



## Integrated Pest Management Program

Department of Plant Science and Landscape Architecture

UConn Extension

### Some selected fungicides labeled for use on herb bedding plants

*If any information in this table is inconsistent with the label, then follow the label.*

<b>Fungicide</b>	<b>Targeted Pest</b>	<b>Comments</b>
Azoxystrobin (Heritage) 4 hr. REI Group 11	Basil: Downy mildew Herbs and spices: Alternaria leaf spot, downy mildew, Phoma blight, powdery mildew	Broad-spectrum, preventive and curative fungicide.
<i>Bacillus amyloliquefaciens</i> D747 (Double Nickel) (Triathlon BA) 4 hr. REI OMRI-certified products Group BM02	Powdery mildews, downy mildews, Damping off & root and crown diseases ( <i>Rhizoctonia</i> , <i>Pythium</i> , and <i>Fusarium</i> ), fungal leaf spots, bacterial diseases, rusts	Broad-spectrum, preventative biological fungicides. Begin applications when conditions in the greenhouse favor disease development.
<i>Bacillus amyloliquefaciens</i> F727 (Stargus) 4 hr. REI OMRI-certified product Group BM02	Botrytis, downy mildew	Broad-spectrum, preventive biological fungicide for growing media or foliar applications. Activates ISR (induced systemic resistance).
<i>Bacillus subtilis</i> QST 713 (Cease) 4 hr. REI OMRI-certified product Group BM02	Alternaria leaf blight, anthracnose, bacterial blight	Broad-spectrum, preventative biological fungicide. For maximum effectiveness, apply prior to or in the early stages of disease development. Thorough coverage essential.

<i>Bacillus amyloliquefaciens</i> ENV 503 (Companion Biological Fungicide Wettable Powder) 4 hr. REI Group BM02	Alternaria, Crown Rot, Damping off, Gray Mold, Botrytis Leaf Blight, Phytophthora aerial blight, Fusarium wilt	Preventive biological fungicide. Activates ISR (induced systemic resistance).
Copper octanoate (Camelot O) (Grotto) 4 hr. REI OMRI-certified products Group M01	Anthraco-nose, Alternaria blight, bacterial blight, botrytis blight, downy mildew, leaf spot, rhizoctonia leaf blight	Contact fungicide/bactericide. See label for plant safety information.
Copper Sulfate Pentahydrate (Phyton 35) 48 hr. REI Group M01	Chives: Bacterial soft rot, downy mildew, botrytis blight Coriander, mint & rosemary: Botrytis, powdery mildew	Systemic bactericide and fungicide. See label for plant safety information. Thorough coverage is needed.
Cyazofamid (Segway O) 12 hr. REI Group 21	Downy mildew, Phytophthora root rot	Locally systemic fungicide. See label for specific use instructions.
Fludioxonil (Spirato GHN) 12 hr. REI Group 12	Alternaria leaf spot, botrytis blight, fusarium blight	Protectant fungicide.
Fluopicolide (Adorn) 12 hr. REI Group 43	Greenhouse Basil: Downy mildew	Protectant, curative, eradicated fungicide with antispore activity. It must be tank-mixed with another fungicide with a different mode of action for resistance management. See supplemental label for use on greenhouse basil.
<i>Gliocladium catenulatum</i> J1446	Alternaria, Botrytis, <i>Fusarium</i> , <i>Phytophthora</i> , <i>Pythium</i> , <i>Rhizoctonia</i> ,	Preventive biological fungicide.

(LALSTOP G46 WG) 4 hr. REI OMRI-certified product Group BM02	powdery mildew suppression	
Hydrogen peroxide & peroxyacetic acid (ZeroTol 2.0) 0 hr. REI (drench) 1 hr. REI (spray) OMRI-certified product	Anthracnose, downy mildew, powdery mildew, Pythium root rot	Contact fungicide. Strong oxidizing agent.
Insecticidal soap (Kopa Insecticidal Soap) (M-Pede) 12 hr. REI OMRI-certified products	Powdery mildew	Contact fungicides. See label for plant safety information.
Mandipropamid (Micora) 4 hr. REI Group 40	Downy mildew	Protectant fungicide with contact and translaminar activity. For use in enclosed greenhouses with permanent flooring for resale to consumers.
Mefenoxam (Subdue MAXX) 48 hr. REI 0 hr. REI (drench) Group 4	Damping off ( <i>Pythium</i> spp.), Downy mildew	Systemic fungicide. For Damping off: Irrigate lightly after application. For Downy Mildew: Foliar spray must be used in a tank mix with other fungicides.
Mineral Oil (Ultra-Pure Oil) 4 hr. REI OMRI certified product	Powdery mildew	Contact fungicide. See label for plant safety information.
Neem oil (Triact 70) 4 hr. REI OMRI-certified product	Powdery mildew, downy mildew, anthracnose, rust, leaf spot, <i>Botrytis</i> .	Contact fungicide. See label for plant safety information.

Oxathiapiprolin (Segovis) 4 hr. REI Group U15	Basil: Downy mildew	Foliar protectant fungicide. Begin foliar applications prior to disease development. For treatment prior to retail sale to residential consumers.
Phosphorus Acid (Alude) 4 hr. REI Group PO7	Downy mildew, Phytophthora root rot	Systemic fungicide. See label for plant safety information.
Phosphorous Acid (Fosphite) 4 hr. REI Group PO7	Root rots: <i>Phytophthora</i> , <i>Pythium</i> , <i>Fusarium</i> , and <i>Rhizoctonia</i> Downy mildew, powdery mildew.	Systemic fungicide. See label for plant safety information.
Phosphorous Acid (Kphite 7LP) 4 hr. REI Group P07	Alternaria, Anthracnose, Downy mildew, Powdery Mildew, Bacterial Leaf Spots Root Rots: <i>Fusarium</i> , <i>Phytophthora</i> , <i>Pythium</i> , and <i>Rhizoctonia</i>	Systemic fungicide. See label for plant safety information.
Phosphorous Acid & Hydrogen Peroxide (OxiPhos) 4 hr. REI	Bacterial leaf spot, downy mildew	Systemic fungicide and contact sanitizer. See label for plant safety information.
Potassium bicarbonate (Milstop) 1 hr. REI (Kaligreen) 4 hr. REI OMRI-certified products	Powdery mildew	Broad-spectrum, contact fungicide. Thorough coverage is essential. Begin applications at first sign of disease and repeat as needed.
<i>Reynoutria sachalinensis</i> extract (Regalia GC) 4 hr. REI Group P05 OMRI-certified product	Downy mildew, powdery mildew	Formulation of an extract from the Giant Knotweed. Use preventatively to increase the natural defense system of plants.
<i>Streptomyces lydicus</i>	Anthracnose, Basil Downy Mildew,	Preventive biological fungicide that contains a

WYEC 108 (Actinovate AG) 4 hr. REI OMRI-certified product	Botrytis, Powdery Mildew	beneficial bacterium.
<i>Swinglea glutinosa</i> extract (EcoSwing) 4 hr. REI OMRI-certified product Group BM01	Alternaria leaf spot, Basil downy mildew, botrytis, powdery mildew	Preventive biological fungicide. Activates ISR (induced systemic resistance). Thorough coverage is needed.
<i>Trichoderma asperellum</i> ICC 012 <i>Trichoderma gamsii</i> ICC 080 (Obtego) 4 hr. REI. OMRI-certified product Group BM02	<i>Fusarium</i> , <i>Phytophthora</i> , <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Sclerotinia</i> , <i>Thielaviopsis</i>	Preventative biological fungicide.
<i>Trichoderma harzianum</i> T-22 (RootShield Granules) 4 hr. REI OMRI-certified productGroup BM02	Root rots such as <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Fusarium</i> , and <i>Thielaviopsis</i>	Preventative biological fungicide for use in soil applications. Becomes active when soil temperatures are above 50 °F.
<i>Trichoderma harzianum</i> T-22 & <i>Trichoderma</i> <i>virens</i> G-41 (RootShield Plus+ Granules) 4 hr. REI (RootShield Plus+ WP) 4 hr. REI OMRI-certified products, Group BMO2	Root rots: <i>Pythium</i> , <i>Phytophthora</i> , <i>Rhizoctonia</i> , <i>Fusarium</i> , <i>Thielaviopsis</i>	Preventative biological fungicide. Becomes active when hold temperatures are above 50 F. WP: No overhead spray.

Fungicides are grouped by their mode of action (MoA) and each MoA group is assigned a Fungicide Resistance Action Committee (FRAC) code. Most systemic fungicides (that are absorbed into plant tissues) are specific in their mode of action. Protectant fungicides are less likely to develop resistance problems as they have multi-site modes of action (M). To prevent the development of resistance, alternative applications among difference FRAC codes and incorporation preventative biological fungicides and cultural controls into your management plan. See <http://www.frac.info/home>

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