

# COMPANION<sup>®</sup>

## BIOLOGICAL FUNGICIDE WETTABLE POWDER

For Agricultural Use

**Active Ingredient:**

*Bacillus subtilis* GB03\* ..... 4.26%

**Other Ingredients:** ..... 95.74%

**Total:** ..... 100.00%

\*Not less than  $6.17 \times 10^7$  Colony  
Forming Units (CFU) per Gram



- Can be Used for Foliar and Soil Applications in Field, Nursery and Forest Production Sites
- For Use in Organic Production



For Organic Use

- For Prevention, Control and Suppression of Soil and Foliar Diseases
- Activates ISR (Induced Systemic Resistance) in Plants



**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

(See back panel for additional precautionary statements)



Another quality product from:  
**Growth Products, Ltd.**  
80 Lafayette Ave., White Plains, NY 10603 USA  
Made in the U.S.A.   
Questions? Call (800) 648-7626  
[www.growthproducts.com](http://www.growthproducts.com)  
[questions@growthproducts.com](mailto:questions@growthproducts.com)

EPA Registration No. 71065-4  
EPA Establishment No. 71065-NY-001  
Growth Products<sup>®</sup> and Companion<sup>®</sup> are  
Registered Trademarks of Growth Products, Ltd.

Net Contents:  8 oz.  5 Lbs.  20 Lbs.  40 Lbs.

**COMPANION® BIOLOGICAL FUNGICIDE  
WETTABLE POWDER**

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals:** CAUTION. Causes moderate eye and skin irritation. Avoid contact with eyes, skin 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
- Waterproof gloves
- Shoes plus socks

Mixer/loaders and applicators must wear a dust/mist-filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. 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, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Requirements**

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 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, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. Do not contaminate water when disposing of equipment washwater. Do not apply this product while bees are actively visiting the area. This product has not been evaluated for hazards to nontarget insects, fish, aquatic invertebrates and other aquatic organisms.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. 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.

**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), notification to workers, 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). There is a REI of four (4) hours for this product. 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 over long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

**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.

**GENERAL INFORMATION AGRICULTURAL CROPS**

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

**Product Description:**

COMPANION® Biological Fungicide Wettable Powder is a broad spectrum biological fungicide for the prevention, control and suppression of many soil borne and foliar diseases on all agricultural crops. Apply as a foliar spray or as soil drench alone or in an alternating spray program with other registered crop protection products. COMPANION® Biological Fungicide Wettable Powder contains the active ingredient *Bacillus subtilis* GB03 which is a naturally occurring (Non-GMO) rhizosphere bacterium, plant growth-promoting rhizobacteria (PGPR) 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 subtilis* GB03 is known to trigger the plant's natural 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 to enhance disease control and reduce the occurrence of resistance. For use on all field grown food crops including vegetables, herbs, small fruits, berries, fruit and nut trees. For use in greenhouse production and hydroponics.

**DISEASE LIST**

<p><b><i>Alternaria</i> spp.</b> - Black Root Rot, Early Blight</p> <p><b><i>Aspergillus</i> spp.</b></p> <p><b><i>Botrytis cinerea</i></b> - Crown Rot, Damping-off Fungus, Gray Mold, Leaf blight</p> <p><b><i>Colletotrichum orbiculare</i></b> - Anthracnose</p> <p><b><i>Colletotrichum</i> spp.</b> - Anthracnose</p> <p><b><i>Didymella bryoniae</i></b> - Gummy Stem Blight</p> <p><b><i>Erwinia</i></b> - Soft Rot</p> <p><b><i>Erwinia carotovora</i></b> - Cucurbit Wilting, Angular Leaf Spot</p> <p><b><i>Erwinia tracheiphila</i></b> - Cucurbit Wilting, Angular Leaf Spot</p> <p><b><i>Golovinomyces cichoracearum</i>, formerly called <i>Erysiphe cichoracearum</i></b> - Powdery Mildew</p>	<p><b><i>Fusarium oxysporum</i></b> - Wilt</p> <p><b><i>Fusarium solani</i></b></p> <p><b><i>Phytophthora aerial blight</i></b> - Blight, Leafspot and Rot</p> <p><b><i>Phytophthora</i> spp.</b> - Late Blight, Blackeye/Buckeye Rot in Tomatoes</p> <p><b><i>Plasmiodiophora brassicae</i></b> - Corky Root, Clubroot</p> <p><b><i>Podosphaera xanthii</i>, formerly called <i>Sphaerotheca fuliginea</i>.</b> - Powdery Mildew</p> <p><b><i>Pseudomonas syringae</i></b> - Angular Leaf Spot</p> <p><b><i>Pythium aphanidermatum</i></b> - Root Rot</p> <p><b><i>Pythium irregulare</i></b> - Root Rot</p> <p><b><i>Pythium</i> spp.</b> - Root Rot</p> <p><b><i>Rhizoctonia solani</i></b> - Root Rot, Bottom / Stem Rot</p>	<p><b><i>Sclerospora graminicola</i></b> - Downy Mildew</p> <p><b><i>Sclerotinia minor</i></b> - Blight</p> <p><b><i>Sclerotinia minor</i></b> - Lettuce Drop</p> <p><b><i>Sclerotinia lycoperici</i></b> - Septoria Leaf Spot</p> <p><b><i>Uncinula necator</i></b> - Powdery Mildew</p> <p><b><i>Xanthomonas campestris</i></b> - Bacterial Leafspot</p> <p><b><i>Xanthomonas axonopodis</i></b> - Citrus Canker</p>
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**Modes of Action:**

COMPANION® Biological Fungicide Wettable Powder has multiple modes of action in preventing, controlling and suppressing plant diseases. It produces a broad-spectrum antibiotic (lutra) lipopeptides that disrupts pathogen cell-wall formation. It is a competitive and fast colonizing rhizosphere bacterium, which occupies the plant's root hairs and leaves, and prevents the growth and antagonistic effects of soil borne and foliar pathogens.

*Bacillus subtilis* GB03 is known to stimulate phytohormones, which trigger the plant's systemic resistance to disease (Induced Systemic Resistance - ISR), the defense mechanisms of the plant for prolonged periods of time. It is non-selective to plant materials.

**PGPR (Plant Growth-Promoting Rhizobacteria):**

*Bacillus subtilis* GB03 is classified as a Plant Growth-Promoting Rhizobacteria (PGPR). PGPR are free-living bacteria that have beneficial effects on plants as they increase plant productivity, enhance crop fertility, growth and root development.

**INTEGRATED PEST (DISEASE) MANAGEMENT (IPM)**

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

**RESISTANCE MANAGEMENT**

COMPANION® Biological Fungicide Wettable Powder is an important tool in the prevention of resistant pathogens that often occur with the continued use of chemical fungicides, since COMPANION® Biological Fungicide Wettable Powder has multiple and unique modes of action that inhibit the pathogens ability to develop resistance. Use COMPANION® Biological Fungicide Wettable Powder in combination with lower rates of chemical fungicides for improved efficacy and /or in rotation with chemical fungicides to reduce overall chemical usage.

COMPANION® Biological Fungicide Wettable Powder can be tank-mixed with other products.

**PREHARVEST INTERVAL**

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

**AERIAL DRIFT REDUCTION ADVISORY INFORMATION**

It is the responsibility of the applicator and grower to avoid spray drift. Do not spray when wind speed favors drift beyond the intended application area. The effects of equipment and weather factors will determine the potential drift. When states have more stringent regulations, they must be observed. Contact your State Extension Agent for spray drift prevention guidelines in your area.

**APPLICATION INSTRUCTIONS – AGRICULTURAL USE**

Apply COMPANION® Biological Fungicide Wettable Powder with all types of sprayers or with sprinkler systems used for making ground applications. Apply COMPANION® Biological Fungicide Wettable Powder through irrigation systems, drip (trickle), fertigation, overhead spray and mist systems, continuous feed, closed ebb and flood systems. 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. Make a slurry in plain water prior to adding to spray tank.
- 5) Determine the treatment rates as indicated in the directions for use and make proper dilutions.
- 6) Partially fill the spray tank with clean water to the ¾ 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.

**AGRICULTURAL APPLICATIONS AS A FOLIAR AND SOIL SPRAY**

CROP	DISEASE	PRODUCT USE RATE
<p><b>Berries</b>                      Blackberry (including Bingleberry, Black Satin Berry, Boysenberry, Cherokee Blackberry, Chesterberry, Cheyenne Blackberry, Coryberry, Darrowberry, Dewberry, Dirksen Thornless Berry, Himalayaberry, Hullberry, Lavacaberry, 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, Loganberry, Raspberry (black and red) and cultivars, varieties and/or hybrids of these.</p>	<p><b>Black Root Rot, Early Blight</b>  <i>Alternaria spp.</i>  <b>Crown Rot, Damping-off Fungus, Gray Mold, Leaf blight</b>  <i>Botrytis cinerea</i>  <b>Root Rot</b>  <i>Pythium spp.</i>  <b>Blight, Leafspot and Rot</b>  <i>Phytophthora aerial blight</i>  <b>Wilt</b>  <i>Fusarium oxysporum</i></p>	<p>½ lb. (8 oz) – 1 ½ lb per Acre                      560 grams – 1.6 Kg per Hectare                      For suppression, begin application prior to disease development and when environmental conditions are conducive to disease development.                      Apply every 7 – 14 days.</p>
<p><b>Brassica Vegetables (Cole Crops)</b>                      Broccoli, Chinese Broccoli, Broccoli rabe, Brussels sprouts, Cabbage, Chinese cabbage (Bok choy and Napa), Chinese mustard cabbage (Gai choy), Cauliflower, Cavolo broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens.</p>	<p><b>Black Root Rot, Early Blight</b>  <i>Alternaria spp.</i>  <b>Crown Rot, Damping-off Fungus, Gray Mold, Leaf blight</b>  <i>Botrytis cinerea</i>  <b>Corky Root, Clubroot</b>  <i>Plasmodiophora brassicae</i>  <b>Root Rot</b>  <i>Pythium spp.</i>  <b>Blight, Leafspot and Rot</b>  <i>Phytophthora aerial blight</i>  <b>Wilt</b>  <i>Fusarium oxysporum</i></p>	<p>½ lb. (8 oz) – 1 ½ lb per Acre                      560 grams – 1.6 Kg per Hectare                      For suppression, begin application 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 fungicide.                      Apply every 7 – 10 days.</p>

**AGRICULTURAL APPLICATIONS AS A FOLIAR AND SOIL SPRAY**

<p><b>Cucurbits</b> Chayote, Chinese Waxgourd, Citron Melon, Cucumber, Gherkin, Edible Gourds (includes Chinese Okra, Cucuzza, Hechima and Hyotan), Momordica 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 Cucumis melo), Pumpkin, Summer Squash (includes Crookneck Squash, Scallop Squash, Straightneck Squash, Vegetable Marrow and Zucchini), Winter Squash (includes Acorn Squash, Butternut Squash, Calabaza, Hubbard Squash, Spaghetti Squash) and Watermelon (includes cultivars, hybrids and/or varieties of Citrullus lanatus).</p>	<p><b>Black Root Rot, Early Blight</b> <i>Alternaria</i> spp. <b>Crown Rot, Damping-off Fungus, Gray Mold, Leaf blight</b> <i>Botrytis cinerea</i> <b>Gummy Stem Blight</b> <i>Didymella bryoniae</i> <b>Cucurbit Wilting, Soft Rot, Angular Leaf Spot, Bacterial Soft Rot</b> <i>Erwinia</i> spp. <b>Powdery Mildew</b> <i>Golovinomyces cichoracearum</i>, formerly called <i>Erysiphe cichoracearum</i>, <i>Podosphaera xanthii</i>, formerly called <i>Sphaerotheca fuliginea</i>. <b>Root Rot</b> <i>Pythium</i> spp. <b>Blight, Leafspot and Rot</b> <i>Phytophthora aerial blight</i> <b>Wilt</b> <i>Fusarium oxysporum</i></p>	<p>½ lb. (8 oz) – 1 ½ lb per Acre 560 grams – 1.6 Kg per Hectare For suppression, begin application soon after emergence or transplant and when environmental conditions are conducive to disease development. Apply every 7 – 10 days.</p>
<p><b>Citrus</b> Citron, Citrus hybrids, Grapefruit, Kumquat, Lemons, Limes, Mandarin, Oranges, Pummelo, Satsuma mandarin, Tangelo, Tangerines, and cultivars, varieties and hybrids of these.</p>	<p><b>Brown Spot, Leaf Spot, Stem-end Rot</b> <i>Alternaria alternata</i> <b>Black Mold Rot</b> <i>Aspergillus</i> spp. <b>Greening (Huanglongbing (HLB))</b> <i>Candidatus liberibacter</i> spp. <b>Postbloom Fruit Drop</b> <i>Colletotrichum acutatum</i> <b>Root Rot, Wilt</b> <i>Fusarium</i> spp. <b>Brown Rot, Foot Rot,</b> <i>Phytophthora</i> spp. <b>Damping-off, Root Rot</b> <i>Pythium</i> spp. <b>Areolate Leaf Spot</b> <i>Rhizoctonia solani</i> <b>Blight, Twig Blight, Fruit Rot, Root Rot</b> <i>Sclerotinia</i> <b>Bacterial Leafspot</b> <i>Xanthomonas campestris</i> <b>Citrus Canker</b> <i>Xanthomonas axonopodis pv. citri</i> <b>Greasy spot</b> <i>Mycosphaerella citri</i></p>	<p>½ lb. (8 oz) – 1 ½ lb per Acre 560 grams – 1.6 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 products.</p>
<p><b>Vine Crops</b> Grapes (wine, table and raisin), Kiwi and Passion Fruit.</p>	<p><b>Powdery Mildew</b> <i>Ucinula necator</i> <b>Damping-off, Root Rot</b> <i>Pythium</i> spp. <b>Crown and Root Rot</b> <i>Phytophthora</i> spp., <i>P. citricola</i>, <i>P. megasperma</i></p>	<p>½ lb. (8 oz) – 1 ½ lb per Acre 560 grams – 1.6 Kg per Hectare Apply every 7 – 14 days. For suppression, begin application when environmental conditions are conducive to disease development and repeat.</p>
<p><b>Herbs and Spices</b> Allspice, Angelica, Anise, Annatto, Basil, Chamomile, Caraway, Cardamom, Cassia, Celery seed, Chervil, Chives, Cinnamon, Cloe, Coriander, Cumin, Curry, Dill, Fennel, Fenugreek, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage, Mace, Marigold, Marjoram, Mint, Mustard, Nasturtium, Nutmeg, Oregano, Parsley, Pepper, Rosemary, Rue, Saffron, Sage, Savory, Sweet bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.</p>	<p><b>Black Root Rot, Early Blight</b> <i>Alternaria</i> spp. <b>Crown Rot, Damping-off Fungus, Gray Mold, Leaf blight</b> <i>Botrytis cinerea</i> <b>Root Rot</b> <i>Pythium</i> spp. <b>Blight, Leafspot and Rot</b> <i>Phytophthora aerial blight</i> <b>Wilt</b> <i>Fusarium oxysporum</i></p>	<p>½ lb. (8 oz) – 1 ½ lb per Acre 560 grams – 1.6 Kg per Hectare For suppression, begin application soon after emergence or transplant and when environmental conditions are conducive to disease development. Apply every 7 – 14 days.</p>

**AGRICULTURAL APPLICATIONS AS A FOLIAR AND SOIL SPRAY**

<p><b>Fruiting Vegetables</b> Eggplant, Groundcherry, Okra, Pepino, Pepper (includes Bell Pepper, Chili Pepper, Cooking Pepper, Pimento, Sweet Pepper), Tomatillo, Tomato, and cultivars, varieties and/or hybrids of these.</p>	<p><i>Aspergillus spp.</i> <b>Black Root Rot, Early Blight</b> <i>Alternaria spp.</i> <b>Crown Rot, Damping-off Fungus, Gray Mold, Leaf blight</b> <i>Botrytis cinerea</i> <b>Root Rot</b> <i>Pythium spp.</i> <b>Late Blight, Blackeye/Buckeye Rot in Tomatoes</b> <i>Phytophthora spp.</i> <b>Wilt</b> <i>Fusarium oxysporum</i> <b>Root Rot, Bottom / Stem Rot</b> <i>Rhizoctonia solani</i> <b>Blight</b> <i>Sclerotinia minor</i> <b>Bacterial Leafspot</b> <i>Xanthomonas campestris</i> <b>Septoria Leaf Spot</b> <i>Septoria lycoperici</i></p>	<p>½ lb. (8 oz) – 1 ½ lb per Acre  560 grams – 1.6 Kg per Hectare  For suppression, begin application 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 fungicides.  Apply every 7 – 14 days.</p>
<p><b>Leafy Vegetables</b> Amaranth, Arugula, Cardoon, Celery, Celtuce, Chervil, Chinese Celery, Chrysanthemum (edible-leaved and garland), 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.</p>	<p><b>Black Root Rot, Early Blight</b> <i>Alternaria spp.</i> <b>Crown Rot, Damping-off Fungus, Gray Mold, Leaf blight</b> <i>Botrytis cinerea</i> <b>Root Rot</b> <i>Pythium spp.</i> <b>Powdery Mildew</b> <i>Golovinomyces cichoracearum (formerly called Erysiphe cichoracearum),</i> <i>Podosphaera xanthii (formerly called Sphaerotheca fuliginea).</i> <b>Blight, Leafspot and Rot</b> <i>Phytophthora aerial blight</i> <b>Root Rot, Bottom / Stem Rot</b> <i>Rhizoctonia solani</i> <b>Lettuce Drop</b> <i>Sclerotinia minor</i> <b>Wilt</b> <i>Fusarium oxysporum</i></p>	<p>½ lb. (8 oz) – 1 ½ lb per Acre  560 grams – 1.6 Kg per Hectare  For suppression, begin application soon after emergence or transplant and when environmental conditions are conducive to disease development.  Apply every 7 – 14 days.</p>
<p><b>Legumes</b> Beans, Broad beans, Chickpea, Guar, Jackbean, Lentil, Peas, Pigeon pea, Soybean.</p>	<p><i>Aspergillus spp.</i> <b>Black Root Rot, Early Blight</b> <i>Alternaria spp.</i> <b>Crown Rot, Damping-off Fungus, Gray Mold, Leaf blight</b> <i>Botrytis cinerea</i> <b>Root Rot</b> <i>Pythium spp.</i> <b>Blight, Leafspot and Rot</b> <i>Phytophthora aerial blight</i> <b>Root Rot, Bottom / Stem Rot</b> <i>Rhizoctonia solani</i> <b>Wilt</b> <i>Fusarium oxysporum</i> <b>Blight</b> <i>Sclerotinia minor</i> <b>Bacterial Blight/ Leafspot</b> <i>Xanthomonas campestris</i> <b>Septoria Leaf Spot</b> <i>Septoria lycoperici</i></p>	<p>½ lb. (8 oz) – 1 ½ lb per Acre  560 grams – 1.6 Kg per Hectare  For suppression, begin application soon after emergence or transplant and when environmental conditions are conducive to disease development.  Apply every 7 – 14 days.</p>
<p><b>Bulb Vegetables</b> Chives, Garlic, Leeks, Onions, Shallots, and cultivars, varieties and/or hybrids of these.</p>	<p><b>Black Root Rot, Early Blight</b> <i>Alternaria spp.</i> <b>Crown Rot, Damping-off Fungus, Gray Mold, Leaf blight</b> <i>Botrytis cinerea</i> <b>Root Rot</b> <i>Pythium spp.</i> <b>Blight, Leafspot and Rot</b> <i>Phytophthora aerial blight</i> <b>Blight</b> <i>Sclerotinia minor</i> <b>Bacterial Blight/ Leafspot</b> <i>Xanthomonas campestris</i> <b>Soft Rot, Angular Leaf Spot, Bacterial</b> <i>Erwinia spp.</i></p>	<p>½ lb. (8 oz) – 1 ½ lb per Acre  560 grams – 1.6 Kg per Hectare  For suppression, begin applications when environmental conditions are conducive to disease development and repeat.  Apply every 7 – 14 days.</p>



AGRICULTURAL APPLICATIONS AS A FOLIAR AND SOIL SPRAY		
<b>Root / Tuber and Corm Vegetables</b> Arracacha, Arrowroot, Artichokes, Beets, Carrot, Cassava, Celeriac, Chayote, Chervil, Chicory, Chufa, Dasheen, Ginger, Ginseng, Horseradish, Parsnip, Potato, Radishes, Rutabaga, Salsify, Skirret, Sweet potato, Tumeric, Turnip, Yams.	<b>Black Root Rot, Early Blight</b> <i>Alternaria spp.</i> <b>Crown Rot, Damping-off Fungus, Gray Mold, Leaf blight</b> <i>Botrytis cinerea</i> <b>Root Rot</b> <i>Pythium spp.</i> <b>Soft Rot, Angular Leaf Spot, Bacterial Soft Rot</b> <i>Erwinia spp.</i> <b>Root Rot, Bottom / Stem Rot</b> <i>Rhizoctonia solani</i> <i>Fusarium solani</i>	½ lb. (8 oz) – 1 ½ lb per Acre 560 grams – 1.6 Kg per Hectare For suppression, begin applications when environmental conditions are conducive to disease development and repeat. Apply every 7 – 14 days.
<b>Tropical / Sub Tropical Fruits, Mangos, Papaya, Avocados, Coffee, Pineapples.</b>	<b>Root Rot</b> <i>Pythium spp.</i> <b>Crown Rot, Damping-off Fungus, Gray Mold, Leaf blight</b> <i>Botrytis cinerea</i> <b>Powdery Mildew</b> <i>Golovinomyces cichoracearum (formerly called Erysiphe cichoracearum)</i> <b>Wilt</b> <i>Fusarium oxysporum</i>	½ lb. (8 oz) – 1 ½ lb per Acre 560 grams – 1.6 Kg per Hectare For suppression, begin soon after emergence or transplant and when environmental conditions are conducive to disease development. Apply every 7 – 14 days.
<b>Bananas and Plantains</b>	<b>Black Sigatoka</b> <i>Myrosphaerella spp.</i>	Begin application when leaves first appear and repeat every 7 days. For improved disease control COMPANION® Biological Fungicide Wettable Powder can be tank mixed with oil or other registered fungicides for control of Black Sigatoka.
<b>Grasses Grown for Seed, Sod Production, Pasture and Forage Grasses</b>	<b>Anthrachnose</b> <i>Colletotrichum graminicola</i> <b>Brown Patch</b> <i>Rhizoctonia spp.</i> <b>Dollar Spot</b> <i>Sclerotinia</i> <b>Summer Patch</b> <i>Magnaporthe poae</i> <b>Fusarium Patch</b> <i>Fusarium nivale</i> <b>Pythium</b> <i>Pythium spp.</i>	½ lb. (8 oz) – 1 ½ lb per Acre 560 grams – 1.6 Kg per Hectare Apply at times of seeding, plugging, sprigs, and newly cut ribbons. Apply through standard spray equipment with no less than 50 gallons of water per acre. Apply every 7 – 14 days.
<b>Seed Treatment for any labeled crops</b>	<i>Rhizoctonia spp.</i> <i>Fusarium spp.</i>	6 lbs – 12 lbs per 100 lbs of seed Apply as a water-based slurry or mist for seed treatment. Use alone or in combination with other seed treatment fungicides and insecticides.

## AS A FOLIAR AND SOIL DRENCH APPLICATION

### HOW TO APPLY

#### Field Applications:

Mix with transplant water. Drench at the time of planting plug, starter plant, and bare-root transplant in field in transplant water. Or soak bare-root transplant 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, covering soil. Apply at time of planting plug, starter plant or cutting. In-furrow applications are more effective against soil borne 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 soil surface, surrounding plants. Limit band to 7" or less. Apply prior to plastic. Begin applications when conditions first become favorable for disease development. Apply on a 7 – 14 day intervals or as required.

#### 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 of the solution on the same day. Inject during the last half of irrigation cycle so that COMPANION® Biological Fungicide Wettable Powder in the root zone, is not lost to deep percolation. Begin applications when conditions first become favorable for disease development.

Apply on a 7 – 14 day intervals or as required.

#### Seed Treatment:

Prepare no more mixture than is required for the immediate operation.

**For pre-plant seed treatment:** Do not use treated seed for food or feed purposes or process for oil. Treat only those seeds needed for immediate use, minimizing the interval between treatment and planting. Do not store excess treated seeds beyond planting. When tank mixing with other seed treatment products, observe all directions for use, crops/sites, use rates, dilution ratios, precautions, and limitations that appear on the tank mix partner label. No label dosage may be exceeded and the most restrictive label precautions and limitations must be followed.

**For commercial seed treatment:** All seed treated commercially with this product must be colored with an EPA-approved dye or colorant of a suitable color to prevent accidental use as food for man or feed for animals. When tank mixing with other seed treatment products, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations that appear on the tank mix partner label. No label dosage may be exceeded and the most restrictive label precautions and limitations must be followed.

#### Spray:

Use through sprinkler, center pivot, lateral move, end tow, side-wheel roll, traveler, solid or hand move systems. Begin applications when conditions first become favorable for disease development. Apply on a 7 – 14 day intervals or as required.

## CHEMIGATION

### General Requirements -

- 1) Apply this product only through a drip system or sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, hand move, flood (basin), furrow, 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 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 which 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) The 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 which 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 which 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. 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 product as required. The product will immediately go into suspension without any required agitation.

### Notice - Read carefully conditions of sale and limited warranty statement.

As its sole express warranty, Growth Products, Ltd., warrants that this product conforms to the microbial description on the label and is reasonably fit for purposes stated on the label only when used in accordance with directions and instructions specified on the label, subject to the inherent risks set forth above. To the extent consistent with applicable law, Growth Products, Ltd. neither makes nor authorizes any of its distributors to make any warranty of fitness or merchantability, guaranty or representation, express or implied, concerning this material. Buyer assumes the responsibility to handle, use and store this product in accordance with the safety instructions and use directions contained on the label. To the extent consistent with applicable law, the Buyer/User purchases this product to the foregoing Conditions of Sale and Warranty which may be varied only by a written agreement signed by a duly authorized representative of Growth Products, Ltd., and if these terms are not acceptable, return all product to the place of purchase, unopened for a full refund.

## 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 and away from heat sources. Keep from overheating or freezing.

**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:** Non-refillable container. Do not reuse or refill this container. Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. 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.

## FIRST AID

If in eyes	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15 – 20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
If on skin or clothing	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15 – 20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>

Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. You may also contact 1-800-222-1222 for emergency medical treatment information.