

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

September 30, 2019

Lauren Seabrook Product Registration Manager BASF Corporation 26 Davis Drive Research Triangle Park, NC 27709-3528

Subject: Registration Review Label Mitigation for Dimethomorph Product Name: Orvego Fungicide EPA Registration Number: 7969-301 Application Date: 07/05/2018 Decision Number: 555385

Dear Ms. Seabrook:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the Dimethomorph Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

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If you have any questions about this letter, please contact Jaclyn Pyne by phone at 703-347-0445, or via email at <u>pyne.jaclyn@epa.gov</u>.

Sincerely,

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Linda Arrington, Branch Chief Risk Management and Implementation Branch 4 Pesticide Re-Evaluation Division Office of Pesticide Programs

Enclosure

Ametoctradin	Group	45	Fungicide
Dimethomorph	Group	40	Fungicide

Orvego[®] Fungicide

For disease control on ornamentals

Active Ingredients:

ametoctradin*: 5-ethyl-6-octyl[1,2,4]triazolo[1,5-a]pyrimidin-7-amine	26.9%
dimethomorph**: 4-[3-(4-chlorophenyl)-3-(3,4-dimethoxyphenyl)-1-oxo-2-propenyl]morpholine	20.2%
Other Ingredients:	52.9%
Total:	100.0%
* Equivalent to 2.50 pounds ametoctradin per gallon	

** Equivalent to 1.88 pounds dimethomorph per gallon

EPA Reg. No. 7969-301

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

See inside for complete **First Aid**, **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

BASF Corporation 26 Davis Drive Research Triangle Park, NC 27709

ACCEPTED

Sep 30, 2019

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 2000 2014

^{NReg. No.} 7969-301



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 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.
lf in eyes	 Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. Call a poison control center or doctor for treatment advice.
lf inhaled	 Move person to fresh air. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice.
	HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).

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 and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

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 nitrile, butyl, neoprene, and/or barrier laminate)
- Shoes plus socks

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, 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/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

DO NOT apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when cleaning equipment or disposing of equipment washwater or rinsate.

Groundwater

Ametoctradin and its degradates have properties and characteristics associated with chemicals detected in groundwater. These chemicals may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water

Ametoctradin and its degradates may impact surface water quality through spray and runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. Ametoctradin and its degradates are classified as having high-to-medium potential for reaching surface water via runoff for several weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of ametoctradin from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours.

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**.

PPE requirements 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:

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

NONAGRICULTURAL USE REQUIREMENTS

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

DO NOT enter or allow others to enter treated areas until sprays have dried.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

Pesticide Storage

Store in a cool, well-ventilated area. **DO NOT** allow to become overheated in storage. Keep container closed when not in use.

Pesticide Disposal

Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

Container Handling

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

In Case of Emergency

In case of large-scale spillage regarding this product, call:

 CHEMTREC 	1-800-424-9300
 BASF Corporation 	1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

Steps to be taken in case material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Product Information

This label must be in the possession of the user at the time of fungicide application.

Carefully read and understand the **Directions For Use** and **Restrictions and Limitations** before applying this product.

Orvego® fungicide may be applied to field-grown and containerized ornamental and nursery plants for the control of downy mildew and phytophthora root, crown, and stem diseases in the following use sites:

- Greenhouses, lathhouses, and shadehouses
- Hardwood and conifer nurseries or plantations
- Interiorscapes
- Outdoor or field nurseries

Orvego may be applied as a foliar spray, soil drench, directed or soil surface spray, or through irrigation systems. For use rate and spray interval, see instructions specific to use site, disease, and plant type. See **Orvego**[®] **fungicide Disease Control** tables for application methods, rates, and timings.

Mode of Action

Orvego contains two active ingredients: ametoctradin and dimethomorph. Ametoctradin, a strong inhibitor of mitochondrial respiration in complex III (cytochrome bc1) of Oomycetes fungi, is classified by the Fungicide Resistance Action Committee (FRAC) as a **Group 45** fungicide. Dimethomorph belongs to the group of cell-wall synthesis inhibitors and is classified as a **Group 40** fungicide.

Orvego is used for the preventive control of certain foliar, stem, and root diseases of herbaceous and woody ornamental crops. **Orvego** can be used on plants grown in greenhouses, lathhouses, shadehouses, interiorscapes, and outdoor container or field nurseries, including hardwood and conifer nursery seedlings. Use this product in a program with other products to provide season-long protection. Under severe disease conditions, use maximum rates and shorter intervals for repeat applications.

Orvego is a foliar and root penetrant with translaminar and locally systemic activity. Thorough plant coverage is important when **Orvego** is used as a preventive application for foliar diseases. Dense foliage or excessive growth will often prevent adequate coverage; adjust spray volumes accordingly. **Orvego** will also control stem and root diseases when applied to the root zone of the plant as a drench, soil surface, or directed spray, or via hydroponic and chemigation systems.

Carefully read, understand, and follow all directions and precautions.

Disease pressure and environmental conditions will determine the length of the spray interval. Calibrate sprayers before application.

Resistance Management

The multiple modes of action of **Orvego** make it ideal for disease management programs where fungicide rotation is emphasized to help prevent the development of resistance.

Certain causal agents of downy mildew diseases (Bremia spp., Peronospora spp., Plasmopara spp., and Pseudoperonospora spp. strains) and Phytophthora spp. have developed resistance to some crop protection products after excessive use. Because the development of resistance cannot be predicted, always use **Orvego** in a resistance management program that incorporates the practices of alternation (rotation) and/or tank mixing **Orvego** with other fungicides effective on downy mildew and Phytophthora diseases.

Apply **Orvego** in an alternation or tank mix program with other registered fungicides that have a different mode of action.

DO NOT apply more than 2 consecutive applications of **Orvego** to a crop unless tank mixed. Between **Orvego** use, rotate to products with different modes of action for 2 applications.

If disease continues to increase excessively after **Orvego** treatment when used according to label directions, **DO NOT** increase the use rate beyond the labeled rate. Discontinue **Orvego** use and switch to another fungicide with a different target site or mode of action, if available. Your local crop advisor can provide an appropriate control strategy.

Orvego is a protectant fungicide. If not applied on a routine protectant spray schedule, examine crops weekly for signs and symptoms of disease. Make fungicide application at the specified label use rate and spray schedule, at the first sign of disease, or during environmental conditions favorable for disease development. Resistance management strategies advise not to apply at rates lower than specified on the label.

Directions For Use Through Sprinkler Irrigation Systems

Orvego® fungicide may be applied as a chemigation treatment through sprinkler irrigation systems.

Pesticide supply tanks are recommended for the application of pesticide products. See label instructions for dilution use rates and timing of applications. Agitate before use and during application. Because the material is used in an injection proportioner, apply the pesticide continuously for the duration of the water application.

Apply this product only through pressurized drench (flood), sprinkler, or drip (trickle) irrigation systems. **DO NOT** apply this product through any other type of irrigation system.

Crop injury or lack of effectiveness can result from nonuniform distribution of treated water.

Contact a state extension service specialist, equipment manufacturers, or other experts for calibration questions.

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 under the supervision of the responsible person shall shut the system down and make necessary adjustments should the need arise.

Use Precautions for Sprinkler Irrigation Applications for Pressurized Drench (Flood) System, Sprinkler (Spray) Chemigation, and Drip (Trickle) Chemigation

Systems using a pressurized water and pesticide injection system must meet the following requirements:

- The system must contain a functional check valve, vacuum-relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump), effectively designed and constructed of materials that are

compatible with pesticides and capable of being fitted with a system interlock.

• **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

Specific Instructions for Public Water Systems

- 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, back-flow preventer (RPZ), or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 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 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.
- 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.

Mixing Instructions

Fill the spray tank until it is approximately 1/2 full with clean water. Shake the **Orvego** container well; then slowly add **Orvego** to the spray tank while agitating. Agitation must be engaged before the addition of the product to obtain a complete and uniform mixture of **Orvego**.

Limit amount of spray mixture prepared to that needed for immediate use.

Orvego can be tank mixed with most recommended fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives.

If tank mixtures are used, follow rate restrictions, label directions, and precautions on all labels.

Under some conditions, the use of additives or adjuvants may improve the performance of **Orvego® fungicide**. However, all varieties and cultivars have not been tested with possible tank mix combinations. Local conditions can also influence plant tolerance and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, or plant injury may result from mixing **Orvego** with other products. Therefore, before using any tank mix (fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives), test the combination on a small portion of the plant to be treated to ensure that a phytotoxic response will not occur as a result of application.

Consult a BASF representative or local agricultural authorities for more information concerning additives.

Compatibility Test for Tank Mix Components

Add components in the following sequence using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.

- 1. **Water** For 100 gallons per acre spray volume, use 16 cups (1 gallon) of water. For other spray volumes, adjust rates accordingly. Use only water from the intended source at the source temperature.
- Water-dispersible products (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)
 - Cap the jar and invert 10 cycles.
- 3. **Water-soluble products** Cap the jar and invert 10 cycles.
- 4. **Emulsifiable concentrates** [oil concentrate or methylated seed oil (MSO) when applicable] - Cap the jar and invert 10 cycles.
- 5. **Water-soluble additives** Cap the jar and invert 10 cycles.
- 6. Let the solution stand for 15 minutes.
- 7. **Evaluate** the solution for uniformity and stability. The spray solution should not have free oil on the surface, or fine particles that precipitate to the bottom, or thick (clabbered) texture. **DO NOT** use any spray solution that could clog spray nozzles.

Mixing Order

- 1. **Water** Begin by agitating a thoroughly clean sprayer tank 3/4 full of clean water.
- Agitation Maintain constant agitation throughout mixing and application.
- 3. **Inductor** If an inductor is used, rinse it thoroughly after each component has been added.
- 4. **Products in PVA bags** Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
- 5. **Water-dispersible products** (such as **Orvego**, dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)
- 6. Water-soluble products

- 7. **Emulsifiable concentrates** (such as oil concentrates when applicable)
- 8. Water-soluble additives [such as ammonium sulfate (AMS) or urea ammonium nitrate (UAN) when applicable]
- 9. Remaining quantity of water

Ensure each component is thoroughly mixed and suspended before adding tank mix partners. Maintain constant agitation during application.

Tank Mixes with Fungicides

Orvego can be used in a tank mix with fungicides registered for control of downy mildews and *Phytophthora* spp. for resistance management or to expand spectrum of disease control. Potential tank mix partner fungicides include, but are not limited to: **Insignia® fungicide**, **Insignia® Intrinsic® brand fungicide**, **Pageant® fungicide**, **Pageant® Intrinsic® brand fungicide**, or **Subdue® Maxx® fungicide**. Refer to the respective tank mix partner labeling for rates, methods of application, proper timing, restrictions, and precautions. Always use in accordance with the most restrictive label restrictions and precautions. **DO NOT** exceed label dosage rates. This product cannot be mixed with any product containing a label prohibiting such mixtures.

Apply fungicide at the specified label use rate and spray schedule, at the first sign of disease, or during environmental conditions favorable for disease development. Refer to **Resistance Management** section guidelines for the total number of consecutive applications of **Orvego** allowed.

Spray Drift Advisories

The applicator is also responsible for avoiding off-site spray drift. Be aware of nearby non-target sites and environmental conditions.

Importance of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Shielded Sprayers

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

Temperature and Humidity

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

Temperature Inversions

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

Wind

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDI-TIONS.** Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Restrictions and Limitations

- Outdoor Uses: DO NOT apply more than a total of 56 fl ozs Orvego[®] fungicide per 100 gallons per crop per year.
- Indoor Uses: DO NOT make more than 4 applications of **Orvego** per crop per season.
- **DO NOT** apply to plants that show injury (leaf phytotoxicity or plant stunting) produced by prior pesticide applications.
- DO NOT use on crops intended for food or feed use.
- **DO NOT** use in vegetables grown in greenhouses for crop production or in vegetable production of transplants for outdoor use.
- **DO NOT** apply this product when wind conditions favor drift.
- **Tank Mixtures** When tank mixing, observe the most restrictive tank mix limitations and precautions of all products used in the tank mixture.
- **Orvego** is not for sale, distribution, or use in Nassau and Suffolk counties in New York State.

Orvego® fungicide Plant List

NOTICE TO USER. Plant tolerance to this product has been found to be acceptable in a limited number of research trials on certain varieties or cultivars of the plant species listed on this label. However, because of the large number of ornamental species and their associated varieties or cultivars, and because of variable growing conditions, it is impossible to test every plant for tolerance to this product. Neither the Manufacturer nor the Seller has determined if this product can be safely used on all ornamental plants. It is the responsibility of the professional user to determine if this product can be used safely before commercial use. In a small test area, test the specified rates on plants for phytotoxicity and disease control before large-scale use.

Orvego® fungicide Plant List (continued)

Common Name	Scientific Name	
Bedding Plants, Herbaceous Plants, and Perennials		
African violet	Saintpaulia ionantha	
Alyssum	Alyssum saxatile	
Begonia	<i>Begonia</i> spp.	
Candytuft	Iberis sempervirens	
Chrysanthemum	Chrysanthemum spp.	
Cordyline spp.	Cordyline spp.	
Daisy, Transvaal (Gerbera daisy)	Gerbera jamesonii	
Dianthus	Dianthus barbatus	
Dieffenbachia spp.	Dieffenbachia spp.	
Dusty miller	Senecio spp.	
Impatiens spp.	Impatiens spp.	
Lisianthus	Eustoma spp.	
Pansy	Viola x wittrockiana	
Periwinkle, rose (Vinca)	Catharanthus roseus	
Petunia	Petunia spp.	
Pinks	<i>Dianthus</i> spp.	
Snapdragon	Antirrhinum majus	
Statice	Limonium spp.	
Stock	Matthiola incana	
Verbena	<i>Verbena</i> spp.	
Vervain	Verbena peruviana	
Foliage and Potted Flow	ering Plants	
Ficus spp.	Ficus spp.	
Geranium	Pelargonium x hortorum	
Persian violet	Exacum spp.	
Poinsettia	Euphorbia pulcherrima	
Pothos	Epipremnum spp.	
Primrose	Primula spp.	
Spathe flower (Spathiphyllum)	Spathiphyllum spp.	

(continued)

Orvego® fungicide Plant List (continued)

Common Name	Scientific Name
Woody Ornamentals: Gro Trees, and Vines	oundcovers, Shrubs,
Andromeda	Pieris japonica
Azalea	Rhododendron spp.
Camellia	Camellia japonica
Fir, Douglas	Pseudotsuga menziesii
Fir, grand	Abies fraseri
Fir, noble	A. grandis
Honeysuckle	Lonicera sempervirens
Oak spp.	Quercus spp.
Periwinkle	Vinca major, V. minor
Rhododendron spp.	Rhododendron spp.
	R. catawbiense
	R. maximum
	R. obtusum
Rose	<i>Rosa</i> spp.
Tanoak	Lithocarpus densiflorus
Viburnum	Viburnum tinus

Orvego® fungicide Disease Control

Downy Mildew and Aerial Phytophthora

Apply to ornamentals for control of downy mildew diseases caused by *Bremia* spp., *Peronospora* spp., *Plasmopara* spp., *Pseudoperonospora* spp., and for control and suppression of aerial Phytophthora caused by *Phytophthora* spp., including *Phytophthora ramorum*, *P. drechsleri*, *P. nicotianae/parasitica* and *P. tropicalis*.

Crop and Use Site	Application Program
Field-grown and containerized	Foliar Spray
 ornamental and nursery plants in: Greenhouses, lathhouses, shadehouses Hardwood and conifer nurseries Interiorscapes Outdoor or field nurseries 	Control of downy mildew - 11 to 14 fl ozs product (0.376 to 0.468 lb ai) per 100 gallons spray solution
	Control and suppression of aerial Phytophthora - 14 fl ozs product (0.468 lb ai) per 100 gallons spray solution
	Apply sprays in sufficient water for complete coverage of flowers, foliage, and stems. Application can be made with high volume, low volume, or ultra-low volume ground equipment only. Follow the spray equipment manufacturer's directions to determine the amount of spray solution required to obtain thorough coverage.
	Thoroughly spray plant foliage until runoff. Begin spraying when plants are well established or at first sign of disease using a full-coverage spray applied on a 10-day to 14-day interval throughout the production cycle.
	Use for <i>Phytophthora ramorum</i> - Use of Orvego as a foliar application has been shown to limit the number of infection sites and lesion development of <i>Phytophthora ramorum</i> when applied prior to infection. Use the 14 fl ozs rate when potential for severe disease pressure exists. Follow guidelines above for spray volumes.
	Outdoor uses - DO NOT apply more than a total of 56 fl ozs Orvego per 100 gallons per crop per year.
	Indoor uses - DO NOT make more than 4 applications of Orvego per crop per season.

(continued)

Orvego® fungicide Disease Control (continued)

Phytophthora Root, Crown, and Stem Rot

Apply to ornamentals for control of root, crown, and stem diseases caused by *Phytophthora* spp. such as *P. cinnamomi*, *P. cryptogea*, *P. drechsleri*, *P. nicotianae/parasitica*, *P. ramorum*, and *P. tropicalis*.

Crop and Use Site	Application Program
• Container-grown herbaceous perennials and woody ornamen- tals grown in lathhouses,	Mix 11 to 14 fl ozs product (0.376 to 0.468 lb ai) per 50 to 100 gallons treat- ment solution. Apply when plant roots are well established or at first sign of disease, on a 10-day to 14-day interval throughout the production cycle.
 shadehouses, and nurseries Greenhouse-grown ornamen- tals, herbaceous perennial and annual plants (e.g. bedding plants, 	Drench - DO NOT apply to dry soil media. Application is best made when soil media has good moisture but is not saturated. Use enough solution to wet the root zone of the plant. Avoid watering plants for several hours after application to facilitate product uptake and maximize fungicide contact.
herbaceous perennials, flowering bulbs, and foliage)Ornamentals grown in	Soil surface or directed spray - Use a broadcast or directed spray applied in sufficient water to obtain thorough coverage of the plant crown, plant stem, and soil surface.
interiorscapes	Bed-grown ornamentals - Apply as broadcast spray or saturate the top layer of the soil.
• Field-grown herbaceous peren- nials and woody ornamentals including cut flowers and	Mix 11 to 14 fl ozs product (0.376 to 0.468 lb ai) per 50 to 100 gallons treat- ment solution. Apply when plant roots are well established or at first sign of disease, on a 10-day to 14-day interval throughout the production cycle.
seedlingsHardwood and conifer nurseries	Drench - Amount of solution will vary with plant size and with root volume and depth. Avoid watering plants for several hours after application to facilitate product uptake and maximize fungicide contact.
Ornamentals grown in hydro-	Mix 11 fl ozs product (0.376 lb ai) per 100 gallons treatment solution.
ponic, rockwool, or similar artificial substrate systems	Chemigate - In circulating systems, treat at the start of crop culture using the dose rate listed per 100 gallons of circulation water. Repeat treatment every 4 weeks.
	Drench - In noncirculating systems, apply 8 fl ozs of stock solution as a drench treatment per 6 inch pot. Adjust amount according to container size.
Outdoor uses - DO NOT apply more than a total of 56 fl ozs Orvego per 100 gallons per crop per year.	
Indoor uses - DO NOT make more than 4 applications of Orvego per crop per season.	

Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Plant injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

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