



COMPANION[®] BIOLOGICAL FUNGICIDE WETTABLE POWDER

- Stop Bud Rot Organically - OMRI Listed
- Activates Induced Systemic Resistance (ISR)
- Enhance Root & Plant Growth
- Organic Fungicide Solution

- Combat Top Cannabis Diseases Including Gray Mold (Botrytis), Powdery Mildew and Fusarium
- Easy to Apply

ACTIVE INGREDIENT:

Bacillus subtilis GB03*4.26%
Other Ingredients:95.74%
Total:100.00%
*Not less than 6.17×10^7 Colony Forming Units (CFU) per Gram

TECHNICAL SPECIFICATIONS:

pH 4.5

PRODUCT DESCRIPTION:

Companion®WP offers an-easy-to use wettable powder that is 100% soluble. It is a broad spectrum Biological Fungicide for the prevention, control and suppression of soil and foliar fungal and bacterial diseases. Apply at planting and throughout the growing season. Companion® WP quickly forms a protection zone around seeds or transplant roots. Use on all types of crops to control diseases such as *Phytophthora*, *Fusarium*, *Pythium*, *Sclerotinia*, and on foliar diseases such as *Botrytis*, Powdery mildew, *Sclerotinia*, *Xanthomonas* and *Erwinia*. OMRI (Organic Materials Review Institute) has determined that Companion WP is allowed for use in organic production according to the USDA National Organic Program. (NOP)

It contains a natural rhizosphere bacteria that quickly populates the soil, forming protective colonies (biofilm) on and around delicate root hairs and on the leaf surface, preventing and destroying diseases. This biofilm acts as a dense barrier, shielding the roots from disease. It is a gram-positive bacterium which survives in extreme environmental conditions including heat & drought, making it a durable and reliable fungicide that

growers can trust.



This unique biological has been studied for years at leading universities and is proven to elicit the plants' natural defense resistance (ISR), to fight against many pathogens. Companion can be used in combination with other fungicides and phosphites (PO_3) at reduced label rates, boosting their efficacy, resulting in higher yields and more marketable crop. Companion can be used up to harvest and has a REI of 4 hours.



Companion's GB03 is natural rhizosphere microorganism that produces metabolites and enzymes that promote plant growth and vigor and disease resistance. These metabolites will reduce the harmful effects of TDS (Total Dissolved Solids) buildup resulting from repeated applications of both chemicals and high salt fertilizers.

A SINGLE PRODUCT WITH MULTIPLE APPROACHES TO DISEASE CONTROL:

Unlike synthetic fungicides that target a specific protein synthesis or the cell membrane, Companion® Biological Fungicide has multiple modes of action involved in its bio-control performance to fight pathogens. It combines four modes of action to suppress diseases:

1. GB03 strain of *Bacillus subtilis* produces a broad spectrum antibiotic, Iturin, an antifungal /antibacterial lipopep-

Companion Biological Fungicide Wettable Powder	Seedlings and Clones	Transplanting	Growth Phase	Transition and Early Bloom	Full Bloom	Finishing
Number of Weeks			1-4	1-3	4-8	
Hours of Light			18	12	12	12
Organic Production	5-10 g	5-10 g	5-10 g	5-10 g	5-10 g	5-10 g
Soil & Soilless Mixes	5-10 g	5-10 g	5-10 g	5-10 g	5-10 g	5-10 g
Foliar Applications	5-10 g	5-10 g	5-10 g	5-10 g	5-10 g	5-10 g
Hydroponic	5-10 g	5-10 g	5-10 g	5-10 g	5-10 g	5-10 g

Apply weekly, amounts listed are to be added per 1 US Gallon (3.79 liters)

Cannabis Application Recommendations		
Application	Rate	Frequency / Notes
All Strains of Cannabis Grown in Soil or Soilless Mixes Indoors and Outdoors	Mix 5-10 grams per gallon water. For larger applications mix ½-1 ½ pound per 100 gal water.	Begin applications at time of transplanting or seeding. Apply weekly through growing cycle.
Hydroponics and Constant Feed	Charging: Mix 5-10 grams per gallon water.	Add whenever nutrient solution reservoir is changed. Replenish every 7-10 days or when water is changed.
Seeding Disease Protection	Mix 5-10 grams per gallon water. For larger applications mix ½-1 ½ pound per 100 gal water.	Drench seed trays until thoroughly soaked at time of seeding. Repeat in 7-14 days.
Clones Disease Protection	Mix 5-10 grams per gallon water. For larger applications mix ½-1 ½ pound per 100 gal water.	Thoroughly drench rockwool, or root cubes before sticking cutting. Also, drench trays of cutting, with solution of Companion after planting. Repeat in 7-10 days.
Sizing-Up & Transplanting	Mix 5-10 grams per gallon water. For larger applications mix ½-1 ½ pound per 100 gal water.	After planting in new container, thoroughly drench plant with diluted Companion.
Prevent Bud Rot Caused by Botrytis Cinerea or Gray Mold	Foliar Spray: 5-10 grams per gallon water. For larger applications mix ½-1 ½ pound per 100 gal water.	Spray foliar applications weekly throughout entire flowering phase and up until harvest. Spray until run-off

tide that destroys pathogens by puncturing their cell walls so that the pathogen desiccates. When used in conjunction with synthetic fungicides, Companion improves their efficacy by allowing them to easily move into the cell.

2. *Bacillus subtilis* GB03 produces unique metabolites (lipoproteins) that have antagonistic activity against pathogens inhibiting their protein production.

3. Companion activates the plant's natural defenses, Induced Systemic Resistance (ISR), allowing the plant's immune system to ward off disease and reduce its susceptibility to pathogen attack.

4. Unlike traditional fungicides which often stunt plant growth, Companion actually promotes plant vigor. It is a beneficial Rhizobacteria (PGPR) that produces auxin-like hormones. It quickly colonizes on roots forming a biofilm that produces surfactins, improving nutrient uptake, increasing root growth, enhancing lateral branching, and promoting overall vigor and yield, in a wide variety of crops.

HYDROPONIC ALGAE CONTROL:

Green algae, called cyanobacteria, is a nuisance that can cause negative impact in hydroponic systems. *Bacillus subtilis* GB03 has the ability of inhibiting or biodegrading cyanobacteria by destroying its cell and plasma membranes, releasing cell organelles. This is an effective and environmentally friendly option for control versus chemical methods such as Algaecides.

FOLIAR APPLICATIONS:

Companion® Biological Fungicide WP when used as a foliar spray can have effective preventative control against Bud Rot (*Botrytis cinerea*), which is one of the most devastating fungal diseases to hit cannabis. It is easily and quickly spread by spores throughout an entire growing

area by means of air and water. It will attack young stems at soil level and mature plants, but it is most devastating on moist and resinous buds. A preventative program using Companion WP should start before any visual signs of the disease are present. Extra care should be taken if, the disease was present in prior seasons since the spores will lay dormant until conditions are conducive for growth and a receptive host becomes available. Companion WP can be foliar applied to all parts of the plant and sprayed to run off. Be sure to spray onto the buds starting at the pre-flower stage and continue spraying the buds every week up to harvest.

A TOOL IN RESISTANCE MANAGEMENT & REDUCTION OF CHEMICALS:

Companion® WP can be used alone or in combination with traditional chemical fungicides either in a tank mix or rotational program. Its multiple modes of action help prevent pathogen resistance. This makes Companion® an ideal foundation for an effective Integrated Pest Management (IPM) Program.

CERTIFIED ACCEPTABLE PESTICIDE:

OMRI has reviewed and listed Companion WP for use in organic crop production. It is allowed for use in organic production according to the USDA National Organic Program (NOP).

APPLICATION & MIXING:

Companion WP can be used on all potting soils such as peat, bark, perlite combinations, or applied as a top dressing on potted plants or outdoor field crops, indoor potted plants. It can be used on all stages of growth including, seed germination, cuttings, potting, plug, sizing up and field applications. Apply both as a foliar spray or soil drench to control fungal disease. DO NOT tank mix with

copper products or highly caustic or acid materials. It can be tank mixed with other technical materials, organic products or fertilizers. Always fill tank $\frac{3}{4}$ full with water before adding concentrates. It is effective on all types of growing medium including bark-containing mixes. It can be incorporated along with starter fertilizers to enhance their efficacy.

Companion WP is a preventative fungicide. For best results begin applying Companion from the beginning of the crop cycle or prior to the onset of any diseases. *Botrytis cinerea* (Bud Rot) affects many crops and is prevalent in nature. To prevent Bud Rot be sure to thoroughly wet stems, buds and leaves to run off with a solution of Companion. Remove infected leaves and buds.

Companion can be used up to the day of harvest.

STORAGE & HANDLING:

Companion Biological Fungicide should be stored in normal warehouse conditions. Keep in cool dry location and out of direct sun light. Do not store above 100° F for long periods of time. Companion Biological Fungicide when mixed with water has neutral pH. Always store in original container and keep tightly sealed after opening. Refer to SDS for additional information on storage, handling, safely, disposal and shipping.

FIRST AID	
IF SWALLOWED:	Call a poison center or doctor if you feel unwell. Rinse mouth.
IF IN EYES:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.
IF ON SKIN:	Remove contaminated clothing and wash skin with plenty of soap and water. If skin irritation occurs, get medical advice/attention.
IF INHALED:	Call a poison center or doctor if you feel unwell.
You may also contact 1-800-992-5994 day or night for emergency treatment information. If medical advice is needed, have product container or label at hand (P101), Keep out of reach of children (P102), Read label before use (P103).	
STORAGE: Keep container tightly closed. May be stored in unheated area, but keep from freezing. Store in areas inaccessible to children and pets.	
DISPOSAL: Dispose of contents/container in accordance with local/regional/national/international regulations. Do not reuse container.	

Condition of Sale and Warranty: Growth Products, Ltd. warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. Handling, storage and use of the product by Buyer or User are beyond the control of Growth Products, Ltd. and Seller. Risks such as crop injury or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property, or failure to follow label directions will be assumed by Buyer or User. IN NO CASE WILL GROWTH PRODUCTS, LTD. OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.

