

Orvego™ Fungicide



Controls downy mildews and Phytophthora species with dual action

Orvego™ fungicide is a combination of ametoctradin and dimethomorph (the same active ingredient in **Stature® SC fungicide**). **Orvego fungicide** provides control of all major ornamental downy mildews and Phytophthora species tested, with excellent plant quality and safety. It's also a great new product for grower rotational programs.

With the new active ingredient ametoctradin you get:

- A new proprietary chemical class, pyrimidylamines.
- A new resistance management tool for oomycete fungi; this Complex III inhibitor in the mitochondria cuts the energy flow of the fungus.
- Control of major infectious stages of the target fungi; zoospores burst within seconds when treated with ametoctradin.

Dual action with **Orvego fungicide**: ametoctradin is a strong inhibitor of mitochondrial respiration in Complex III (cytochrome bc1) of oomycetes fungi. The active ingredient is classified by the US EPA as a Group 45 fungicide. Dimethomorph belongs to the group of cell-wall synthesis inhibitors classified by the US EPA as target site of action Group 40 fungicides.

Orvego fungicide works best applied preventatively.

Key Pathogens Controlled By Orvego Fungicide:

Phytophthora species Daisy downy mildew species

- *P. cinnamomi*
- *P. cryptogea*
- *P. dreschleri*
- *P. nicotianae*/
P. parasitica
- *P. ramorum*
- *P. syringae*
- *P. tropicalis*
- *Bremia* spp.
- *Peronospora* spp.
- *Plasmopara* spp.
- *Pseudoperonospora* spp.



Use Sites: Production ornamentals in greenhouses, lathouses, container and field nurseries and for use in interiorscapes

Application rates: 11.0 to 14.0 fl. oz. /100 gal.; 4 applications of **Orvego fungicide** per crop per season

REI: 12 hr.

Signal Word: CAUTION

Mode of Action: Inhibits mitochondrial respiration in Complex III (cytochrome bc1) and cell-wall synthesis inhibitor of oomycetes fungi.¹

Behavior in Plant: Penetrant with translaminar and locally systemic activity following a foliar application. When used as a soil drench, it protects plant roots and crown as a translaminar, locally systemic fungicide.

Control of Different Phytophthora Species By Product

¹ Development of fungicide resistance is of particular concern for foliar pathogens such as downy mildews and some Phytophthora species. The active ingredients in **Orvego fungicide**, ametoctradin and dimethomorph, have shown no cross resistance with metalaxyl and menfenoaxam insensitive isolates in field or laboratory assays.

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Keys to Success

- Use **Orvego fungicide** as a preventive application or at first sign of disease. **Orvego fungicide** has been shown to significantly reduce sporulation of downy mildew and Phytophthora fungi.
- For crown- and root-rotting Phytophthoras: Use a srench, or heavy spray, to crown with thorough wetting of surface (of pot or soil), or drench, directing all of the application into the soil surrounding the roots. When making drench applications never apply to dry soils or substrates, and do not irrigate or apply additional water to pots/plants for several hours to allow for fungicide uptake.
- For *P. nicotianae/parasitica*: Use preventatively; if disease is present, control is best achieved when combined with mancozeb or when rotated in 14-day interval with **Pageant® Intrinsic™ brand fungicide**.
- For sudden oak death: **Orvego fungicide** will limit the number of infection sites and stop sporulation of *P. ramorum* when applied prior to infection.
- For downy mildew control: Apply **Orvego fungicide** on a 10–14 day interval and make no more than two consecutive applications. Combine with mancozeb when applied curatively under disease epidemic. Spray interval should not exceed 14 days when conditions are present for disease; rotate with **Pageant Intrinsic brand fungicide**.

Control Symptoms

Antisporulant activity stops disease spread. Translaminar activity results in excellent activity on downy mildew pathogens that reside on underside of leaf surfaces.

Ornamental Plant Safety

Orvego fungicide has shown excellent plant safety on a number of ornamental species. Refer to the product label for a complete list of evaluated species. Users should conduct small-scale tests under local growing conditions prior to the use of the product in a wide-scale operation.

Orvego fungicide Downy Mildew Efficacy Downy Mildew (*Plasmopara obducens*) on *Impatiens Walleriana*



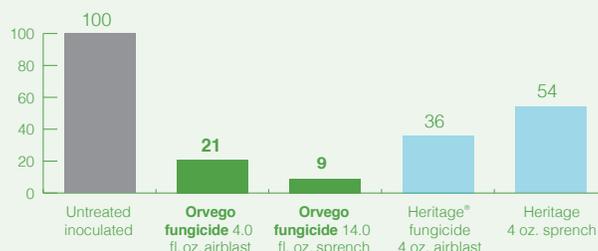
Inoculated control **Orvego fungicide** srench 14.0 fl. oz./100 gal.

All treatments shown applied prior to inoculation at rate/100 gal. all data not shown.

Downy Mildew Control with Srench or Airblast Applications

BASF Sponsored Trial; A. Palmateer, Univ. of FL, Homestead 2012

Preventative Control: Percent (%) of Canopy Affected



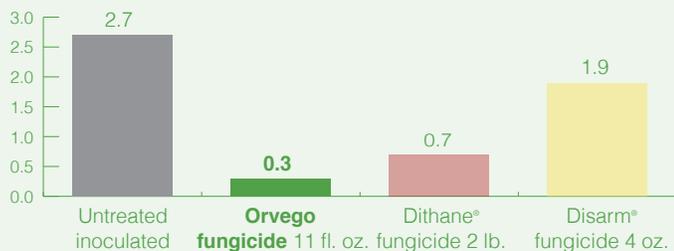
Phytophthora cryptogea on Gerbera

Photo courtesy of Dr. M. Benson, North Carolina State University

Phytophthora ramorum on Viburnum

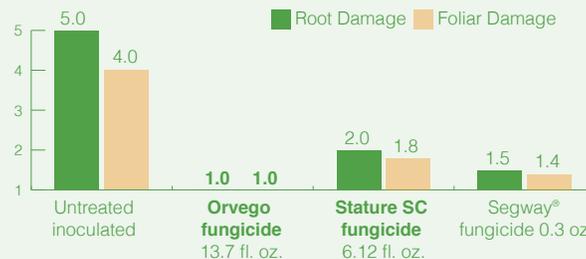
IR-4 Sponsored Trial; G. Chastagner; Washington State Univ. 2011

Number of Lesions (#) Following Preventative Application



Phytophthora cryptogea on Gerbera Daisy

BASF Sponsored Trial, 2009; M. Benson, North Carolina State Univ.



Foliar Rating: 1 = No Disease, 2 = Slight Disease, 3 = Moderate to Severe Disease, 4 = Dead Plant
Root Rating: 1 = Healthy, 2 = Fine Roots Necrotic, 3 = Coarse Roots Necrotic, 4 = Crown Rot, 5 = Dead

Always read and follow label directions.

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