



Companion® Biological Fungicide Wettable Powder

- Can Be Used for Foliar and Soil Applications in the Field, in Nurseries, in Greenhouses, or in Shadehouses
- For Prevention, Control or Suppression of Soil and Foliar Diseases
- Activates ISR (Induced Systemic Resistance) in Plants

ACTIVE INGREDIENT:

Bacillus amyloliquefaciens strain ENV503*0.15%

OTHER INGREDIENTS:99.85%

TOTAL:100.00%

*Contains not less than 6.33×10^9 Colony Forming Units (CFU) per gram of product

KEEP OUT OF REACH OF CHILDREN

(See side panel for additional Precautionary Statements)

Another quality product from:

DPH Biologicals LLC
21417 County Road 1950 East
Princeton, IL 61356
Questions? Call toll free (800) 648-7626
Manufactured in the U.S.A.

EPA Registration No. 94485-7

EPA Establishment No. 94485-IL-1

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Net Contents: 5 lb. (2.27 kg)

PRECAUTIONARY STATEMENTS

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

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

Mixers/loaders and applicators must wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any R or P filter; OR a NIOSH-approved elastomeric particulate respirator with any R or P filter; OR a NIOSH-approved powered air-purifying respirator with an HE filter. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

Follow manufacturer's instructions for cleaning/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

For terrestrial uses: 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 washwater or rinsate.

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 State or Tribal 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 and restricted-entry interval. The requirements in this box only apply to the 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 four (4) hours.

EXCEPTION: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas (that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water) is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

PRODUCT INFORMATION

- For Prevention, Control or Suppression of Root and Foliar Diseases
- Activates the Plant's Defense / Immune System (Induced Systemic Resistance [ISR])
- Contains Plant Growth-Promoting Rhizobacteria (PGPR)
- Quickly Establishes Beneficial Colonies on Roots and Leaves
- Stimulates Healthier Roots and Improves Nutrient Uptake

Product Description:

Companion Biological Fungicide is a broad spectrum biological fungicide [and bactericide] for the prevention, control or suppression of many soilborne and foliar diseases on the labeled agricultural crops. Apply as a foliar spray or as a soil drench alone or in an alternating spray program with other EPA-registered crop protection products.

Companion Biological Fungicide Wettable Powder contains the active ingredient *Bacillus amyloliquefaciens* strain ENV503, a plant growth-promoting rhizobacterium that quickly establishes beneficial colonies on the plant's roots and leaves. It protects the roots from invading pathogens, stimulates healthier roots and improves nutrient uptake. *Bacillus amyloliquefaciens* strain ENV503 is also known to trigger the plant's immune system (ISR).

Companion Biological Fungicide Wettable Powder can be used on all plant material and is most effective when applied prior to the onset of disease. Use Companion Biological Fungicide Wettable Powder in combination and/or rotation with chemical fungicides [and bactericides] to enhance disease control and reduce the occurrence of resistance. For use in greenhouse production and hydroponics.

Modes of Action:

Companion® Biological Fungicide Wettable Powder has multiple modes of action in preventing, controlling or suppressing plant diseases. Its active ingredient, *Bacillus amyloliquefaciens* strain ENV503, produces broad-spectrum antibiotic lipopeptides (iturin) that disrupt pathogen cell-wall formation and is a competitive, fast-colonizing rhizosphere bacterium that occupies the plant's root hairs and leaves. It also prevents the growth and antagonistic effects of soilborne and foliar pathogens. Finally, *Bacillus amyloliquefaciens* strain ENV503 is known to stimulate phytohormones that trigger the plant's systemic resistance to disease (Induced Systemic Resistance - ISR), the defense mechanisms of the plant, for prolonged periods of time.

PGPR (Plant Growth-Promoting Rhizobacteria):

Bacillus amyloliquefaciens strain ENV503 is within the plant growth-promoting rhizobacteria (PGPR) classification. PGPR are free-living bacteria that have beneficial effects on plants as they increase plant productivity and enhance crop fertility, growth and root development.

TABLE 1 – DISEASE LIST

<i>Alternaria alternata</i> - Brown Spot, Leaf Spot, Stem-End Rot <i>Alternaria</i> spp. - Black Root Rot, Early Blight <i>Aspergillus</i> spp. <i>Botrytis cinerea</i> - Crown Rot, Damping-off Fungus, Gray Mold, Leaf Blight <i>Candidatus Liberibacter</i> spp. - Greening (<i>Huanglongbing</i> (HLB)) <i>Colletotrichum acutatum</i> - Post-Bloom Fruit Drop <i>Colletotrichum orbiculare</i> - Anthracnose <i>Colletotrichum</i> spp. - Anthracnose <i>Didymella bryoniae</i> - Gummy Stem Blight <i>Erwinia</i> spp. - Soft Rot, Angular Leaf Spot, Bacterial Soft Rot <i>Erwinia carotovora</i> - Cucurbit Wilting, Angular Leaf Spot, Bacterial Soft Rot <i>Erwinia tracheiphila</i> - Cucurbit Wilting, Angular Leaf Spot, Bacterial Soft Rot <i>Fusarium nivale</i> - Fusarium Patch <i>Fusarium oxysporum</i> - Wilt <i>Fusarium solani</i> - Areolate Leaf Spot <i>Fusarium</i> spp. - Root Rot, Wilt <i>Golovinomyces cichoracearum</i> (formerly called <i>Erysiphe cichoracearum</i>) - Powdery Mildew <i>Magnaporthe poae</i> - Summer Patch <i>Mycosphaerella</i> spp. - Black Sigatoka <i>Mycosphaerella citri</i> - Greasy Spot	<i>Phytophthora aerial blight</i> - Blight, Leaf Spot and Rot <i>Phytophthora</i> spp. - Late Blight, Blackeye / Buckeye Rot in Tomatoes - Brown Rot, Food Rot - Crown and Root Rot <i>Plasmodiophora brassicae</i> - Corky Root, Clubroot <i>Podosphaera xanthii</i> (formerly called <i>Sphaerotheca fuliginea</i>) - Powdery Mildew <i>Pseudomonas syringae</i> - Angular Leaf Spot <i>Pythium aphanidermatum</i> - Root Rot <i>Pythium irregulare</i> - Root Rot <i>Pythium</i> spp. - Root Rot, Damping-off, Pythium <i>Rhizoctonia</i> spp. - Brown Patch <i>Rhizoctonia solani</i> - Root Rot, Bottom / Stem Rot <i>Sclerospora graminicola</i> - Downy Mildew <i>Sclerotinia</i> - Dollar Spot <i>Sclerotinia minor</i> - Blight - Lettuce Drop <i>Septoria lycopersici</i> - Septoria Leaf Spot <i>Uncinula necator</i> - Powdery Mildew <i>Xanthomonas campestris</i> - Bacterial Blight / Leaf Spot <i>Xanthomonas axonopodis</i> - Citrus Canker
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INTEGRATED PEST (DISEASE) MANAGEMENT (IPM)

Integrate Companion® Biological Fungicide Wettable Powder into an overall disease and pest management strategy whenever fungicide [and bactericide] use is necessary. Apply Companion® Biological Fungicide Wettable Powder alone or in combination and/or rotation with chemical fungicides [and bactericides]. This will result in less susceptibility to disease and overall reduction in the use of chemical fungicides [and bactericides]. Consult local agricultural authorities for specific IPM strategies developed for your crop(s) and location.

RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, Companion® Biological Fungicide Wettable Powder contains a Group 44 fungicide/bactericide. Any fungal/bacterial population may contain individuals naturally resistant to Companion® Biological Fungicide Wettable Powder and other Group 44 fungicides/bactericides. A gradual or total loss of pest control may occur over time if these fungicides/bactericides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay fungicide/bactericide resistance, take one or more of the following steps:

- Rotate the use of Companion® Biological Fungicide Wettable Powder or other Group 44 fungicides/bactericides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicide/bactericides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide/bactericide use that includes scouting, uses historical information related to pesticide use, and includes crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide/bactericide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal/bacterial populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.

For further information or to report suspected resistance, contact DPH Biologicals LLC at 800-648-7626. You can also contact your pesticide distributor or university extension specialist to report resistance.

PRE-HARVEST INTERVAL

Companion® Biological Fungicide Wettable Powder can be applied up to and including the day of harvest for all crops on this label.

APPLICATION INSTRUCTIONS

Apply Companion® Biological Fungicide Wettable Powder with all types of sprayers or with other equipment used for making ground applications. Apply Companion® Biological Fungicide Wettable Powder as a spray, a drench, a dip, via chemigation or other methods as specified on this label. Fit sprayers applying Companion® Biological Fungicide Wettable Powder with a strainer size of 50-mesh or larger.

Mixing Instructions:

Special care must be taken when tank mixing.

- 1) Prepare no more spray mixture than is required for the immediate operation.
- 2) Thoroughly clean spray equipment before using this product. Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injector system. Flush with clean water. Failure to provide a clean tank, void of scale or residues, can cause product to lose effectiveness or strength.
- 3) Vigorous agitation is necessary to dissolve and disperse the product. Maintain maximum agitation throughout the spray operation.
- 4) Companion Biological Fungicide Wettable Powder must be diluted with water prior to use.
- 5) Make a slurry in plain water prior to adding to spray tank.
- 6) Determine the treatment rates as indicated in the directions for use and make proper dilutions. Partially fill the spray tank with clean water to the $\frac{3}{4}$ level and then add the specific amount of Companion® Biological Fungicide Wettable Powder to the tank as required. Add the remaining water. Mix thoroughly. Maintain agitation continuously while spraying.
- 7) Check pH of tank mix solution prior to adding Companion® Biological Fungicide Wettable Powder. DO NOT mix into tank solution if pH is below 4 or above 9.
- 8) DO NOT allow spray mixture to stand for prolonged periods of time or overnight.
- 9) Companion® Biological Fungicide Wettable Powder is compatible with many commonly used pesticides, fertilizers, adjuvants and surfactants; however, do not combine with other materials if there is no previous experience or use of the combination to show it is physically compatible and non-injurious under your use conditions. Check for compatibility with other products.

Application to Plant Grown in Nurseries, in Greenhouses and in Shadehouses, and to Ornamental Plants:

Spray application: Mix 0.5 to 1.5 lb. of Companion Biological Fungicide Wettable Powder per 100 gal. of water and apply as a foliar

spray of sufficient volume to wet the entire plant with minimal runoff. Begin preventative applications at plant emergence and repeat every 3 - 28 days as needed (every 3 - 7 days if disease pressure is high or environmental conditions are highly favorable to disease outbreak or 10 - 28 days if disease pressure is low or environmental conditions are less conducive to disease outbreak).

Drench application: Mix 0.5 to 1.5 lb. of Companion Biological Fungicide Wettable Powder per 100 gal. of water and apply as a drench or coarse spray to soil or other growing media in pots, flats, plugs, trays, or planting beds for control or suppression of soilborne diseases of seedlings, cuttings, bedding plants, and transplants (including vegetables and other transplanted food crops). Make first application at or immediately before seeding, sticking, germination, or transplanting. Repeat applications every 14 - 28 days as needed.

Transplants can be treated immediately before transplanting into field soils to protect against damping-off and other diseases that reduce plant establishment.

Cutting or root dip: Dip basal end of cuttings or bare roots (individually or in bunches) in a suspension of 0.5 to 1.5 lb. of ENV503 Biofungicide Wettable Powder per gal. of water. Immerse for 5 - 10 seconds immediately before planting.

Chemigation: Mix 0.5 to 1.5 lb. of Companion® Biological Fungicide Wettable Powder per 100 gal. of water and apply via drip, handheld, or sprinkler irrigation systems. Refer to "Chemigation Instructions" for more details.

APPLICATIONS AS A FOLIAR OR SOIL SPRAY		
Crop	Disease	Product Application Rate, Timing & Frequency
Berries, including: Blackberry (includes Bingleberry, Black Satin Berry, Boysenberry, Cherokee Blackberry, Chesterberry, Cheyenne Blackberry, Coryberry, Darrowberry, Dewberry, Dirksen Thornless Berry, Himalayaberry, Hullberry, Lavacaberry, Loganberry, Lowberry, Lucretiaberry, Mammoth Blackberry, Marionberry, Nectarberry, Olallieberry, Oregon Evergreen Berry, Phenomenalberry, Rangeberry, Ravenberry, Rossberry, Shawnee Blackberry and Youngberry), Blueberry, Cranberry, Currant, Elderberry, Strawberry, Gooseberry, Huckleberry, Raspberry (Black and Red) and Cultivars, Varieties and/or Hybrids of These.	Black Root Rot, Early Blight <i>Alternaria</i> spp. Crown Rot, Damping-Off Fungus, Gray Mold, Leaf Blight <i>Botrytis cinerea</i> Root Rot <i>Pythium</i> spp. Blight, Leaf Spot and Rot <i>Phytophthora</i> aerial blight Wilt <i>Fusarium oxysporum</i>	½ lb (8 oz) – 1 ½ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare For suppression, begin applications prior to disease development and when environmental conditions are conducive to disease development. Apply every 7 – 14 days. Apply through standard spray equipment with no less than 50 gal. water per Acre.
Brassica (Cole) Leafy Vegetables, including: Broccoli, Chinese Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Cabbage (Bok Choy and Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavalo Broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach and Rape Greens.	Black Root Rot, Early Blight <i>Alternaria</i> spp. Crown Rot, Damping-Off Fungus, Gray Mold, Leaf Blight <i>Botrytis cinerea</i> Corky Root, Clubroot <i>Plasmodiophora brassicae</i> Root Rot <i>Pythium</i> spp. Blight, Leaf Spot and Rot <i>Phytophthora</i> aerial blight Wilt <i>Fusarium oxysporum</i>	½ lb (8 oz) – 1 ½ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare For suppression, begin applications soon after emergence or transplant and when environmental conditions are conducive to disease development. Can be used in a tank mix or rotational program with other registered pesticide products. Apply every 7 – 10 days. Apply through standard spray equipment with no less than 50 gal. water per Acre.

APPLICATIONS AS A FOLIAR OR SOIL SPRAY		
Crop	Disease	Product Application Rate, Timing & Frequency
Cucurbit Vegetables, including: Chayote, Chinese Waxgourd, Citron Melon, Cucumber, Gherkin, Edible Gourds (includes Chinese Okra, Cucuzza, Hechima and Hyotan), <i>Momordica</i> spp. (includes Balsam Apple, Balsam Pear, Bitter Melon and Chinese Cucumber), Muskmelon (includes True Cantaloupe, Cantaloupe, Casaba, Crenshaw Melon, Golden Pershaw Melon, Honeydew Melon, Honey Balls, Mango Melon, Persian Melon, Pineapple Melon, Santa Claus Melon, Snake Melon and Hybrids and/or Cultivars of <i>Cucumis melo</i>), Pumpkin, Summer Squash (includes Crookneck Squash, Scallop Squash, Straightneck Squash, Vegetable Marrow and Zucchini), Winter Squash (includes Acorn Squash, Butternut Squash, Calabaza, Hubbard Squash and Spaghetti Squash) and Watermelon (includes Cultivars, Hybrids and/or Varieties of <i>Citrullus lanatus</i>).	Black Root Rot, Early Blight <i>Alternaria</i> spp. Crown Rot, Damping-Off Fungus, Gray Mold, Leaf Blight <i>Botrytis cinerea</i> Gummy Stem Blight <i>Didymella bryoniae</i> Cucurbit Wilting, Soft Rot, Angular Leaf Spot, Bacterial Soft Rot <i>Erwinia</i> spp. Powdery Mildew <i>Golovinomyces cichoracearum</i> (formerly called <i>Erysiphe cichoracearum</i>), <i>Podosphaera xanthii</i> (formerly called <i>Sphaerotheca fuliginea</i>) Root Rot <i>Pythium</i> spp. Blight, Leaf Spot and Rot <i>Phytophthora</i> aerial blight Wilt <i>Fusarium oxysporum</i>	½ lb (8 oz) – 1 ½ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare For suppression, begin applications soon after emergence or transplant and when environmental conditions are conducive to disease development. Apply every 7 – 10 days. Apply through standard spray equipment with no less than 50 gal. water per Acre.
Citrus Fruits, including: Citron, Citrus Hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin, Orange, Pummelo, Satsuma Mandarin, Tangelo, Tangerine and Cultivars, Varieties and/or Hybrids of These.	Brown Spot, Leaf Spot, Stem-End Rot <i>Alternaria alternate</i> Black Mold Rot <i>Aspergillus</i> spp. Greening (Huanglongbing (HLB)) <i>Candidatus Liberibacter</i> spp. Post-Bloom Fruit Drop <i>Colletotrichum acutatum</i> Root Rot, Wilt <i>Fusarium</i> spp. Brown Rot, Foot Rot <i>Phytophthora</i> spp. Damping-off, Root Rot <i>Pythium</i> spp. Areolate Leaf Spot <i>Rhizoctonia solani</i> Blight, Twig Blight, Fruit Rot, Root Rot <i>Sclerotinia</i> Bacterial Leaf Spot <i>Xanthomonas campestris</i> Citrus Canker <i>Xanthomonas axonopodis</i> pv. <i>citri</i> Greasy Spot <i>Mycosphaerella citri</i>	½ lb (8 oz) – 1 ½ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare For suppression, begin applications at the onset of first new foliar flush on all citrus varieties and when environmental conditions are conducive to disease development. Apply every 7 – 14 days. Use Companion Biological Fungicide Wettable Powder in a tank mix or rotational program with other registered pesticide products. Apply through standard spray equipment with no less than 50 gal. water per Acre.

APPLICATIONS AS A FOLIAR OR SOIL SPRAY		
Crop	Disease	Product Application Rate, Timing & Frequency
Vine Crops Grape (Wine, Table and Raisin), Kiwifruit and Passionfruit.	Powdery Mildew <i>Uncinula necator</i> Damping-Off, Root Rot <i>Pythium</i> spp. Crown and Root Rot <i>Phytophthora</i> spp., <i>Phytophthora citricola</i> , <i>Phytophthora megasperma</i>	$\frac{1}{2}$ lb (8 oz) – 1 $\frac{1}{2}$ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare For suppression, begin applications when environmental conditions are conducive to disease development and repeat. Apply every 7 – 14 days. Apply through standard spray equipment with no less than 50 gal. water per Acre.
Herbs and Spices, including: Allspice, Angelica, Anise, Annatto, Basil, Chamomile, Caraway, Cardamom, Cassia, Celery Seed, Chervil (Dried), Chives, Cinnamon, Coriander, Cumin, Curry, Dill, Fennel, Fenugreek, Horehound, Hyssop, Juniper Berry, Lavender, Lemongrass, Lovage, Mace, Marigold, Marjoram, Mustard, Nasturtium, Nutmeg, Oregano, Parsley (Dried), Pepper, Rosemary, Rue, Saffron, Sage, Savory, Sweet Bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff and Wormwood. Mint	Black Root Rot, Early Blight <i>Alternaria</i> spp. Crown Rot, Damping-Off Fungus, Gray Mold, Leaf Blight <i>Botrytis cinerea</i> Root Rot <i>Pythium</i> spp. Blight, Leaf Spot and Rot <i>Phytophthora</i> aerial blight Wilt <i>Fusarium oxysporum</i>	$\frac{1}{2}$ lb (8 oz) – 1 $\frac{1}{2}$ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare For suppression, begin applications soon after emergence or transplant and when environmental conditions are conducive to disease development. Apply every 7 – 14 days. Apply through standard spray equipment with no less than 50 gal. water per Acre.
Fruiting Vegetables, including: Eggplant, Groundcherry, Okra, Pepino, Pepper (includes Bell Pepper, Chili Pepper, Cooking Pepper, Pimento and Sweet Pepper), Tomatillo, Tomato and Cultivars, Varieties and/or Hybrids of These.	Aspergillus spp. Black Root Rot, Early Blight <i>Alternaria</i> spp. Crown Rot, Damping-Off Fungus, Gray Mold, Leaf Blight <i>Botrytis cinerea</i> Root Rot <i>Pythium</i> spp. Late Blight, Blackeye / Buckeye Rot in Tomatoes <i>Phytophthora</i> spp. Wilt <i>Fusarium oxysporum</i> Root Rot, Bottom / Stem Rot <i>Rhizoctonia solani</i> Blight <i>Sclerotinia minor</i> Bacterial Leaf Spot <i>Xanthomonas campestris</i> Septoria Leaf Spot <i>Septoria lycopersici</i>	$\frac{1}{2}$ lb (8 oz) – 1 $\frac{1}{2}$ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare For suppression, begin applications soon after emergence or transplant and when environmental conditions are conducive to disease development. Can be used in a tank mix or rotational program with other registered pesticide products. Apply every 7 – 14 days. Apply through standard spray equipment with no less than 50 gal. water per Acre.

APPLICATIONS AS A FOLIAR OR SOIL SPRAY		
Crop	Disease	Product Application Rate, Timing & Frequency
Leafy Vegetables (Except Brassica Vegetables), including: Amaranth, Arugula, Cardoon, Celery, Celtuce, Chervil, Chinese Celery, Chrysanthemum (Edible-Leaved and Gariand), Corn Salad, Cress (Garden and Upland), Dandelion, Dock (Sorrel), Endive (Escarole), Fennel, Lettuce (Head and Leaf), Orach, Parsley, Purslane (Garden and Winter), Radicchio, Rhubarb, Spinach, Spinach (New Zealand and Vine) and Swiss Chard, including Those Grown for Seed Production.	Black Root Rot, Early Blight <i>Alternaria</i> spp. Crown Rot, Damping-Off Fungus, Gray Mold, Leaf Blight <i>Botrytis cinerea</i> Root Rot <i>Pythium</i> spp. Powdery Mildew <i>Golovinomyces cichoracearum</i> (formerly called <i>Erysiphe cichoracearum</i>), <i>Podosphaera xanthii</i> (formerly called <i>Sphaerotheca fuliginea</i>) Blight, Leaf Spot and Rot <i>Phytophthora</i> aerial blight Root Rot, Bottom / Stem Rot <i>Rhizoctonia solani</i> Lettuce Drop <i>Sclerotinia minor</i> Wilt <i>Fusarium oxysporum</i>	½ lb (8 oz) – 1 ½ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare For suppression, begin applications soon after emergence or transplant and when environmental conditions are conducive to disease development. Apply every 7 – 14 days. Apply through standard spray equipment with no less than 50 gal. water per Acre.
Legume Vegetables, including: Bean, Broad Bean, Chickpea, Guar, Jackbean, Lentil, Pea, and Pigeon Pea	Aspergillus spp. Black Root Rot, Early Blight <i>Alternaria</i> spp. Crown Rot, Damping-Off Fungus, Gray Mold, Leaf Blight <i>Botrytis cinerea</i> Root Rot <i>Pythium</i> spp. Blight, Leaf Spot and Rot <i>Phytophthora</i> aerial blight Root Rot, Bottom / Stem Rot <i>Rhizoctonia solani</i> Wilt <i>Fusarium oxysporum</i> Blight <i>Sclerotinia minor</i> Bacterial Blight / Leaf Spot <i>Xanthomonas campestris</i> Septoria Leaf Spot <i>Septoria lycopersici</i>	½ lb (8 oz) – 1 ½ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare For suppression, begin applications soon after emergence or transplant and when environmental conditions are conducive to disease development. Apply every 7 – 14 days. Apply through standard spray equipment with no less than 50 gal. water per Acre.
Bulb Vegetables, including: Fresh Leaves Chive, Garlic, Leek, Onion, Shallot and Cultivars, Varieties and/or Hybrids of These.	Black Root Rot, Early Blight <i>Alternaria</i> spp. Crown Rot, Damping-Off Fungus, Gray Mold, Leaf Blight <i>Botrytis cinerea</i> Root Rot <i>Pythium</i> spp. Blight, Leaf Spot and Rot <i>Phytophthora</i> aerial blight Blight <i>Sclerotinia minor</i> Bacterial Blight/ Leaf Spot <i>Xanthomonas campestris</i> Soft Rot, Angular Leaf Spot, Bacterial Soft Rot <i>Erwinia</i> spp.	½ lb (8 oz) – 1 ½ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare For suppression, begin applications when environmental conditions are conducive to disease development and repeat. Apply every 7 – 14 days. Apply through standard spray equipment with no less than 50 gal. water per Acre.

APPLICATIONS AS A FOLIAR OR SOIL SPRAY		
Crop	Disease	Product Application Rate, Timing & Frequency
Root and Tuber Vegetables, including: Arracacha, Arrowroot, Artichoke, Beet, Carrot, Cassava, Celeriac, Chayote (Root), Chervil (Turnip-Rooted), Chicory, Chufa, Dasheen, Ginger, Ginseng, Horseradish, Parsnip, Potato, Radish, Rutabaga, Salsify, Skirret, Sweet Potato, Turmeric, Turnip and Yam.	Black Root Rot, Early Blight <i>Alternaria</i> spp. Crown Rot, Damping-Off Fungus, Gray Mold, Leaf Blight <i>Botrytis cinerea</i> Root Rot <i>Pythium</i> spp. Soft Rot, Angular Leaf Spot, Bacterial Soft Rot <i>Erwinia</i> spp. Root Rot, Bottom / Stem Rot <i>Rhizoctonia solani</i> <i>Fusarium solani</i>	½ lb (8 oz) – 1 ½ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare For suppression, begin applications when environmental conditions are conducive to disease development and repeat. Apply every 7 – 14 days. Apply through standard spray equipment with no less than 50 gal. water per Acre.
Tropical and Subtropical Fruits, Inedible Peel (Except Banana, Passionfruit and Plantain), including: Mango, Papaya, Avocado and Pineapples.	Root Rot <i>Pythium</i> spp. Crown Rot, Damping-Off Fungus, Gray Mold, Leaf Blight <i>Botrytis cinerea</i> Powdery Mildew <i>Golovinomyces cichoracearum</i> (formerly called <i>Erysiphe cichoracearum</i>) Wilt <i>Fusarium oxysporum</i>	½ lb (8 oz) – 1 ½ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare For suppression, begin applications soon after emergence or transplant and when environmental conditions are conducive to disease development. Apply every 7 – 14 days. Apply through standard spray equipment with no less than 50 gal. water per Acre.
Grasses Grown for Seed, Sod Production and Pasture and Forage Grasses	Anthracnose <i>Colletotrichum graminicola</i> Brown Patch <i>Rhizoctonia</i> spp. Dollar Spot <i>Sclerotinia</i> Summer Patch <i>Magnaporthe poae</i> Fusarium Patch <i>Fusarium nivale</i> Pythium <i>Pythium</i> spp.	½ lb (8 oz) – 1 ½ lb per Acre 0.226 Kg (226 g) – 0.680 Kg per Hectare Apply at time of seeding, plugging sprigs and newly cut ribbons. Apply through standard spray equipment with no less than 50 gal water per Acre. Apply every 7 – 14 days.

HOW TO APPLY TO CROPS

Transplant Water Applications:

Mix with transplant water. Drench at the time of planting plug, starter plant or bare-root transplant in field in transplant water. Alternatively, for bare-root transplants, soak in the solution 1 to 5 minutes and plant immediately.

In-Furrow:

Apply as an in-furrow spray, in sufficient water, to obtain thorough coverage of the open furrow, and then cover soil. Apply at time of planting plug, starter plant or cutting. In-furrow applications are more effective against soilborne diseases that may develop later in the growing season.

Banding:

Spray directly onto soil using single or multiple nozzles. Adjust to provide thorough coverage of the soil surface and surrounding plants. Limit band to 7" or less. Apply prior to plastic. Begin applications when environmental conditions are conducive to disease development. Apply on 7- to 14-day intervals or as specified on this label.

Drip Irrigation:

Add to stock solution. Do not mix with concentrated acids or if pH of solution is below 4 or above 9. Use all the solution on the same day. Inject during the last half of the irrigation cycle so that Companion Biological Fungicide Wettable Powder gets into the root zone and is not lost to deep percolation. Begin applications when environmental conditions are conducive to disease development. Apply on 7- to 14-day intervals or as specified on this label.

Sprinkler or Flood (Basin), Furrow, and Border Irrigation:

Use through sprinkler (e.g., center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move systems) or flood (basin), furrow, and border irrigation systems. Begin applications when environmental conditions are conducive to disease development. Apply on 7- to 14-day intervals or as specified on this label.

CHEMIGATION INSTRUCTIONS

Overall Requirements:

- 1) Apply this product only through sprinkler (including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move); flood (basin), furrow or border; or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system.
- 2) Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- 3) If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- 4) 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.
- 5) 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.

Specific Requirements for Chemigation Systems Connected to 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, 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, 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 flow 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.
- 7) Do not apply when wind speed favors drift beyond the area intended for treatment.

Specific Requirements for Sprinkler Chemigation:

- 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 that will stop the water pump motor 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.

Specific Requirements for Flood (Basin), Furrow and Border Chemigation:

- 1) Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.
- 2) Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
 - a. 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.
 - b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
 - c. 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.
 - d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
 - e. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
 - f. 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.

Specific Requirements for Drip (Trickle) Chemigation:

- 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 that will stop the water pump motor 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.

Application Instructions for All Types of Chemigation:

- 1) Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injector system. Flush with clean water. Failure to provide a clean tank, void of scale or residues, may cause product to lose effectiveness or strength.
- 2) Determine the treatment rates as indicated in the directions for use and make proper dilutions. Except for drip irrigation that requires the product to be injected during the last half of irrigation cycle, the product can be applied continuously or at any time during the water application.
- 3) Prepare a solution in the chemical tank by filling the tank with the required water and then adding the product as required.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Store in a dry place out of direct sunlight, away from heat sources and under typical room temperatures. Keep from overheating or freezing.

Pesticide Disposal: Wastes resulting from the use of this product must 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 container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

CONDITIONS OF SALE AND WARRANTY

The DIRECTIONS FOR USE of this product are believed to be adequate and must be followed carefully, it is impossible to eliminate all risk inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result due to such factors as weather conditions, presence or absences of other materials, or the manner of use or application, all of which are beyond the control of DPH Biologicals LLC, the manufacturer, or the seller.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE PRODUCTS SOLD TO YOU ARE FURNISHED "AS IS" BY DPH BIOLOGICALS LLC THE MANUFACTURER AND THE SELLER ARE SUBJECT ONLY TO THE MANUFACTURER'S WARRANTIES, IF ANY, WHICH APPEAR ON THE LABEL OF THE PRODUCT SOLD TO YOU. EXCEPT AS WARRANTED BY THIS LABEL, DPH BIOLOGICALS LLC, THE MANUFACTURER, OR THE SELLER MAKES NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO THE BUYER OR THE USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD FOR USE OF THE PRODUCT, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND DPH BIOLOGICALS LLC, THE MANUFACTURER'S OR THE SELLER'S TOTAL LIABILITY SHALL BE LIMITED TO DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT. NO AGENT OR EMPLOYEE OF DPH BIOLOGICALS LLC, OR THE SELLER IS AUTHORIZED TO AMEND THE TERMS OF THIS WARRANTY DISCLAIMER OR THE PRODUCT'S LABEL OR TO MAKE A PRESENTATION OR RECOMMENDATION DIFFERENT FROM OR INCONSISTENT WITH THE LABEL OF THIS PRODUCT.

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