Greenhouse and Nursery 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 GREENHOUSE AND NURSERY INSECTICIDE
EBB & FLOOD APPLICATIONS

Adelgids Aphids Armored scales (suppression) Fungus Gnats (larvae only) [1] 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 Scales Thrips (suppression)[4]	Whiteflies White Grub larvae (such as Japanese Beetle, Masked Chafers, European Chafer, Oriental Beetle, Asiatic Garden Beetle)

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 Greenhouse and Nursery Insecticide 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.

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		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.

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		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	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 and Forest 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.

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

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

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.

Do not apply MERIT 2 Greenhouse and Nursery Insecticide to soils which are water logged or saturated, which will not allow penetration into the root zone of the plants.

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.

For outdoor ornamentals grown in beds or turf, applications of MERIT 2 Greenhouse and Nursery Insecticide cannot exceed a total of 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.

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of liability before using this product.

If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following conditions, disclaimer of warranties and limitations of liability.

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NOTIFICATION

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