



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

January 27, 2020

Erika Rohr Luke  
Regulatory Affairs Specialist  
Marrone Bio Innovations  
1540 Drew Avenue  
Davis, CA 95618

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment –  
Consolidating sublabels, adding Hemp and other crops, and adding three alternate brand  
names: Traverse®, Traverse® Biofungicide and Traverse® Plant Health.  
Product Name: MBI-106 12 Biofungicide  
EPA Registration Number: 84059-21  
Application Date: 09/06/2019  
OPP Decision Number: 555391

Dear Mrs. Luke:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

The alternate brand names Traverse®, Traverse® Biofungicide and Traverse® Plant Health have been added to the registration, and our records have been updated accordingly. This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency (EPA). If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims

Page 2 of 2  
EPA Reg. No. 84059-21  
OPP Decision No. 555391

made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Menyon Adams by phone at (703) 347-8496 or via email at [adams.menyon@epa.gov](mailto:adams.menyon@epa.gov).

Sincerely,

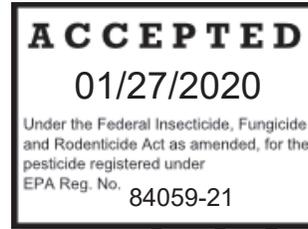
A handwritten signature in black ink, appearing to read 'Gina Burnett', is centered below the text 'Sincerely,'.

Gina Burnett, Senior Regulatory Specialist  
Biochemical Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511P)  
Office of Pesticide Programs

Enclosure

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

MASTER LABEL



# MBI-106 12 Biofungicide

**Alternate Brand Names:** REGALIA® 12 Biofungicide, REGALIA® 12A Biofungicide, REGALIA® 12B Biofungicide, REGALIA® 12 Soil, REGALIA® 12 PRE, TRAVERSE®, TRAVERSE® Biofungicide, TRAVERSE® Plant Health

**Sublabel A: Agricultural Crops; Greenhouse; Turf**

**Sublabel B: Professional Landscape Use**

**Sublabel C: Home & Garden Use**

EPA Registration No. 84059-21

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

## Sublabel A: Agricultural Crops; Greenhouse; Turf

### REGALIA® 12 Biofungicide

A plant extract to boost the plants' defense mechanisms to protect against certain fungal and bacterial diseases, and to improve plant health.

Active ingredient: Extract of *Reynoutria sachalinensis* ..... 12 %  
Other ingredients: ..... 88 %  
Total ..... 100 %

EPA Reg. No. 84059-21

EPA Est. No. 085970-FL-001

EPA Est. No. 084059-MI-001

**GROUP P5 FUNGICIDE**

KEEP OUT OF REACH OF CHILDREN

### CAUTION

FIRST AID	
<b>IF SWALLOWED:</b>	Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
<b>IF ON SKIN OR CLOTHING:</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control center or doctor for treatment advice.
<b>IF INHALED:</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
<b>IF IN EYES:</b>	Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
<b>HOTLINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor, or if going for treatment. Contact the poison control center hotline at 1-800-222-1222; 24 hours a day, 7 days a week for emergency medical treatment information.	

(USDA BioBased logo placeholder) \* [with] \*This mark is not an indication of safety. Read and follow all label instructions.) (Organic gardening/production logo placeholder) (Can Be Used in Organic Production) (For Organic Production)(OMRI Placeholder)

LOT #: (xxx) (printed on container)

Net Contents: 1 pint, 1 quart, 1 gallon, 2.5 gallon, 5 gallon, 55 gallon drum, 265 gallon tote  
Marrone Bio Innovations, Inc. 1540 Drew Ave, Davis, CA 95618

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

## **PRECAUTIONARY STATEMENTS**

### **HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear goggles or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers must wear:

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

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### **ENVIRONMENTAL HAZARDS**

For terrestrial uses: Do not apply directly to water, 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.

(Use the following additional statement for containers that hold 5 gallons or more: Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.)

## **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 exemptions pertaining to the statements on this label about personal protective equipment (PPE) and the restricted-entry interval (REI). The requirements in this box only apply to 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 4 hours.

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
- Protective eyewear

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

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. The REI does not apply when this product is used for seed treatment at planting or in hopper box treatments.

#### GENERAL INFORMATION

REGALIA® 12 Biofungicide is an extract from the plant *Reynoutria* spp. for use on ornamental plants, turf, and edible crops. REGALIA® 12 Biofungicide applied to actively growing plants (see DIRECTIONS FOR USE) will improve plant health and will help make the treated portions resistant to certain plant diseases. Plant health benefits often result in greater yields at harvest, especially when crops are stressed by pathogens or environmental conditions. **Use REGALIA® 12 Biofungicide as a preventative rather than a curative application.** Apply prior to disease infestation to protect the growing leaf tissue. See specific information below for diseases controlled and use rates on ornamental plants, turf, and edible crops.

REGALIA® 12 Biofungicide can be used as a seed treatment, plant dip, soil drench, in-furrow spray, or applied through drip irrigation to control or suppress certain soil-borne diseases and to promote healthy root growth. See below specific information for diseases controlled and use rates on treating seeds with REGALIA® 12 Biofungicide.

#### (MODE OF ACTION

The extract obtained from *Reynoutria sachalinensis* plant material contains bioactive compounds. The extract, when applied to the host plant, activates the plant's defense system to increase phenolics and antioxidants, and strengthen cell walls. This mode of action is classified as induced systemic resistance (ISR). Plants also develop an enhanced resistance to further pathogen attacks. This type of enhanced resistance is referred to as systemic acquired resistance (SAR).

When applied at rates and timing for disease control, the induced resistance against important diseases provides translaminar activity, which takes place within one to two days of application. Repeat foliar applications per label instructions. Use REGALIA® 12 Biofungicide, therefore, as a preventative treatment. In addition to foliar applications, REGALIA® 12 Biofungicide can be used in multiple application methods as a plant dip, soil drench, in-furrow spray, or applied through drip irrigation to control or suppress certain soil-borne diseases and to promote healthy root growth.

When applied at rates and timing for plant health effects, the improved plant defense responses minimize the impacts of stress and disease, resulting in optimized yields at harvest. Applying Regalia® 12 Biofungicide has been shown to increase leaf chlorophyll content and increase soluble protein content in some crops. These effects often lead to improved crop quality and/or yields.)

#### MIXING AND APPLICATION INSTRUCTIONS

##### – SHAKE WELL PRIOR TO USE –

REGALIA® 12 Biofungicide is a micro-emulsion concentrate consisting of certain ingredients extracted from *Reynoutria* spp. Use 50-mesh nozzle screens or larger.

**See AERIAL APPLICATION section for aerial application use directions.**

**See CHEMIGATION section for chemigation use directions.**

**See PRE-PLANT DIP section for pre-plant dip use directions.**

**See SEED TREATMENT section for seed treatment use directions.**

**See SOIL TREATMENT section for soil application use directions.**

Use higher water volumes with larger sized crops and extensive foliage to obtain thorough coverage.

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

**REGALIA® 12 Biofungicide alone:** Add ½ of the required amount of water to the mix tank. With the agitator running, add the REGALIA® 12 Biofungicide to the mix tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the REGALIA® 12 Biofungicide has completely dispersed into the mix water. Maintain agitation until all the mixture has been applied.

**REGALIA® 12 Biofungicide + tank-mixtures:** Add ½–¾ of the required amount of water to the mix tank. Start the agitation before adding any tank mix ingredients. In general, tank-mix ingredients should be added in this order: wettable powders, dry flowable formulations, liquid flowable formulations, and emulsifiable formulations such as REGALIA® 12 Biofungicide. Always allow each tank-mix ingredient to become completely dispersed before adding the next component. Maintain continuous agitation until all components have been dispersed and throughout the application process. After all components are completely dispersed add the remainder of the water. REGALIA® 12 Biofungicide cannot be mixed with another product with a prohibition against mixing. Use of the tank mix must be in accordance with the most restrictive label limitations and precautions. **Do not pre-mix REGALIA® 12 Biofungicide with any other tank mix component prior to adding to the spray tank.**

**Compatibility:** Do not combine REGALIA® 12 Biofungicide in the spray tank with pesticides, adjuvants, or fertilizers if there has been no previous experience or use of the combination to show it is physically compatible, effective, and non-injurious under your use conditions. Electrostatic sprayers have not been tested to demonstrate successful application and maintain product efficacy.

REGALIA® 12 Biofungicide is compatible with many commonly used pesticides, fertilizers, adjuvants, and surfactants, but has not been evaluated with all potential combinations. To ensure compatibility of the tank mix combinations, evaluate prior to use as follows: Using a suitable container, add the proportional amounts of product to water. Add wettable powders first, then water dispersible granules, then liquid flowables, and lastly, emulsifiable concentrates. Mix thoroughly and let stand for at least five minutes. If the combination stays mixed or can be remixed, it is physically compatible. Test the mix on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of the application.

#### **5.0–53.33 fluid ounces per acre for FOLIAR (GROUND) applications**

- (For ground applications (to optimize disease control and to maximize yields), (apply this product) (at 5.0–53.33 fluid ounces) (apply (5.0–26.66 fluid ounces of) this product preventatively) (in (a minimum of) 15–100 gallons of water per acre) (prior to disease development using sufficient volume for thorough coverage) (or) (preventatively) (when the first symptoms of disease are visible) (or when environmental conditions are conducive to rapid disease development) (Increase water volume as plant size increases.) (For foliar applications, apply this product preventatively in 20–100 gallons of water per acre) (Spray water volumes must be of at least 1.5 gallons of water per 1000 sq. ft.)
- For concentrated ground applications, apply this product at 5.0–20 fluid ounces per acre (in 10–25 gallons of water per acre.) (in a minimum of 10 gallons of water per acre.)
- (Apply this product preventatively or when the first disease symptoms are visible and reapply every 7–14 days.) (It is important to apply this product at the flag leaf stage to maximize yield.) (Apply this product preventatively or when the first disease symptoms appear.) (Repeat applications in 7–14-day intervals) (depending upon crop growth and disease pressure.) (Repeat applications in 7–14-day intervals depending upon crop growth and disease pressure) (Repeat applications at 7–10-day intervals) (Continue sprays at 7-day intervals or as needed)
- (When the plants are) (under high disease pressure, tank-mix this product with another fungicide for more effective control.) (For improved performance, use this product in a tank mix or rotational program with other registered fungicides.) (Under moderate to heavy disease pressure, tank-mix this product with another fungicide.) (For improved performance, apply 5.0–26.66 fluid ounces this product in a tank mix with another registered fungicide. Consult your local Extension Specialist or Crop Consultant regarding the optimum timing

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

of fungicide applications.) (Tank-mix this product with other registered fungicides for improved disease control under heavy pressure.) (When tank mixed with other fungicides, use 5.0 –26.66 fluid ounces of REGALIA® 12 Biofungicide per acre.)

- **Dilute applications:** this product can be applied by ground equipment to tree crops in dilute applications of 100–400 gallons of water. Apply this product at a rate of 5.0–53.33 fluid ounces per acre when applied alone, or at 13.33–53.33 fluid ounces per acre when tank mixed with another fungicide. Avoid excessive amounts of water that result in the runoff of spray material.
- Spray until just before point of runoff.
- This product may be used to control certain diseases of container, bench, flat, plug, bed, or field-grown ornamentals **in greenhouses, shade-houses, outdoor nurseries, retail nurseries, and other landscape areas.**

#### **5.0–13.33 fluid ounces per acre for FOLIAR (AERIAL) applications**

- For aerial applications, apply this product in a minimum of 3-10 gallons of water per acre.
- Apply this product preventatively or when the first disease symptoms are visible and reapply every 7–14 days.
- (It is important to apply this product at the flag leaf stage to maximize yield.) (Apply this product preventatively or when the first disease symptoms appear.) (Repeat applications in 7–14-day intervals) (depending upon crop growth and disease pressure.)
- (When the plants are under high disease pressure, tank-mix this product with another registered fungicide for more effective control.) (For improved performance, use this product in a tank mix or rotational program with other registered fungicides.)
- Under moderate to heavy disease pressure, tank-mix this product with another fungicide.

#### **AERIAL APPLICATION INSTRUCTIONS**

Apply REGALIA® 12 Biofungicide by aerial application to the Edible Crops listed in this label at the rate of 5.0–13.33 fluid ounces per acre in a minimum of 5 gallons of water per acre unless otherwise specified in the SELECTED CROPS section. Increasing the amount of water applied per acre will improve product performance. Follow all instructions to reduce aerial drift.

#### **AERIAL DRIFT REDUCTION ADVISORY INFORMATION**

**GENERAL:** Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. Where states have more stringent regulations, they should be observed. Note: This section is advisory in nature and does not supersede the mandatory label requirements.

**INFORMATION ON DROPLET SIZE:** The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply droplets large enough to provide sufficient coverage and control. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

**CONTROLLING DROPLET SIZE:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Pressure – Do not exceed the nozzle manufacturer’s recommended pressures. For many nozzle types, lower pressure produces larger droplets. When high flow rates are needed, use

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

higher flow rate nozzles instead of increasing pressure. Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage. Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential. Nozzle Type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**BOOM WIDTH:** For aerial applications, the boom width must not exceed 75% of the wingspan or 90% of the rotary blade. Use upwind swath displacement and apply only when wind speed is 3–10 mph as measured by an anemometer. Use medium or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or crop canopy.

**APPLICATION HEIGHT:** Do not make application at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**SWATH ADJUSTMENT:** When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

**WIND:** Drift potential is lowest between wind speeds of 2–10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

**TEMPERATURE AND HUMIDITY:** When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**TEMPERATURE INVERSIONS:** Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

**SENSITIVE AREAS:** The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas). Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

## CHEMIGATION USE DIRECTIONS

Do not use reclaimed water for application of this product.

### Spray preparation

First prepare a suspension of REGALIA® 12 Biofungicide in a mix tank. Fill tank ½ to ¾ the desired amount of water. Start mechanical or hydraulic agitation. Add the required amount of REGALIA® 12 Biofungicide, and then the remaining volume of water. Then set the sprinkler to deliver a minimum of 0.1 to 0.3 inch of water per acre. Start sprinkler and uniformly inject the suspension of REGALIA® 12 Biofungicide into the irrigation water line so as to deliver the desired rate per acre. Inject the suspension of REGALIA® 12 Biofungicide with a positive displacement pump into the main line after the filter, and ahead of a right angle turn to insure adequate mixing. Any questions on calibration should be directed to your State Extension Service Specialists, to equipment manufacturers or other experts.

Do not combine REGALIA® 12 Biofungicide with pesticides, surfactants or fertilizers for application through chemigation equipment unless prior experience has shown the combination physically compatible, effective and non-injurious under conditions of use. REGALIA® 12 Biofungicide has not been fully evaluated for compatibility with all adjuvants or surfactants. Conduct a spray compatibility test if a mixture with adjuvants or surfactants is planned.

**Apply REGALIA® 12 Biofungicide at 5.0–53.33 fluid ounces per acre according to the instructions below unless specified differently in the SELECTED CROPS section.**

### 5.0–53.33 fluid ounces per acre for CHEMIGATION applications

- For chemigation applications for improved plant growth and suppression of soil-borne diseases, apply this product through drip irrigation (at the rate of 5.0–53.33 fluid ounces per acre) immediately after transplant and at 14-day intervals or begin 14 days after transplant when soil drench applications are used.

---

## CHEMIGATION

---

### General Requirements –

- 1) Apply this product only through a drip or trickle system or center pivot sprinkler system, lateral move, end tow, side (wheel) roll, traveler, solid set, hand move, flood (basin), furrow, border or drip (trickle) irrigation systems.
- 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.

### 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

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

- 4) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 5) 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.
- 6) 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.
- 7) 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 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) 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 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.
- 3) 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 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.

**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 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.

**PRE-PLANT DIP USE DIRECTIONS**

Apply REGALIA® 12 Biofungicide as a pre-plant dip for improved plant health and suppression of certain soil-borne diseases. (See use table for more information.) Apply REGALIA® 12 Biofungicide at a rate of 5.0–53.33 fluid ounces

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

of product per 100 gallons of water as a pre-plant dip immediately prior to transplanting, unless specified differently in the SELECTED CROPS section.

**5.0–53.33 fluid ounces per 100 gallons of water for PLANT DIP (bare root) applications**

- For plant dip applications for improved plant growth and suppression of soil-borne diseases, apply this product in a 0.04–0.41% v/v suspension (5.0–53.33 fluid ounces this product per 100 gallons water) as a pre-plant dip immediately prior to transplanting.

**SEED TREATMENT USE DIRECTIONS**

REGALIA® 12 Biofungicide can be applied as a seed dressing for suppression of soil-borne diseases to improve early-season root growth. REGALIA® 12 Biofungicide may be applied as a water-based slurry with other registered seed treatment insecticides and fungicides through standard slurry- or mist-type commercial seed treatment equipment. REGALIA® 12 Biofungicide can be used in on-farm hopper-box or planter-box treatments.

**Mixing instructions:** Prepare no more mixture than is required for the immediate operation. Agitate the solution continuously during mixing and application. Mechanical mixing is required for proper mixing of REGALIA® 12 Biofungicide mixtures.

**REGALIA® 12 Biofungicide alone:** Add ½ of the required amount of water to the mix tank. With the agitator running, add the REGALIA® 12 Biofungicide to the mix tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the REGALIA® 12 Biofungicide has completely dispersed into the mix water. Maintain agitation until all the mixture has been applied.

**REGALIA® 12 Biofungicide + tank-mixtures:** Add ½ of the required amount of water to the mix tank. Start the agitation before adding any tank mix ingredients. Add tank-mix ingredients in the following order: wettable powders, dry flowable formulations, liquid flowable formulations, and emulsifiable formulations such as REGALIA® 12 Biofungicide. Always allow each tank-mix ingredient to become completely dispersed before adding the next component. Maintain continuous agitation until all components have been dispersed and throughout the application process.

**Note:** When using REGALIA® 12 Biofungicide in tank-mixtures, add all products in water soluble packaging should be added to the tank before any other tank-mix ingredient, including REGALIA® 12 Biofungicide. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank-mix ingredient to the tank.

If using REGALIA® 12 Biofungicide in a tank mixture with other seed treatment products, observe all directions for use, crops/sites, use rates, dilution ratios, precautions, and limitations which appear on the tank-mix ingredient label. Do not exceed label rates and the most restrictive label precautions and limitations must be followed. Do not mix this product with any product which prohibits such mixing.

Do not apply this product through any type of irrigation system.

**0.62–6.25 fluid ounces (18– 185 ml) per 100 lbs. seed for SEED TREATMENT applications**

- For suppression of soil-borne diseases, apply this product as a seed treatment at the rate of 0.62–6.25 fluid ounces (18– 185 ml) per 100 lbs. seed.

**5.0–53.33 fluid ounces per 100 gallons of water for SEED PIECE DIP applications**

- For seed piece dip applications for improved plant growth and suppression of soil-borne diseases, apply this product in a 0.04–0.41% v/v suspension (5.0–53.33 fluid ounces this product per 100 gallons water) as a pre-plant dip to transplants or seed pieces immediately prior to transplanting.

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

### SOIL TREATMENT USE DIRECTIONS

REGALIA® 12 Biofungicide can be applied by soil drench, in-furrow spray, or soil injection to improve plant health and to protect against certain soil-borne diseases.

In general, REGALIA® 12 Biofungicide can be applied by the following methods, unless specified differently in the SELECTED CROPS section:

#### Soil Drench Applications:

Apply REGALIA® 12 Biofungicide at a concentration of 5.0–40 fluid ounces per 100 gallons of water, and at a sufficient rate to thoroughly soak the growing media and root zone. Make an initial application of REGALIA® 12 Biofungicide during or shortly after transplant to reduce transplant shock, suppress the listed soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10–14-day interval.

#### 5.0–40 fluid ounces per 100 gallons of water for SOIL DRENCH applications

- For soil drench applications, apply this product at a concentration of 5.0–40 fluid ounces per 100 gallons of water, and at a sufficient rate to thoroughly soak the growing media and root zone. Make an initial application of this product during or shortly after transplant to reduce transplant shock, suppress soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10–14-day interval.

#### Shanked-In and Injected Applications:

REGALIA® 12 Biofungicide can be shanked-in or injected into the soil alone, or with most types of liquid nutrients.

#### In-Furrow Applications:

At planting, apply REGALIA® 12 Biofungicide as an in-furrow spray at the rate of 5.0–53.33 fluid ounces per acre or 0.29 – 4.08 fluid ounces ( 9–121 ml) per 1000 feet of row according to the chart below. Apply REGALIA® 12 Biofungicide in 5–15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.

#### 5.0–53.33 fl. oz. per acre or 0.29 – 4.08 fl. oz. ( 9 - 121 ml) per 1000 ft. row for IN-FURROW applications

- For in-furrow applications, at planting apply this product as an in-furrow spray at the rate of 5.0- 53.33 fluid ounces per acre or 0.29 – 4.08 fluid ounces ( 9 - 121ml) per 1000 feet of row according to the chart in the SOIL TREATMENT USE DIRECTIONS section. Apply this product in 5–15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.

Fluid ounces of Regalia 12 per 1000 row feet

Fluid ounces per acre	30" rows	32" rows	34" rows	36" rows	38" rows	40" rows
5.0	0.29	0.31	0.33	0.34	0.36	0.38
10.0	0.57	0.61	0.65	0.69	0.73	0.77
20.0	1.15	1.23	1.30	1.38	1.45	1.53
30.0	1.72	1.84	1.95	2.07	2.18	2.30

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

40.0	2.30	2.45	2.60	2.75	2.91	3.06
53.33	3.05	3.27	3.47	3.67	3.88	4.08

30" = 17,424 row ft./acre, 32" = 16,315 row ft./acre, 34" = 15,374 row ft./acre,

36" = 14,520 row ft./acre, 38" = 13,754 row ft./acre, 40" = 13,068 row ft./acre.

#### APPLICATION RATES FOR SELECTED CROPS

When used as directed REGALIA® 12 Biofungicide will improve plant health, and induce the defense system of the treated plants listed below towards the diseases specified below.

[Interchangeable language:

- 1 quart REGALIA® 12 Biofungicide per acre interchangeable with 2 tablespoons (tbsp.) REGALIA® 12 Biofungicide per 1,000 square (sq.) feet (ft.), and multiples thereof
- 1 quart REGALIA® 12 Biofungicide per 50 gallons water interchangeable with 4 teaspoons REGALIA® 12 Biofungicide per gallon water, and multiples thereof
- 1 quart REGALIA® 12 Biofungicide per 50 gallons water interchangeable with 1.5 tablespoons REGALIA® 12 Biofungicide per gallon water, and multiples thereof]

#### FOR USE ON THE FOLLOWING CROPS FOR CONTROL OR SUPPRESSION OF (THE FOLLOWING) (DISEASES) (PATHOGENS)(PESTS)

The use rate for REGALIA® 12 Biofungicide when applied alone or as an alternate spray is 5.0–53.33 fluid ounces per 100 gallons of water ( 0.04–0.41% v/v dilution of REGALIA® 12 Biofungicide) applied at 50–100 gallons of water per acre. When tank mixed with another fungicide, the use rate for REGALIA® 12 Biofungicide is 5.0–53.33 fluid ounces in 100 gallons of water applied at 50–100 gallons of water per acre. Use higher water volumes with larger sized crops and extensive foliage in order to secure thorough coverage. Do not use carrier volumes and/or adjuvants that create spray runoff or drip-accumulation at the base of fruit or on the harvested commodity. See specific application directions pertaining to each crop for additional details.

For greenhouse application on the crops and diseases listed, the use rate for REGALIA® 12 Biofungicide is 5.0–53.33 fluid ounces in 100 gallons of water ( 0.04–0.41% v/v dilution of REGALIA® 12 Biofungicide) sprayed until just before point of runoff. When tank mixed with another fungicide, the use rate for REGALIA® 12 Biofungicide is 5.0–53.33 fluid ounces in 100 gallons of water. Repeat at 7–14-day intervals as needed. See specific application directions for each crop for additional details.

**[pests can alternatively appear in the specific crops]**

- Aerial Stem Rot (*Erwinia carotovora*)
- Aerial Web Blight (*Rhizoctonia solani*)
- Alfalfa Wilt (*Xylella spp.*)
- Alternaria Blight (*Alternaria cucumerina*)
- Alternaria Blotch (*Alternaria mali*)
- Alternaria Brown Spot (*Alternaria alternata*)
- Alternaria Fruit Rot (*Alternaria spp.*)
- Alternaria Leaf Blight (*Alternaria spp.*)
- Alternaria Leaf Spot (*Alternaria spp.*)
- Alternaria Leaf Spot, Boll Rot (*Alternaria spp.*)
- Alternaria Spot/Fruit Rot (*Alternaria alternata*)

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

- Angular Leaf Spot (*Mycosphaerella angulata*) (*Xanthomonas fragariae*)
- Anthracnose (*Collectotrichum* spp.) (*Gnomonia leptostyla*) (*Collectotrichum gloeosporioides*) (*Collectotrichum lagenarium*) (*Collectotrichum truncatum*) (*Elsinoe ampelina*)
- Anthracnose (*Collectotrichum coccodes*) (*Collectotrichum atramentarium*) (*Collectotrichum dematium*)
- Anthracnose (*Collectotrichum* spp.) – suppression only
- Anthracnose and Black Stem Rot (*Collectotrichum trifolii*)
- Anthracnose Boll Rot (*Glomeria* spp.)
- Anthracnose Fruit Rot (*Collectotrichum acutatum*)
- Anthracnose Leaf Blight (*Collectotrichum graminicola*)
- Anthracnose of Potato (*Collectotrichum coccodes*)
- Anthracnose, Boll Rot (*Glomeria* spp.)
- Apple Scab (*Venturia inaequalis*) (Suppression only)
- Ascochyta Blight, Boll Rot (*Ascochyta* spp.)
- Asian Soybean Rust (*Phakopsora pachyrhizi*)
- Aspergillus crown rot (*Aspergillus niger*)
- *Aureobasidium zeae*
- Bacteria (*Erwinia* spp.) (*Pseudomonas* spp.) (*Xanthomonas* spp.)
- Bacterial (Leaf) Spot (*Xanthomonas pruni*)
- Bacterial Blast (*Pseudomonas syringae*)
- Bacterial blight (*Pseudomonas cannabina*)
- Bacterial Blight (*Pseudomonas syringae*) (*Pseudomonas viridiflava*) (*Xanthomonas campestris* pv. *pruni*) (*Xanthomonas campestris*)
- Bacterial Blight and Streak (*Xanthomonas* spp.)
- Bacterial Blight/Rot (*Xanthomonas* spp.)
- Bacterial Canker (*Erwinia nigrifluens*) (*Pseudomonas syringae*) (*Pseudomonas* spp.) (*Xanthomonas campestris*) (*Xanthomonas* spp.)
- Bacterial Leaf Blight (*Xanthomonas campestris*)
- Bacterial Leaf Spot (*Pseudomonas* spp.)
- Bacterial leaf streak (*Xanthomonas campestris* pv. *Holcicola*)
- Bacterial leaf stripe (*Pseudomonas* spp.)
- Bacterial Pustule (*Xanthomonas* spp.)
- Bacterial rots (*Pantoea* spp.)
- Bacterial Speck (*Pseudomonas syringae* pv. *glycinea*) (*Pseudomonas syringae*)
- Bacterial Spot (*Xanthomonas pruni*) (*Xanthomonas* spp.) (*Xanthomonas cucurbitae*)
- Bacterial Wilt (*Clavibacter michiganense*)
- Barley yellow dwarf virus
- Bentgrass/Bermudagrass Dead Spot (*Ophiosphaerella agrostis*)
- Bermudagrass Decline (*Gaeumannomyces graminis* var. *graminis*)
- Bitter Rot (*Collectotrichum* spp.)
- Black dot disease (*Epicoccum nigrum*) (*Epicoccum purpurascens*)
- Black mildew (*Schiffnerula cannabis*)
- Black Mold (*Alternaria alternata*)
- Black Root (*Thielaviopsis basicola*)
- Black Root Rot (*Rhizoctonia* spp.) (*Pythium* spp.)
- Black Root Rot / Black Crown Rot (*Alternaria* spp.)
- Black Rot (*Guignardia bidwellii*)
- Black Rot/Frogeye Leaf Spot (*Botryosphaeria obtusa*)
- Black Scurf (*Rhizoctonia solani*)
- Black shank (*Phytophthora nicotianae*)
- Black Spot (*Guignardia citricarpa*), (*Phyllosticta citricarpa*)
- Black Spot of Rose (*Diplocarpon rosae*)
- Blossom Blight (*Monilinia* spp.)
- Blue Mold (*Peronospora tabacina*)
- Boll Rot (*Alternaria* spp.) (*Ascochyta* spp.) (*Fusarium* spp.) (*Phoma* spp.)
- Bot Rot (*Botryosphaeria dothidea*)
- Botryosphaeria Blight (*Botryosphaeria dothidea*)
- Botrytis (*Botrytis cinerea*) (*Botrytis* spp.)
- Botrytis Blight (*Botrytis cinerea*)
- Botrytis Blossom Blight (*Botrytis cinerea*)
- Botrytis Bud Rot (*Botrytis cinerea*)
- Botrytis Bunch Rot (*Botrytis cinerea*)
- Botrytis Fruit Rot (*Botrytis cinerea*)

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

- Botrytis Leaf Blight (*Botrytis squamosa*)
- Botrytis Neck Rot (*Botrytis spp.*)
- Brooks Spot (*Mycosphaerella pomii*)
- Brown / Hull Rot (*Monilinia spp.*)
- Brown blight (*Alternaria alternata*) (*Alternaria tenuis*)
- Brown leaf spot and stem canker (*Ascochyta spp.*) (*Ascochyta prasadii*) (*Phoma spp.*) (*Didymella spp.*) (*Phoma exigua*) (*Phoma glomerata*) (*Phoma herbarum*)
- Brown patch (*Rhizoctonia solani*)
- Brown Rot (*Monilinia spp.*)
- Brown Rot Blossom Blight (*Monilinia laxa*)
- Brown Rot Fruit Rot (*Monilinia fruticola*)
- Brown Rot, Leaf Spots & Smuts (*Ceratobasidium spp.*) (*Cercospora spp.*) (*Cochliobolus spp.*) (*Drechslera spp.*)
- Brown Rust (*Puccinia melanocephala*)
- Brown Spot (*Alternaria spp.*) (*Septoria glycines*)
- Brown Stripe/Gray Streak (*Cercosporidium graminis*)
- Bull's Eye Rot (*Neofabraea spp.*)
- Cedar-Apple Rust (*Gymnosporangium juniperi-virginianae*) – suppression only
- Cercospora Blight (*Cercospora asparagi*) (*Cercospora kikuchii*)
- Cercospora Blight and Leaf Spot (*Cercospora spp.*)
- Cercospora Leaf Spot (*Cercospora citrulina*) (*Cercospora spp.*) (*Cercospora beticola*)
- Charcoal rot (*Macrophomina phaseolina*)
- Cherry Leaf Spot (*Blumeriella jaapii*)
- *Cladosporium spp*
- Cladosporium stem canker (*Cladosporium cladosporioides*) (*Cladosporium herbarum*) (*Mycosphaerella tassiana*)
- Clubroot (*Plasmodiophora brassicae*)
- Colletotrichum Crown Rot (*Colletotrichum spp.*) (*Colletotrichum graminicola*)
- Common Scab (*Streptomyces scabies*)  
Suppression only
- Copper Spot (*Glaeocercospora sorghi*)
- Corn grey leaf spot (*Cercospora zeae-maydis*) (*Cercospora zeina*)
- Cotton root rot (*Phymatotrichopsis omnivora*) (*Phymatotrichum omnivorum*)
- Cranberry cotton ball (*Monilinia oxycocci*)
- Cranberry Early Rot (*Phyllosticta vacciniae*)
- Crown and Foot Rots (*Pseudocercospora herpotrichoides*, *Rhizoctonia*)
- Crown gall (*Agrobacterium tumefaciens*)
- Curvularia leaf spot (*Curvularia cymbopogonis*) (*Curvularia lunata*) (*Cochliobolus lunatus*)
- Cylindrosporium blight (*Cylindrosporium spp.*) (*Cylindrosorium cannabinum*)
- Damping off (*Aspergillus flavus*) (*Botrytis cinerea*) (*Botryotinia fuckeliana*) (*Fusarium spp.*) (*Fusarium oxysporum*) (*Fusarium solani*) (*Nectria haematococca*) (*Macrophomina phaseolina*) (*Pellicularia filamentosa*) (*Phytophthora sp.*) (*Pythium spp.*) (*Pythium aphanidermatum*) (*Pythium debaryanum*) (*Pythium ultimum*) (*Rhizoctonia spp.*) (*Rhizoctonia solani*) (*Thanatephorus cucumeris*)
- Dichondra Rust (*Puccinia dichondrae*)
- Diplodia Boll Rot (*Diplodia spp.*)
- Diseases from pruning wounds including *Eutypa* (*Eutypa lata*), *Botryosphaeria rhodia*, *Phaeoacremonium aleophilum* and *P. chlamydospora*
- Dollar Spot (*Lanzia spp.*) (*Moellerodiscus spp.* formerly *Sclerotinia homeocarpa*)
- Downy Mildew (*Bremia lactucae*), (*Peronospora spp.*) (*Peronospora destructor*) (*Peronospora mansherica*) (*Peronospora parasitica*) (*Peronospora trifoliorum*) (*Plasmopara viburni*) (*Plasmopara viticola*) (*Pseudoperonospora cubensis*) (*Pseudoperonospora humuli*)
- Downy mildew (*Pseudoperonospora cannabina*) (*Pseudoperonospora humuli*)
- Early Blight (*Alternaria solani*)
- Early Blight of celery (*Cercospora apii*)
- Early Leaf Spot (*Cercospora arachidicola*)
- Early Rot in Cranberry (*Phyllosticta vacciniae*)
- Eastern Filbert Blight (*Anisogramma anomala*)
- *Eutypa* (*Eutypa lata*)

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

- Eye Spot (*Aureobasidium zeae*)
- Fire Blight (*Erwinia amylovora*) – suppression only
- Flyspeck (*Zygophiala jamaicensis*)
- Foliar Blight
- Frog-eyed Leaf Spot (*Cercospora sojina*)
- Fruit Finish
- Fungal Disease Complexes (*Bipolaris spp.*, *Monographella spp.*, *Phaeosphaeria spp.*)
- Fusarium foot rot and root rot (*Fusarium solani*)
- Fusarium Head Blight (*Fusarium graminearum*)
- *Fusarium oxysporum*
- Fusarium Patch (*Fusarium nivale*)
- *Fusarium proliferatum*
- Fusarium root and stem rot
- *Fusarium solani*
- *Fusarium spp.*
- Fusarium stem canker (*Fusarium sulphureum*) (*Gibberella cyanogena*)(*Gibberella saubinetii*)
- Fusarium wilt (*Fusarium oxysporum f.sp. cannabis*) (*Fusarium oxysporum f.sp. vasinfectum*)
- *Fusarium wilt (Fusarium oxysporum)*
- *Glomerella tucumanensis*, also known as *Colletotrichum falcatum* (Suppression Only)
- Gray leaf spot (*Cercospora sorghi*) (*Pyricularia grisea*) (*Cercospora zeae-maydis*)
- Gray Mold (*Botrytis cinerea*) (*Botrytis spp.*)
- Greasy Spot (*Mycosphaerella citri*)
- Green Fruit Rot (*Botrytis cinerea*)
- Gummy Stem Blight (*Didymella bryoniae*)
- Hard Lock
- Hard Lock, Boll Rot (*Fusarium spp.*)
- Hemp canker (*Sclerotinia sclerotiorum*)
- Hemp Leaf Spot (*Bipolaris sp.*)
- Hull Rot (*Rhizopus stolonifer* and *Monilinia spp.*)
- Kernel smut (*Tilletia barclayana*)
- Late Blight (*Phytophthora infestans*) (*Septoria apiicola*)
- Late Leaf Spot (*Cercosporidium personatum*)
- Late Rot in Cranberry
- Leaf Blight (*Pseudocercospora vitis*) (*Septosphaeria turcica*)
- Leaf Rust (*Pucciniastrum vaccinii*) (*Tranzschelia discolor*)
- Leaf Spot (*Alternaria spp.*) (*Cercospora spp.*) (*Cercospora beticola*) (*Corynespora cassicola*) (*Entomosporium spp.*) (*Mycosphaerella fragariae*) (*Myrothecium spp.*) (*Septoria spp.*)
- Leaf Spots (*Drechslera*, *Cochliobolus*, *Cercospora*)
- Leafspots and Blotches (*Pseudopeziza medicaginus*, *Stemphyllium spp.*, *Cercospora spp.*, *Stagonospora spp.*)
- Leptosphaeria blight (*Leptosphaeria cannabina*)(*Leptosphaeria woroninii*)(*Leptosphaeria acuta*)
- Melanose (*Diaporthe citri*)
- Melting Out Leaf Spot (*Bipolaris spp.*), (*Drechslera spp.*)
- Miscanthus blight
- Miscanthus streak virus
- Mosaic viruses
- Mummy Berry (*Monilinia vaccinii-corymbosi*),
- Necrotic Ring Spot (*Leptosphaeria korrae*)
- Northern Leaf Blight (*Exserohilum turcicum*)
- Northern Leaf Spot (*Cochliobolus carbonum*)
- Olive Knot (*Pseudomonas savastanoi*)
- Olive leaf spot (*Cercospora cannabis*) (*Pseudocercospora cannabina*)
- Onion Downy Mildew (*Peronospora destructor*)
- Onion Purple Blotch (*Alternaria porri*)
- Ophiobolus stem canker (*Ophiobolus cannabinus*)(*Ophiobolus anguillides*)
- Orange Rust (*Puccinia kuehnii*)
- Panicum mosaic virus
- Peg
- *Pencillium*
- Phoma Blight
- Phoma Blight, Boll Rot (*Phoma spp.*)
- Phoma stem canker (*Phoma herbarum*) (*Phoma exigua*)
- Phomopsis
- *Phomopsis spp.*

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

- Phomopsis Fruit Rot (*Phomopsis viticola*)
- Phomopsis Leaf Blight (*Phomopsis obscurans*)
- Phomopsis Leaf Spot, Twig Blight, and Fruit Rot (*Phomopsis spp.*)
- Phomopsis stem canker (*Phomopsis cannabina*)(*Phomopsis achilleae*)(*Diaporthe arctii var. achilleae*)
- Phymatotrichum root rot (*Phymatotrichopsis omnivora*)(*Phymatotrichum omnivorum*)
- Phytophthora Blight (*Phytophthora capsici*)
- Phytophthora Root Rot and Crown Rot (*Phytophthora spp.*)
- Phytophthora (*Phytophthora spp.*)
- Pin Rot Complex (*Alternaria/Xanthomonas*)
- Pink Patch (*Limonomyces roseipellis*)
- Pink Rot (*Phytophthora ervtrhoseptica*)(*Sclerotinia sclerotiorum*)
- Pink rot (*Trichothecium roseum*)(*Cephalothecium roseum*)
- Pithomyces blight
- Pod and Stem Blight (*Diaporthe phaseolorum var. sojae*) (*Phomopsis longicola*) (*Diaporthe spp.*)
- Pod and Stem Blight (*Diaporthe spp.*)
- Postbloom Fruit Drop (*Colletotrichum acutatum*)
- Powdery Mildew (*Erysiphe spp.*) (*Erysiphe betae*), (*Erysiphe cichoracearum*) (*Erysiphe cruciferarum*) (*Erysiphe graminis*) (*Erysiphe polygoni*) (*Leveillula taurica*) (*Microsphaera alni*) (*Oidium spp.*), (*Oidopsis taurica*) (*Podosphaera spp.*) (*Podosphaera leucotricha*) (*Sphaerotheca spp.*) (*Sphaerotheca fuliginea*) (*Sphaerotheca macularis*) (*Sphaerotheca pannosa*) (*Uncinula necator*)
- Powdery Mildew (*Golovinomyces*) (*Erysiphe cichoracearum*)(*Leveillula taurica*)(*Oidiopsis taurica*)(*Sphaerotheca macularis*)(*Sphaerotheca humuli*)(*Oidium spp.*)
- Powdery Mildew / Rusty Spot (*Podosphaera spp.*), (*Sphaerotheca pannosa*)
- *Puccinia spp.*
- Purple spot (*Stemphylium vesicarium*)
- Pythium (aerial blight phase) (*Pythium spp.*)
- Pythium (*Pythium spp.*)
- *Pythium acanthicum*
- *Pythium aphanidermatum*
- Pythium Blight, Pythium Root Rot (*Pythium aphanidermatum*), (*Pythium spp.*)
- *Pythium dissoticum*
- *Pythium myriotylum*
- Pythium root and damping off
- Ramularia (*Ramularia spp.*)
- Ramularia Leaf Spot (*Ramularia cynarae*)
- Red boot (Melanospora cannabis)
- Red Rot (*Glomerella tucumanensis*, also known as *Colletotrichum falcatum*)
- Red Thread (*Laetisaria fuciformis*)
- Rhizoctonia Foliar Blight, Peg, and Root Rot (*Rhizoctonia solani*)
- Rhizoctonia Large Patch (*Rhizoctonia solani*)
- Rhizoctonia soreshin and root rot (*Rhizoctonia solani*)
- *Rhizoctonia spp.*
- Rice Blast (*Pyricularia grisea*)
- Ripe Rot (*Colletotrichum gloeosporioides*)
- Root and collar rots (*Phytophthora*, *Pythium*, *Fusarium*, *Rhizoctonia*)
- Rot (*Rhizoctonia spp.*), (*Pythium spp.*), (*Fusarium spp.*), (*Cylindrocarpon spp.*)
- Rust (*Aecidium cannabis*)(*Uredo kriegneriana*)(*Uromyces inconspicuus*)
- Rust (*Phykopsora spp.*) (*Puccinia spp.*) (*Puccinia asparagi*) (*Puccinia menthae*) (*Puccinia porri*) (*Tranzschelia discolor*) (*Uromyces appendiculatus*) (*Uromyces betae*)
- Rusty Spot (*Podosphaera leucotricha*)
- Scab (*Cladosporium carpophilum*) (*Sphaceloma perseae*) (*Elsinoe australis*) (*Elsinoe fawcetti*) (*Elsinoe mangiferae*) (*Venturia spp.*)
- Sclerotinia (*Sclerotinia Sclerotiorum*)
- Sclerotinia Head and Leaf Drop (*Sclerotinia minor*) (*Sclerotinia sclerotiorum*)
- Sclerotinia stem and crown rot (*Sclerotinia sclerotiorum*)
- Sclerotium root and stem rot (*Sclerotium rolfsii*)(*Athella rolfsii*)

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

- Seedling and Damping Off Disease Complex, including Root and Crown Rots (*Pythium*, *Phytophthora*, *Rhizoctonia*, and *Stagonospora* spp.)
- Septoria Brown Spot (*Septoria glycines*)
- Septoria Leaf/Speckled Leaf Spot/Blotch (*Septoria* spp.)
- Sheath Spot and Blight (*Rhizoctonia oryzae*), (*Thanatephorus cucumeris*)
- Shot Hole (*Wilsonomyces carpophilus*)
- Sigatoka (*Mycosphaerella fijiensis*)
- Smut (*Tilletia* spp.) (*Tilletia barclayana*)
- Smuts and Bunts (*Tilletia* spp.)
- Snowmold, Gray (*Typhula* spp.)
- Snowmold, Pink (*Microdochium nivale*)
- Sooty Blotch (*Geastrumia polystigmati*), (*Leptodontium elatius*), (*Peltaster fructicola*)
- Sorghum downy mildew (*Peronosclerospora sorghi*)
- Sour Rot (*Alternaria tenuis*) (*Aspergillus* spp.) (*Botrytis cinerea*) (*Cladosporium herbarum*) (*Penicillium* spp.) (*Rhizopus arrhizus*)
- Southern Blight (*Sclerotium rolfsii*)
- Southern blight (*Sclerotium rolfsii*) (*Athella rolfsii*)
- Southern leaf blight (*Bipolaris* spp.) (*Cochliobolus heterostrophus*)
- Spring Black Stem (*Phoma medicaginus*)
- Spring Dead Spot (*Leptosphaeria korrae*), (*Leptosphaeria narmari*), (*Ophiosphaerella herpotricha*), (*Gaeumannomyces graminis*)
- Spur Blight (*Didymella* spp.), (*Phoma* spp.)
- Stem Rot (*Sclerotium oryzae*)
- Stemphylium leaf and stem spot (*Stemphylium botryosum*) (*Pleospora tarda*) (*Stemphylium cannabinum*)
- Stemphylium Leaf Blight (*Stemphylium vesicarium*)
- Stemphylium Leaf Spot (*Stemphylium* spp.)
- *Striatura ulcerosa* (*Pseudomonas amygdali* pv. *mori*)
- Stripe Smut (*Ustilago striiformis*), (*Urocystis agropyri*)
- Summer Bentgrass Decline
- Summer Patch, Poa Patch (*Magnaporthe poae*)
- Switchgrass Mosaic Virus
- Take-All Patch (*Gaeumannomyces graminis*)
- Tan Spot (*Pyrenophora tritici-repentis*)
- Tar spot (*Phyllachora cannabis*)
- Target Spot (*Corynespora cassiicola*) (*Rhizoctonia solani*)
- Tropical rot (*Lasiodiplodia theobromae*)(*Botryodiplodia theobromae*)
- Twig blight (*Dendrophoma marconii*)(*Botryosphaeria marconii*)
- *Venturia* spp.
- Verticillium wilt (*Verticillium* spp.) (*Verticillium albo-atrum*)
- *Verticillium* spp.
- Verticillium wilt (*Verticillium albo-atrum*)(*Verticillium dahliae*)
- Walnut Blight (*Xanthomonas campestris*)
- White leaf spot (*Phomopsis ganjae*)
- White Mold (*Sclerotinia sclerotiorum*) (*Sclerotium rolfsii*) (*Sclerotinia minor*) (*Sclerotinia trifoliorum*)
- white mold stem rot
- White Mold/ Sclerotinia Stem Rot (*Sclerotinia sclerotiorum*)
- White Rot (*Botryosphaeria dothidea*)
- White Rust (*Albugo occidentalis*)
- *Xanthomonas campestris*
- *Xanthomonas* leaf spot (*Xanthomonas campestris* pv. *cannabis*)
- *Xanthomonas* Leaf Spot (*Xanthomonas campestris*)
- *Xanthomonas* spp.
- Yellow leaf spot (*Septoria cannabis*)(*Septoria cannabinina*)
- Yellow Patch (*Rhizoctonia cerealis*)
- Yellow Tuft/Downy Mildew (*Sclerophthora macrospora*)
- Zoysia Patch (*Rhizoctonia solani*)

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

---

**Pre-harvest Interval (PHI) = 0 days**

---

**ROOT, TUBER AND CORM CROPS:** Potato, Beet, Carrot, Cassava, Ginger, Ginseng, Horseradish, Radish, Sweet Potato, Turnip (including those for seed production), and other root and tuber crops

For suppression of Early Blight, Black Root Rot/Black Crown Rot, and Late Blight, begin application of this product in 25-100 gallons of water per acre soon after emergence when conditions are conducive to disease development. Repeat on a 5-7 day interval or as needed. For improved performance, use this product in a tank mix with other registered fungicides.)

---

**SUGAR BEETS** (includes crop for seed production)

---

**LEAVES OF ROOT AND TUBER VEGETABLES:** Beet, Chervil, and other leaves of roots and tubers

---

**BULB VEGETABLES:** Onion (Bulb and Green), Garlic, Leek, Shallot and other bulb vegetables

---

**LEAFY VEGETABLE CROPS (except Brassica vegetables):** Arugula, Celery, Chervil, Cilantro, Corn Salad, Cress, Dandelion, Dock, Edible Chrysanthemum, Endive, Fennel, Garden Peas, Head Lettuce, Leaf Lettuce, Parsley, Purslane, Radicchio, Rhubarb, Spinach, Swiss Chard, Turnip, Watercress and other leafy vegetable crops

West of the Rocky Mountains – For aerial applications, apply this product at 5.0–20 fluid ounces per acre in a minimum of 10 gallons of water per acre.

East of the Rocky Mountains – For aerial applications, apply this product at 5.0–13.33 fluid ounces per acre in a minimum of 5 gallons of water per acre.

For California – For aerial application apply REGALIA® 12 Biofungicide at 5.0–20 fluid ounces per acre in 10–20 gallons of water per acre.

**Restrictions:**

REGALIA® 12 Biofungicide should be applied to healthy, actively growing plants. Do not apply REGALIA® 12 Biofungicide to plants that are stressed due to cold weather, drought, excessive moisture, etc. Do not apply when extended/unseasonably cold or cold and cloudy conditions are expected.

---

**BRASSICAS (COLE) LEAFY VEGETABLES:** Broccoli, Broccoli Rabe, Brussels Sprouts, Cabbage, Chinese Broccoli, Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavalo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens, and other cole crops

---

**LEGUME VEGETABLES, succulent or dried (not including soybeans and peanuts) (not including peanuts):** Chickpeas, Dry Beans, Garbanzo Beans, Green Beans, Lentils, Lima Beans, Peas, Shell Beans, Snap Beans, Split Peas (including those grown for seed or oil production), and other legume vegetables

---

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

## SOYBEAN

---

**FOLIAGE OF LEGUME VEGETABLES (not including soybeans and peanuts):** Garden peas and other foliage of legume vegetables

---

**FRUITING VEGETABLES:** Tomato, Pepper, Eggplant, Ground Cherry, Okra, Tomatillo and other fruiting vegetables

Phytophthora Blight – Apply this product in combination with labeled rates of a copper fungicide or with another fungicide labeled for Phytophthora Blight control.

---

### **CUCURBITS:**

**Includes all types and hybrids of:** Chayote, Chinese waxgourd, Cucumber, Citron melon, Gherkin, Pumpkin, Watermelon, Chinese okra, Cucuzza, Hyotan, Balsam apple, Balsam pear, Bitter melon, Chinese cucumber, Cantaloupe, Casaba, Crenshaw melon, Golden pershaw melon, Honeydew melon, Honey balls, Mango melon, Persian melon, Pineapple melon, Santa Claus melon, Snake melon, Crookneck squash, Scallop squash, Straightneck squash, Vegetable marrow, Zucchini, Acorn squash, Butternut squash, Calabaza, Hubbard squash, Spaghetti squash, and other cucurbits

When greenhouse cucurbits are under high disease conditions, use the shorter spray interval.

Downy Mildew – Tank-mix this product with another fungicide labeled for Downy Mildew control and re-apply at a 7-day interval or according to the label directions of the tank mix ingredient.

Phytophthora Blight – Apply this product in combination with labeled rates of a copper fungicide or with another fungicide labeled for Phytophthora Blight control.

---

**CITRUS CROPS:** Orange, Grapefruit, Kumquat, Lemon, Tangelo, Tangerine, Pummelo, and other citrus crops

---

**POME FRUITS:** Apple, Crabapple, Loquat, Oriental Pear, Pear, Quince, Mayhaw, and other pome fruits

(Begin applications when conditions are conducive to disease development but not prior to petal fall. Repeat applications on a 7-10 day intervals)(Additional sprays beyond second cover may be needed on susceptible varieties, or when environmental conditions are conducive to rapid disease development. Use high label rate and shorter spray intervals when conditions are conducive to rapid disease development.)

Fire Blight – For suppression, apply 5.0–26.66 fluid ounces of this product in 50–100 gallons of water per acre (beginning at petal fall) (prior to bloom) (at a lower rate) (at 13.33 fl.oz. per acre) (as part of a tank mix). For maximum control, use this product prior to infection events. During periods of rapid development and frequent infection periods, use spray intervals of 3–7 days.

- Apply in sufficient water to provide full coverage. For improved performance, use this product in a rotational program with antibiotics registered for Fire Blight control such as but not limited to oxytetracycline or streptomycin.
  - Proper orchard cultural practices are essential to eliminate Fire Blight-infected tissue from the orchard to assure good performance of any crop protection product. Remove and destroy dead and diseased wood from the orchard prior to and during the growing season.
-

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

Scab – For suppression, apply 1 quart of this product in 50–100 gallons of water per acre at green tip and through bloom when environmental conditions become favorable for primary Scab development and repeat on a 7–10-day interval or as needed. Use this product in a tank mix or rotational program with other fungicides labeled for Scab control. Following bloom, this product can be applied at 5.0–53.33 fluid ounces per acre.

Use caution when selecting spray adjuvants. Select only those adjuvants which through prior experience do not affect fruit finish when combined with this product.

Dilute applications: this product can be applied by ground equipment to tree crops in dilute applications of 100–400 gallons of water. Apply this product at a rate of 5.0–53.33 fluid ounces per acre when applied alone, or at 5.0–53.33 fluid ounces per acre when tank mixed with another fungicide. Avoid excessive amounts of water that result in the runoff of spray material.

Some sensitive tree fruit varieties have exhibited petal staining and/or necrosis after application of higher use rates. To minimize petal staining and/or necrosis:

- Use adjuvants that improve coverage, not penetration; follow the manufacturer's mixing instructions.
- Use adjuvants that through prior experience do not affect petal integrity when combined with this product.

Apply 1 quart of this product in 50–100 gallons of water per acre in Pome Fruit, from 10% bloom to full bloom.

---

**STONE FRUITS:** Apricot<sup>†</sup>, Cherry (sweet and tart), Nectarine, Peach, Plum, Plumcot, Prune, and other stone fruits

Do not exceed a concentration of 0.41% v/v.

Bacterial Blight – Apply this product in 50–100 gallons of water per acre postharvest before Fall rains.

Brown Rot Blossom Blight – Begin application of this product in 50–100 gallons of water per acre at early bloom and repeat through petal fall on a 7-day interval or as needed.

Powdery Mildew – Begin application of this product in 50–100 gallons of water per acre at popcorn stage and repeat on a 7-day interval or as needed. For improved performance, use this product in a tank mix or rotational program with other registered fungicides for powdery mildew control.

Scab – Begin application of this product in 50–100 gallons of water per acre at petal fall and repeat on a 7–10-day interval or as needed. For improved performance, tank mix this product with another fungicide labeled for Scab control.

For all other diseases – Begin application prior to disease development when environmental conditions and plant stage are conducive to rapid disease development and repeat on a 7–10-day interval or as needed. Use in a tank mix or rotational program when disease conditions are severe.

Dilute applications: this product can be applied by ground equipment to tree crops in dilute applications of 100–400 gallons of water. Apply this product at a rate of 5.0–53.33 fluid ounces per acre when applied alone, or at 5.0–53.33 fluid ounces per acre when tank mixed with another fungicide. Avoid excessive amounts of water that result in the runoff of spray material.

<sup>†</sup>Some sensitive apricot varieties have exhibited fruit spotting as a result of application. Spray a test strip to confirm your variety is not susceptible to spotting before spraying.

Some sensitive tree fruit varieties have exhibited petal staining and/or necrosis after application of higher use rates. To minimize petal staining and/or necrosis:

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

- Use adjuvants that improve coverage, not penetration; follow the manufacturer's mixing instructions.
- Use adjuvants that through prior experience do not affect petal integrity when combined with this product.
- Apply 1 quart of this product in 50–100 gallons of water per acre in:
  - Cherries, from white bud (first white, popcorn) to full bloom,
  - Stone fruit, from 10% bloom to full bloom.

---

**BERRIES (AND SMALL FRUIT):** Blueberry, Blackberry (all varieties), Cranberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Ligonberry, Loganberry, Raspberry (red and black), Salal and cultivars and/or hybrids of these and other berries. Grape, Strawberry and other smallfruit

Do not exceed a concentration of 0.41% v/v.

Mummy Berry – Initiate application at bud break stage of development. Apply this product preventatively and repeat on a 7–10-day interval or as needed. For best performance, tank mix this product with other registered fungicides for Mummy Berry control.

Botrytis Blight – Apply this product preventatively when the first disease symptoms are visible and reapply every 7–14 days.

Bacterial Canker – Apply this product prior to Fall rains and repeat applications during dormancy before Spring growth. This product can be tank mixed with another registered fungicide for improved control of bacterial canker.

Anthracnose Fruit Rot and Alternaria Fruit Rot on blueberries – Initiate application at green tip and continue applications on a 7–10-day interval

Anthracnose – For suppression, apply this product preventatively in 50–100 gallons of water per acre and repeat on a 7–10-day interval or as needed. For best performance, tank-mix this product with other registered fungicides for Anthracnose control.

---

**TREE NUT CROPS:** Walnut (Black and English), Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio and other tree nut crops

Walnut Blight – For preventative control, apply this product in 50–100 gallons of water per acre. Repeat applications at 7–10-day intervals. Under conditions of heavy disease pressure, tank-mix this product with a copper-based fungicide.

Dilute applications: this product can be applied by ground equipment to tree crops in dilute applications of 100–400 gallons of water. Apply this product at a rate of 5.0–53.33 fluid ounces per acre when applied alone, or at 5.0–53.33 fluid ounces per acre when tank mixed with another fungicide. Avoid excessive amounts of water that result in the runoff of spray material.

---

**CEREAL GRAINS:** Barley, Buckwheat, Grain Amaranth, Milo, Oat, Millets, Rice, Rye, Sorghum (sweet sorghum and other varieties), Triticale, Wheat and other cereal grains

**CORN:** Sweet Corn, Field Corn, Popcorn, Silage Corn, Seed Corn

---

**FORAGE, FODDER AND STRAW OF CEREAL GRAINS:** Corn, Wheat, and any other cereal grain crop

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

---

**GRASS FORAGE, FODDER, AND HAY:** Bermuda grass, Bluegrass, Bromegrass, Fescue, Pasture and range grasses grown for hay or silage, Sudangrass, Timothy, and other grass forage, fodder, and hay

---

**NON-GRASS ANIMAL FEED:** Alfalfa, Clover, Kudzu, Lespedeza, Lupin, Sainfoin, Trefoil, Vetch, and other non-grass animal feed

---

**HERBS (field and greenhouse):** Angelica, Balm, Basil, Borage, Burnet, Chamomile, Catnip, Chervil, Chive, Clary, Coriander, Costmary, Cilantro, Curry, Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage, Marjoram, Nasturtium, Parsley (dried), Peppermint, Rosemary, Sage, Savory (summer and winter), Sweet Bay, Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood and other herbs

---

**SPICES (field and greenhouse):** Allspice; anise (seed); anise, star; annatto (seed); caper (buds); caraway; caraway, black; cardamom; cassia (buds); celery (seed); cinnamon; clove (buds); coriander (seed); culantro (seed); cumin; dill (seed); fennel, common; fennel, Florence (seed); fenugreek; grains of paradise; juniper (berry); lovage (seed); mace; mustard (seed); nutmeg; pepper, black; pepper, white; poppy (seed); saffron; vanilla and other spices

---

**OIL SEED CROPS (not including cotton, peanut, or soybean):** Canola, Castor, Flax, Jojoba, Rapeseed, Safflower, Sesame, Sunflower, and other oil seeds

---

#### **COTTON**

For ground applications for foliar and Boll Rot disease control, apply this product preventatively in 15–40 gallons of water per acre prior to disease development using sufficient volume for thorough coverage.

---

**STALK, STEM, AND LEAF PETIOLE VEGETABLES:** Asparagus, celery and other stalk, stem and leaf petiole vegetables

---

**TROPICAL AND SUBTROPICAL FRUITS, EDIBLE PEEL:** Olive and other tropical and subtropical fruits with edible peel

---

**TROPICAL AND SUBTROPICAL FRUITS, INEDIBLE PEEL:** Avocado, Banana, Kiwi, Mango, Papaya, Plantain, Pineapple, Pomegranate and other tropical and subtropical fruits with inedible peel

Sigatoka – Initiate applications when leaves first appear and repeat on a 7–10-day schedule. Apply in sufficient water by ground or air to obtain thorough coverage of foliage. For improved disease control, this product may be tank-mixed with oil or other fungicides registered for Sigatoka control at label rates

---

(Other crops [outside crop groups])

---

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

---

## ARTICHOKE

---

### HOPS

Minimum spray volumes for hop growth stages are as follows:

Emergence to Training: Apply 5.0–26.66 fluid ounces this product per acre using a minimum spray volume of 20 gallons per acre. Coverage will vary with the size of the vines and the type of spray equipment. Apply adequate spray volume to achieve complete spray coverage.

Training to Wire-Touch: Apply 5.0–26.66 fluid ounces this product per acre using a minimum spray volume of 50 gallons per acre. Coverage will vary with the size of the vines and the type of spray equipment. Apply adequate spray volume to achieve complete spray coverage.

Wire-Touch through Harvest: Apply 5.0–53.33 fluid ounces of this product using a minimum of 100 gallons of water per acre. Higher water volumes may be necessary to achieve thorough coverage after side arms develop. Do not apply more than 53.33 fluid ounces of product per acre per application. Apply adequate spray volume to achieve complete spray coverage. Use the higher rates when moderate to high disease pressure is present or expected.

For control of downy mildew, tank-mix this product with another fungicide labeled for Downy Mildew control and re-apply at a 7-day interval or according to the label directions of the tank mix ingredient.

---

## PEANUT

---

### HEMP

---

## SUGARCANE

---

## CROTALARIA, SESSBANIA, KENAF

---

### FLOWERING PLANTS

Begin applications preventatively (before disease symptoms become visible) at the 4 to 6-leaf stage and treat at 7–14-day intervals as needed prior to sale or harvest. Spray until just before point of runoff.

(The following plant species have been treated with Regalia® 12 Biofungicide to prevent disease.)

**Plants investigated:**

**Annual and Perennial Flowering Plants:** Begonias, Freesias, Geraniums, Gerbera, Impatiens, *Lamium*, Lisianthus, Petunias, Poinsettias, Roses, Salvias, Snapdragons, Zinnias.

**Trees and Shrubs:** Azalea, Boxwood, Crape Myrtle, Dogwood, Indian Hawthorne, Jumbo Azalea, Lilac, Loropetalum, Japanese Maple, Japanese Privet, *Photinia*, Rhododendron, *Rosaceae*, Soft Touch Holly, Spirea, *Viburnum*.

**Tropical Foliage:** *Aglaonema*, *Dieffenbachia*, *Dracaena*, English Ivy, *Hibiscus*, Leatherleaf Fern, *Spathiphyllum*.

Since it is not possible to test all ornamental species or varieties grown in the greenhouse, test Regalia® 12 Biofungicide on a few plants prior to large-scale usage.)

---

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

---

## BEDDING PLANTS

Begin applications preventatively (before disease symptoms become visible) at the 4 to 6-leaf stage and treat at 7–14-day intervals as needed prior to sale or harvest. Spray until just before point of runoff.

(The following plant species have been treated with Regalia® 12 Biofungicide to prevent disease.

**Plants investigated:**

**Annual and Perennial Flowering Plants:** Begonias, Freesias, Geraniums, Gerbera, Impatiens, *Lamium*, Lisianthus, Petunias, Poinsettias, Roses, Salvias, Snapdragons, Zinnias.

**Trees and Shrubs:** Azalea, Boxwood, Crape Myrtle, Dogwood, Indian Hawthorne, Jumbo Azalea, Lilac, Loropetalum, Japanese Maple, Japanese Privet, *Photinia*, Rhododendron, *Rosaceae*, Soft Touch Holly, Spirea, *Viburnum*.

**Tropical Foliage:** *Aglaonema*, *Dieffenbachia*, *Dracaena*, English Ivy, *Hibiscus*, Leatherleaf Fern, *Spathiphyllum*.

Since it is not possible to test all ornamental species or varieties grown in the greenhouse, test Regalia® 12 Biofungicide on a few plants prior to large-scale usage.)

---

## FOLIAGE PLANTS

Begin applications preventatively (before disease symptoms become visible) at the 4 to 6-leaf stage and treat at 7–14-day intervals as needed prior to sale or harvest. Spray until just before point of runoff.

(The following plant species have been treated with Regalia® 12 Biofungicide to prevent disease.

**Plants investigated:**

**Annual and Perennial Flowering Plants:** Begonias, Freesias, Geraniums, Gerbera, Impatiens, *Lamium*, Lisianthus, Petunias, Poinsettias, Roses, Salvias, Snapdragons, Zinnias.

**Trees and Shrubs:** Azalea, Boxwood, Crape Myrtle, Dogwood, Indian Hawthorne, Jumbo Azalea, Lilac, Loropetalum, Japanese Maple, Japanese Privet, *Photinia*, Rhododendron, *Rosaceae*, Soft Touch Holly, Spirea, *Viburnum*.

**Tropical Foliage:** *Aglaonema*, *Dieffenbachia*, *Dracaena*, English Ivy, *Hibiscus*, Leatherleaf Fern, *Spathiphyllum*.

Since it is not possible to test all ornamental species or varieties grown in the greenhouse, test Regalia® 12 Biofungicide on a few plants prior to large-scale usage.)

---

## ORNAMENTALS

Begin applications preventatively (before disease symptoms become visible) at the 4 to 6-leaf stage and treat at 7–14-day intervals as needed prior to sale or harvest. Spray until just before point of runoff.

(The following plant species have been treated with Regalia® 12 Biofungicide to prevent disease.

**Plants investigated:**

**Annual and Perennial Flowering Plants:** Begonias, Freesias, Geraniums, Gerbera, Impatiens, *Lamium*, Lisianthus, Petunias, Poinsettias, Roses, Salvias, Snapdragons, Zinnias.

**Trees and Shrubs:** Azalea, Boxwood, Crape Myrtle, Dogwood, Indian Hawthorne, Jumbo Azalea, Lilac, Loropetalum, Japanese Maple, Japanese Privet, *Photinia*, Rhododendron, *Rosaceae*, Soft Touch Holly, Spirea, *Viburnum*.

**Tropical Foliage:** *Aglaonema*, *Dieffenbachia*, *Dracaena*, English Ivy, *Hibiscus*, Leatherleaf Fern, *Spathiphyllum*.

Since it is not possible to test all ornamental species or varieties grown in the greenhouse, test Regalia® 12 Biofungicide on a few plants prior to large-scale usage.)

---

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

---

**GRASS (GROWN FOR) SEED**

---

**SWITCHGRASS, MISCANTHUS**

---

**TOBACCO**

---

**TURFGRASS AND ORNAMENTAL GRASSES:** Bluegrass, Bentgrass, Bermudagrass, Dichondra, Fescue, Orchardgrass, *Poa annua*, Ryegrass, St. Augustine, Zoysia mixtures and other turfgrass and ornamental grasses

This product aids in control of turf diseases and improves turf quality.

This product may be used to control the following diseases of container, bench, flat, plug, bed, or field-grown ornamentals and edible crops in **shade-houses, outdoor nurseries, retail nurseries,** and other **landscape areas.**

---

**SHRUBS AND TREES:** Conifers, Broadleaves

Begin applications preventatively (before disease symptoms become visible) at the 4 to 6-leaf stage and treat at 7–14-day intervals as needed prior to sale or harvest. Spray until just before point of runoff.

The following plant species have been treated with Regalia® 12 Biofungicide to prevent disease.

**Plants investigated:**

**Annual and Perennial Flowering Plants:** Begonias, Freesias, Geraniums, Gerbera, Impatiens, *Lamium*, Lisianthus, Petunias, Poinsettias, Roses, Salvias, Snapdragons, Zinnias.

**Trees and Shrubs:** Azalea, Boxwood, Crape Myrtle, Dogwood, Indian Hawthorne, Jumbo Azalea, Lilac, Loropetalum, Japanese Maple, Japanese Privet, *Photinia*, Rhododendron, *Rosaceae*, Soft Touch Holly, Spirea, *Viburnum*.

**Tropical Foliage:** *Aglaonema*, *Dieffenbachia*, *Dracaena*, English Ivy, *Hibiscus*, Leatherleaf Fern, *Spathiphyllum*.

Since it is not possible to test all ornamental species or varieties grown in the greenhouse, test Regalia® 12 Biofungicide on a few plants prior to large-scale usage.

---

**INTEGRATED PEST MANAGEMENT (IPM)**

Many conventional fungicides have been tested in an IPM regime with REGALIA® 12 Biofungicide with very satisfactory results. One of the major objectives of IPM has been to reduce the probability of disease resistance development to a particular active ingredient.

The alternate use of (1–2 sprays) followed by a conventional, registered fungicide (1–2 sprays) has been successfully used in many crops. In addition, the use of tank mixes with a conventional fungicide has also been successful.

Follow label instructions of the particular registered product: Do not exceed amounts or treatment intervals on the label.

**STORAGE AND DISPOSAL**

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

---

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

**Pesticide Storage:** Store in a cool, dry place. Avoid freezing.

**Pesticide Disposal:** To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**Container Handling (under 5 gallons):** Non-refillable 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 and drain for 10 seconds after the flow begins to drip. 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.

**Container Handling (over 5 gallons):** Non-refillable container. Do not reuse or refill this container Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. 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.

Marrone Bio Innovations is a member of the Ag Container Recycling Council.

Visit <http://www.acrecycle.org/contact.html> for information on how to arrange pick-up of this empty pesticide container.



#### **WARRANTY**

To the extent consistent with applicable law, the seller makes no warranty, expressed or implied, of merchantability, fitness or otherwise concerning use of this product. To the extent permitted by the applicable law, the user assumes all risks of use, storage or handling that are not in strict accordance with the accompanying directions.

Label date:

Made in the U.S.A.

US Patents No. 4,863,734 and No. 5,989,429

REGALIA® is a trademark of Marrone Bio Innovations, Inc.

Marrone Bio Innovations' name and logo are registered trademarks of Marrone Bio Innovations, Inc.

© Marrone Bio Innovations, Inc.

1540 Drew Ave., Davis, CA 95618

1-877-664-4476

[www.marronebio.com](http://www.marronebio.com)

[info@marronebio.com](mailto:info@marronebio.com)

**LOT (#XXXX)(printed on container)**

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

## Sublabel B: Professional Landscape Use

### REGALIA® 12 Biofungicide

A plant extract to boost the plants' defense mechanisms to protect against certain fungal and bacterial diseases, and to improve plant health.

Active ingredient: Extract of *Reynoutria sachalinensis* ..... 12 %  
Other ingredients: ..... 88 %  
Total ..... 100 %

EPA Reg. No. 84059-21

EPA Est. No. 085970-FL-001

EPA Est. No. 084059-MI-001

**GROUP P5 FUNGICIDE**

KEEP OUT OF REACH OF CHILDREN

### CAUTION

FIRST AID	
<b>IF SWALLOWED:</b>	Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
<b>IF ON SKIN OR CLOTHING:</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control center or doctor for treatment advice.
<b>IF INHALED:</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
<b>IF IN EYES:</b>	Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
<b>HOTLINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor, or if going for treatment. Contact the poison control center hotline at 1-800-222-1222; 24 hours a day, 7 days a week for emergency medical treatment information.	

(USDA BioBased logo placeholder) \* [with] \*This mark is not an indication of safety. Read and follow all label instructions.) (Organic gardening/production logo placeholder) (Can Be Used in Organic Production) (For Organic Production)(OMRI Placeholder)

LOT #: (xxx) (printed on container)

Net Contents: 1 pint, 1 quart, 1 gallon, 2.5 gallon, 5 gallon, 55 gallon drum, 265 gallon tote  
Marrone Bio Innovations, Inc. 1540 Drew Ave, Davis, CA 95618

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

## **PRECAUTIONARY STATEMENTS**

### **HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear goggles or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers must wear:

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

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### **ENVIRONMENTAL HAZARDS**

For terrestrial uses: Do not apply directly to water, 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.

(Use the following additional statement for containers that hold 5 gallons or more: Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.)

## **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 exemptions pertaining to the statements on this label about personal protective equipment (PPE) and the restricted-entry interval (REI). The requirements in this box only apply to 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 4 hours.

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
- Protective eyewear

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

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. The REI does not apply when this product is used for seed treatment at planting or in hopper box treatments.

#### GENERAL INFORMATION

REGALIA® 12 Biofungicide is an extract from the plant *Reynoutria* spp. for use on ornamental plants and edible crops. REGALIA® 12 Biofungicide applied to actively growing plants (see DIRECTIONS FOR USE) will improve plant health and will help make the treated portions resistant to certain plant diseases. Plant health benefits often result in greater yields at harvest, especially when crops are stressed by pathogens or environmental conditions. **Use REGALIA® 12 Biofungicide as a preventative rather than a curative application.** Apply prior to disease infestation to protect the growing leaf tissue. See specific information below for diseases controlled and use rates on ornamental plants and edible crops.

REGALIA® 12 Biofungicide can be used as a seed treatment, plant dip, soil drench, in-furrow spray, or applied through drip irrigation to control or suppress certain soil-borne diseases and to promote healthy root growth. See below specific information for diseases controlled and use rates on treating seeds with REGALIA® 12 Biofungicide.

#### (MODE OF ACTION)

The extract obtained from *Reynoutria sachalinensis* plant material contains bioactive compounds. The extract, when applied to the host plant, activates the plant's defense system to increase phenolics and antioxidants, and strengthen cell walls. This mode of action is classified as induced systemic resistance (ISR). Plants also develop an enhanced resistance to further pathogen attacks. This type of enhanced resistance is referred to as systemic acquired resistance (SAR).

When applied at rates and timing for disease control, the induced resistance against important diseases provides translaminar activity, which takes place within one to two days of application. Repeat foliar applications per label instructions. Use REGALIA® 12 Biofungicide, therefore, as a preventative treatment. In addition to foliar applications, REGALIA® 12 Biofungicide can be used in multiple application methods as a plant dip, soil drench, in-furrow spray, or applied through drip irrigation to control or suppress certain soil-borne diseases and to promote healthy root growth.

When applied at rates and timing for plant health effects, the improved plant defense responses minimize the impacts of stress and disease, resulting in optimized yields at harvest. Applying Regalia® 12 Biofungicide has been shown to increase leaf chlorophyll content and increase soluble protein content in some crops. These effects often lead to improved crop quality and/or yields.)

#### MIXING AND APPLICATION INSTRUCTIONS

##### – SHAKE WELL PRIOR TO USE –

REGALIA® 12 Biofungicide is a micro-emulsion concentrate consisting of certain ingredients extracted from *Reynoutria* spp. Use 50-mesh nozzle screens or larger.

**See AERIAL APPLICATION section for aerial application use directions.**

**See CHEMIGATION section for chemigation use directions.**

**See PRE-PLANT DIP section for pre-plant dip use directions.**

**See SEED TREATMENT section for seed treatment use directions.**

**See SOIL TREATMENT section for soil application use directions.**

Use higher water volumes with larger sized crops and extensive foliage to obtain thorough coverage.

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

**REGALIA® 12 Biofungicide alone:** Add ½ of the required amount of water to the mix tank. With the agitator running, add the REGALIA® 12 Biofungicide to the mix tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the REGALIA® 12 Biofungicide has completely dispersed into the mix water. Maintain agitation until all the mixture has been applied.

**REGALIA® 12 Biofungicide + tank-mixtures:** Add ½–¾ of the required amount of water to the mix tank. Start the agitation before adding any tank mix ingredients. In general, tank-mix ingredients should be added in this order: wettable powders, dry flowable formulations, liquid flowable formulations, and emulsifiable formulations such as REGALIA® 12 Biofungicide. Always allow each tank-mix ingredient to become completely dispersed before adding the next component. Maintain continuous agitation until all components have been dispersed and throughout the application process. After all components are completely dispersed add the remainder of the water. REGALIA® 12 Biofungicide cannot be mixed with another product with a prohibition against mixing. Use of the tank mix must be in accordance with the most restrictive label limitations and precautions. **Do not pre-mix REGALIA® 12 Biofungicide with any other tank mix component prior to adding to the spray tank.**

**Compatibility:** Do not combine REGALIA® 12 Biofungicide in the spray tank with pesticides, adjuvants, or fertilizers if there has been no previous experience or use of the combination to show it is physically compatible, effective, and non-injurious under your use conditions. Electrostatic sprayers have not been tested to demonstrate successful application and maintain product efficacy.

REGALIA® 12 Biofungicide is compatible with many commonly used pesticides, fertilizers, adjuvants, and surfactants, but has not been evaluated with all potential combinations. To ensure compatibility of the tank mix combinations, evaluate prior to use as follows: Using a suitable container, add the proportional amounts of product to water. Add wettable powders first, then water dispersible granules, then liquid flowables, and lastly, emulsifiable concentrates. Mix thoroughly and let stand for at least five minutes. If the combination stays mixed or can be remixed, it is physically compatible. Test the mix on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of the application.

#### **5.0–53.33 fluid ounces per acre for FOLIAR (GROUND) applications**

- (For ground applications (to optimize disease control and to maximize yields), (apply this product) (at 5.0–53.33 fluid ounces) (apply (5.0–26.66 fluid ounces of) this product preventatively) (in (a minimum of) 15–100 gallons of water per acre) (prior to disease development using sufficient volume for thorough coverage) (or) (preventatively) (when the first symptoms of disease are visible) (or when environmental conditions are conducive to rapid disease development) (Increase water volume as plant size increases.) (For foliar applications, apply this product preventatively in 20–100 gallons of water per acre) (Spray water volumes must be of at least 1.5 gallons of water per 1000 sq. ft.)
- For concentrated ground applications, apply this product at 5.0–20 fluid ounces per acre (in 10–25 gallons of water per acre.) (in a minimum of 10 gallons of water per acre.)
- (Apply this product preventatively or when the first disease symptoms are visible and reapply every 7–14 days.) (It is important to apply this product at the flag leaf stage to maximize yield.) (Apply this product preventatively or when the first disease symptoms appear.) (Repeat applications in 7–14-day intervals) (depending upon crop growth and disease pressure.) (Repeat applications in 7–14-day intervals depending upon crop growth and disease pressure) (Repeat applications at 7–10-day intervals) (Continue sprays at 7-day intervals or as needed)
- (When the plants are) (under high disease pressure, tank-mix this product with another fungicide for more effective control.) (For improved performance, use this product in a tank mix or rotational program with other registered fungicides.) (Under moderate to heavy disease pressure, tank-mix this product with another fungicide.) (For improved performance, apply 5.0–26.66 fluid ounces this product in a tank mix with another registered fungicide. Consult your local Extension Specialist or Crop Consultant regarding the optimum timing of fungicide applications.) (Tank-mix this product with other registered fungicides for improved disease control

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

under heavy pressure.) (When tank mixed with other fungicides, use 5.0 –26.66 fluid ounces of REGALIA® 12 Biofungicide per acre.)

- **Dilute applications:** this product can be applied by ground equipment to tree crops in dilute applications of 100–400 gallons of water. Apply this product at a rate of 5.0–53.33 fluid ounces per acre when applied alone, or at 13.33–53.33 fluid ounces per acre when tank mixed with another fungicide. Avoid excessive amounts of water that result in the runoff of spray material.
- Spray until just before point of runoff.
- This product may be used to control certain diseases of container, bench, flat, plug, bed, or field-grown ornamentals **in shade-houses, outdoor nurseries, retail nurseries, and other landscape areas.**

#### **5.0–13.33 fluid ounces per acre for FOLIAR (AERIAL) applications**

- For aerial applications, apply this product in a minimum of 3-10 gallons of water per acre.
- Apply this product preventatively or when the first disease symptoms are visible and reapply every 7–14 days.
- (It is important to apply this product at the flag leaf stage to maximize yield.) (Apply this product preventatively or when the first disease symptoms appear.) (Repeat applications in 7–14-day intervals) (depending upon crop growth and disease pressure.)
- (When the plants are under high disease pressure, tank-mix this product with another registered fungicide for more effective control.) (For improved performance, use this product in a tank mix or rotational program with other registered fungicides.)
- Under moderate to heavy disease pressure, tank-mix this product with another fungicide.

#### **AERIAL APPLICATION INSTRUCTIONS**

Apply REGALIA® 12 Biofungicide by aerial application to the Edible Crops listed in this label at the rate of 5.0–13.33 fluid ounces per acre in a minimum of 5 gallons of water per acre unless otherwise specified in the SELECTED CROPS section. Increasing the amount of water applied per acre will improve product performance. Follow all instructions to reduce aerial drift.

#### **AERIAL DRIFT REDUCTION ADVISORY INFORMATION**

**GENERAL:** Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. Where states have more stringent regulations, they should be observed. Note: This section is advisory in nature and does not supersede the mandatory label requirements.

**INFORMATION ON DROPLET SIZE:** The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply droplets large enough to provide sufficient coverage and control. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

**CONTROLLING DROPLET SIZE:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Pressure – Do not exceed the nozzle manufacturer’s recommended pressures. For many nozzle types, lower pressure produces larger droplets. When high flow rates are needed, use higher flow rate nozzles instead of increasing pressure. Number of Nozzles – Use the minimum number of nozzles

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

that provide uniform coverage. Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential. Nozzle Type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**BOOM WIDTH:** For aerial applications, the boom width must not exceed 75% of the wingspan or 90% of the rotary blade. Use upwind swath displacement and apply only when wind speed is 3–10 mph as measured by an anemometer. Use medium or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or crop canopy.

**APPLICATION HEIGHT:** Do not make application at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**SWATH ADJUSTMENT:** When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

**WIND:** Drift potential is lowest between wind speeds of 2–10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

**TEMPERATURE AND HUMIDITY:** When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**TEMPERATURE INVERSIONS:** Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

**SENSITIVE AREAS:** The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas). Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

## CHEMIGATION USE DIRECTIONS

Do not use reclaimed water for application of this product.

### **Spray preparation**

First prepare a suspension of REGALIA® 12 Biofungicide in a mix tank. Fill tank ½ to ¾ the desired amount of water. Start mechanical or hydraulic agitation. Add the required amount of REGALIA® 12 Biofungicide, and then the remaining volume of water. Then set the sprinkler to deliver a minimum of 0.1 to 0.3 inch of water per acre. Start sprinkler and uniformly inject the suspension of REGALIA® 12 Biofungicide into the irrigation water line so as to deliver the desired rate per acre. Inject the suspension of REGALIA® 12 Biofungicide with a positive displacement pump into the main line after the filter, and ahead of a right angle turn to insure adequate mixing. Any questions on calibration should be directed to your State Extension Service Specialists, to equipment manufacturers or other experts.

Do not combine REGALIA® 12 Biofungicide with pesticides, surfactants or fertilizers for application through chemigation equipment unless prior experience has shown the combination physically compatible, effective and non-injurious under conditions of use. REGALIA® 12 Biofungicide has not been fully evaluated for compatibility with all adjuvants or surfactants. Conduct a spray compatibility test if a mixture with adjuvants or surfactants is planned.

**Apply REGALIA® 12 Biofungicide at 5.0–53.33 fluid ounces per acre according to the instructions below unless specified differently in the SELECTED CROPS section.**

### **5.0–53.33 fluid ounces per acre for CHEMIGATION applications**

- For chemigation applications for improved plant growth and suppression of soil-borne diseases, apply this product through drip irrigation (at the rate of 5.0–53.33 fluid ounces per acre) immediately after transplant and at 14-day intervals or begin 14 days after transplant when soil drench applications are used.

---

## CHEMIGATION

---

### **General Requirements –**

- 1) Apply this product only through a drip or trickle system or center pivot sprinkler system, lateral move, end tow, side (wheel) roll, traveler, solid set, hand move, flood (basin), furrow, border or drip (trickle) irrigation systems.
- 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.

### **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

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

- 4) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 5) 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.
- 6) 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.
- 7) 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 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) 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 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.
- 3) 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 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.

**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 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.

**PRE-PLANT DIP USE DIRECTIONS**

Apply REGALIA® 12 Biofungicide as a pre-plant dip for improved plant health and suppression of certain soil-borne diseases. (See use table for more information.) Apply REGALIA® 12 Biofungicide at a rate of 5.0–53.33 fluid ounces

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

of product per 100 gallons of water as a pre-plant dip immediately prior to transplanting, unless specified differently in the SELECTED CROPS section.

**5.0–53.33 fluid ounces per 100 gallons of water for PLANT DIP (bare root) applications**

- For plant dip applications for improved plant growth and suppression of soil-borne diseases, apply this product in a 0.04–0.41% v/v suspension (5.0–53.33 fluid ounces this product per 100 gallons water) as a pre-plant dip immediately prior to transplanting.

**SEED TREATMENT USE DIRECTIONS**

REGALIA® 12 Biofungicide can be applied as a seed dressing for suppression of soil-borne diseases to improve early-season root growth. REGALIA® 12 Biofungicide may be applied as a water-based slurry with other registered seed treatment insecticides and fungicides through standard slurry- or mist-type commercial seed treatment equipment. REGALIA® 12 Biofungicide can be used in on-farm hopper-box or planter-box treatments.

**Mixing instructions:** Prepare no more mixture than is required for the immediate operation. Agitate the solution continuously during mixing and application. Mechanical mixing is required for proper mixing of REGALIA® 12 Biofungicide mixtures.

**REGALIA® 12 Biofungicide alone:** Add ½ of the required amount of water to the mix tank. With the agitator running, add the REGALIA® 12 Biofungicide to the mix tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the REGALIA® 12 Biofungicide has completely dispersed into the mix water. Maintain agitation until all the mixture has been applied.

**REGALIA® 12 Biofungicide + tank-mixtures:** Add ½ of the required amount of water to the mix tank. Start the agitation before adding any tank mix ingredients. Add tank-mix ingredients in the following order: wettable powders, dry flowable formulations, liquid flowable formulations, and emulsifiable formulations such as REGALIA® 12 Biofungicide. Always allow each tank-mix ingredient to become completely dispersed before adding the next component. Maintain continuous agitation until all components have been dispersed and throughout the application process.

**Note:** When using REGALIA® 12 Biofungicide in tank-mixtures, add all products in water soluble packaging should be added to the tank before any other tank-mix ingredient, including REGALIA® 12 Biofungicide. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank-mix ingredient to the tank.

If using REGALIA® 12 Biofungicide in a tank mixture with other seed treatment products, observe all directions for use, crops/sites, use rates, dilution ratios, precautions, and limitations which appear on the tank-mix ingredient label. Do not exceed label rates and the most restrictive label precautions and limitations must be followed. Do not mix this product with any product which prohibits such mixing.

Do not apply this product through any type of irrigation system.

**0.62–6.25 fluid ounces (18– 185 ml) per 100 lbs. seed for SEED TREATMENT applications**

- For suppression of soil-borne diseases, apply this product as a seed treatment at the rate of 0.62–6.25 fluid ounces (18– 185 ml) per 100 lbs. seed.

**5.0–53.33 fluid ounces per 100 gallons of water for SEED PIECE DIP applications**

- For seed piece dip applications for improved plant growth and suppression of soil-borne diseases, apply this product in a 0.04–0.41% v/v suspension (5.0–53.33 fluid ounces this product per 100 gallons water) as a pre-plant dip to transplants or seed pieces immediately prior to transplanting.

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

### SOIL TREATMENT USE DIRECTIONS

REGALIA® 12 Biofungicide can be applied by soil drench, in-furrow spray, or soil injection to improve plant health and to protect against certain soil-borne diseases.

In general, REGALIA® 12 Biofungicide can be applied by the following methods, unless specified differently in the SELECTED CROPS section:

#### Soil Drench Applications:

Apply REGALIA® 12 Biofungicide at a concentration of 5.0–40 fluid ounces per 100 gallons of water, and at a sufficient rate to thoroughly soak the growing media and root zone. Make an initial application of REGALIA® 12 Biofungicide during or shortly after transplant to reduce transplant shock, suppress the listed soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10–14-day interval.

#### 5.0–40 fluid ounces per 100 gallons of water for SOIL DRENCH applications

- For soil drench applications, apply this product at a concentration of 5.0–40 fluid ounces per 100 gallons of water, and at a sufficient rate to thoroughly soak the growing media and root zone. Make an initial application of this product during or shortly after transplant to reduce transplant shock, suppress soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10–14-day interval.

#### Shanked-In and Injected Applications:

REGALIA® 12 Biofungicide can be shanked-in or injected into the soil alone, or with most types of liquid nutrients.

#### In-Furrow Applications:

At planting, apply REGALIA® 12 Biofungicide as an in-furrow spray at the rate of 5.0–53.33 fluid ounces per acre or 0.29 – 4.08 fluid ounces ( 9–121 ml) per 1000 feet of row according to the chart below. Apply REGALIA® 12 Biofungicide in 5–15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.

#### 5.0–53.33 fl. oz. per acre or 0.29 – 4.08 fl. oz. ( 9 - 121 ml) per 1000 ft. row for IN-FURROW applications

- For in-furrow applications, at planting apply this product as an in-furrow spray at the rate of 5.0- 53.33 fluid ounces per acre or 0.29 – 4.08 fluid ounces ( 9 - 121ml) per 1000 feet of row according to the chart in the SOIL TREATMENT USE DIRECTIONS section. Apply this product in 5–15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.

Fluid ounces of Regalia 12 per 1000 row feet

Fluid ounces per acre	30" rows	32" rows	34" rows	36" rows	38" rows	40" rows
5.0	0.29	0.31	0.33	0.34	0.36	0.38
10.0	0.57	0.61	0.65	0.69	0.73	0.77
20.0	1.15	1.23	1.30	1.38	1.45	1.53
30.0	1.72	1.84	1.95	2.07	2.18	2.30

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

40.0	2.30	2.45	2.60	2.75	2.91	3.06
53.33	3.05	3.27	3.47	3.67	3.88	4.08

30" = 17,424 row ft./acre, 32" = 16,315 row ft./acre, 34" = 15,374 row ft./acre,

36" = 14,520 row ft./acre, 38" = 13,754 row ft./acre, 40" = 13,068 row ft./acre.

#### APPLICATION RATES FOR SELECTED CROPS

When used as directed REGALIA® 12 Biofungicide will improve plant health, and induce the defense system of the treated plants listed below towards the diseases specified below.

[Interchangeable language:

- 1 quart REGALIA® 12 Biofungicide per acre interchangeable with 2 tablespoons (tbsp.) REGALIA® 12 Biofungicide per 1,000 square (sq.) feet (ft.), and multiples thereof
- 1 quart REGALIA® 12 Biofungicide per 50 gallons water interchangeable with 4 teaspoons REGALIA® 12 Biofungicide per gallon water, and multiples thereof
- 1 quart REGALIA® 12 Biofungicide per 50 gallons water interchangeable with 1.5 tablespoons REGALIA® 12 Biofungicide per gallon water, and multiples thereof]

#### FOR USE ON THE FOLLOWING CROPS FOR CONTROL OR SUPPRESSION OF (THE FOLLOWING) (DISEASES) (PATHOGENS)(PESTS)

The use rate for REGALIA® 12 Biofungicide when applied alone or as an alternate spray is 5.0–53.33 fluid ounces per 100 gallons of water ( 0.04–0.41% v/v dilution of REGALIA® 12 Biofungicide) applied at 50–100 gallons of water per acre. When tank mixed with another fungicide, the use rate for REGALIA® 12 Biofungicide is 5.0–53.33 fluid ounces in 100 gallons of water applied at 50–100 gallons of water per acre. Use higher water volumes with larger sized crops and extensive foliage in order to secure thorough coverage. Do not use carrier volumes and/or adjuvants that create spray runoff or drip-accumulation at the base of fruit or on the harvested commodity. See specific application directions pertaining to each crop for additional details.

**[pests can alternatively appear in the specific crops]**

- Aerial Stem Rot (*Erwinia carotovora*)
- Aerial Web Blight (*Rhizoctonia solani*)
- Alfalfa Wilt (*Xylella spp.*)
- Alternaria Blight (*Alternaria cucumerina*)
- Alternaria Blotch (*Alternaria mali*)
- Alternaria Brown Spot (*Alternaria alternata*)
- Alternaria Fruit Rot (*Alternaria spp.*)
- Alternaria Leaf Blight (*Alternaria spp.*)
- Alternaria Leaf Spot (*Alternaria spp.*)
- Alternaria Leaf Spot, Boll Rot (*Alternaria spp.*)
- Alternaria Spot/Fruit Rot (*Alternaria alternata*)
- Angular Leaf Spot (*Mycosphaerella angulata*) (*Xanthomonas fragariae*)
- Anthracnose (*Collectotrichum spp.*) (*Gnomonia leptostyla*) (*Collectotrichum gloeosporioides*) (*Collectotrichum lagenarium*) (*Collectotrichum truncatum*) (*Elsinoe ampelina*)
- Anthracnose (*Collectotrichum coccodes*) (*Collectotrichum atramentarium*) (*Collectotrichum dematium*)

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

- Anthracnose (*Colletotrichum* spp.) – suppression only
- Anthracnose and Black Stem Rot (*Colletotrichum trifolii*)
- Anthracnose Boll Rot (*Glomeria* spp.)
- Anthracnose Fruit Rot (*Colletotrichum acutatum*)
- Anthracnose Leaf Blight (*Colletotrichum graminicola*)
- Anthracnose of Potato (*Colletotrichum coccodes*)
- Anthracnose, Boll Rot (*Glomeria* spp.)
- Apple Scab (*Venturia inaequalis*) (Suppression only)
- Ascochyta Blight, Boll Rot (*Ascochyta* spp.)
- Asian Soybean Rust (*Phakopsora pachyrhizi*)
- Aspergillus crown rot (*Aspergillus niger*)
- *Aureobasidium zeae*
- Bacteria (*Erwinia* spp.) (*Pseudomonas* spp.) (*Xanthomonas* spp.)
- Bacterial (Leaf) Spot (*Xanthomonas pruni*)
- Bacterial Blast (*Pseudomonas syringae*)
- Bacterial blight (*Pseudomonas cannabina*)
- Bacterial Blight (*Pseudomonas syringae*) (*Pseudomonas viridiflava*) (*Xanthomonas campestris* pv. *pruni*) (*Xanthomonas campestris*)
- Bacterial Blight and Streak (*Xanthomonas* spp.)
- Bacterial Blight/Rot (*Xanthomonas* spp.)
- Bacterial Canker (*Erwinia nigrifluens*) (*Pseudomonas syringae*) (*Pseudomonas* spp.) (*Xanthomonas campestris*) (*Xanthomonas* spp.)
- Bacterial Leaf Blight (*Xanthomonas campestris*)
- Bacterial Leaf Spot (*Pseudomonas* spp.)
- Bacterial leaf streak (*Xanthomonas campestris* pv. *Holcicola*)
- Bacterial leaf stripe (*Pseudomonas* spp.)
- Bacterial Pustule (*Xanthomonas* spp.)
- Bacterial rots (*Pantoea* spp.)
- Bacterial Speck (*Pseudomonas syringae* pv. *glycinea*) (*Pseudomonas syringae*)
- Bacterial Spot (*Xanthomonas pruni*) (*Xanthomonas* spp.) (*Xanthomonas cucurbitae*)
- Bacterial Wilt (*Clavibacter michiganense*)
- Barley yellow dwarf virus
- Bentgrass/Bermudagrass Dead Spot (*Ophiosphaerella agrostis*)
- Bermudagrass Decline (*Gaeumannomyces graminis* var. *graminis*)
- Bitter Rot (*Colletotrichum* spp.)
- Black dot disease (*Epicoccum nigrum*) (*Epicoccum purpurascens*)
- Black mildew (*Schiffnerula cannabis*)
- Black Mold (*Alternaria alternata*)
- Black Root (*Thielaviopsis basicola*)
- Black Root Rot / Black Crown Rot (*Alternaria* spp.)
- Black Rot (*Guignardia bidwellii*)
- Black Rot/Frogeye Leaf Spot (*Botryosphaeria obtusa*)
- Black Scurf (*Rhizoctonia solani*)
- Black shank (*Phytophthora nicotianae*)
- Black Spot (*Guignardia citricarpa*), (*Phyllosticta citricarpa*)
- Black Spot of Rose (*Diplocarpon rosae*)
- Blossom Blight (*Monilinia* spp.)
- Blue Mold (*Peronospora tabacina*)
- Boll Rot (*Alternaria* spp.) (*Ascochyta* spp.) (*Fusarium* spp.) (*Phoma* spp.)
- Bot Rot (*Botryosphaeria dothidea*)
- Botryosphaeria Blight (*Botryosphaeria dothidea*)
- Botrytis (*Botrytis cinerea*)
- Botrytis Blight (*Botrytis cinerea*)
- Botrytis Bud Rot (*Botrytis cinerea*)
- Botrytis Bunch Rot (*Botrytis cinerea*)
- Botrytis Fruit Rot (*Botrytis cinerea*)
- Botrytis Leaf Blight (*Botrytis squamosa*)
- Botrytis Neck Rot (*Botrytis* spp.)
- Brooks Spot (*Mycosphaerella pomi*)
- Brown / Hull Rot (*Monilinia* spp.)
- Brown blight (*Alternaria alternata*) (*Alternaria tenuis*)
- Brown leaf spot and stem canker (*Ascochyta* spp.) (*Ascochyta prasadii*) (*Phoma* spp.) (*Didymella* spp.) (*Phoma exigua*) (*Phoma glomerata*) (*Phoma herbarum*)
- Brown patch (*Rhizoctonia solani*)
- Brown Rot (*Monilinia* spp.)

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

- Brown Rot Blossom Blight (*Monilinia laxa*)
- Brown Rot Fruit Rot (*Monilinia fruticola*)
- Brown Rot, Leaf Spots & Smuts  
(*Ceratobasidium spp.*) (*Cercospora spp.*)  
(*Cochliobolus spp.*) (*Drechslera spp.*)
- Brown Rust (*Puccinia melanocephala*)
- Brown Spot (*Alternaria spp.*) (*Septoria glycines*)
- Brown Stripe/Gray Streak (*Cercosporidium graminis*)
- Bull's Eye Rot (*Neofabraea spp.*)
- Cedar-Apple Rust (*Gymnosporangium juniperi-virginianae*) – suppression only
- Cercospora Blight (*Cercospora asparagi*)(*Cercospora kikuchii*)
- Cercospora Blight and Leaf Spot (*Cercospora spp.*)
- Cercospora Leaf Spot (*Cercospora citrulina*)  
(*Cercospora spp.*) (*Cercospora beticola*)
- Charcoal rot (*Macrophomina phaseolina*)
- Cherry Leaf Spot (*Blumeriella jaapii*)
- *Cladosporium spp*
- Cladosporium stem canker (*Cladosporium cladosporioides*)(*Cladosporium herbarum*)(*Mycosphaerella tassiana*)
- Clubroot (*Plasmodiophora brassicae*)
- Colletotrichum Crown Rot (*Colletotrichum spp.*) (*Colletotrichum graminicola*)
- Common Scab (*Streptomyces scabies*)  
Suppression only
- Copper Spot (*Gloeocercospora sorghi*)
- Corn grey leaf spot (*Cercospora zeae-maydis*) (*Cercospora zeina*)
- Cotton root rot (Phymatotrichopsis omnivora)(*Phymatotrichum omnivorum*)
- Cranberry cotton ball (*Monilinia oxycocci*)
- Cranberry Early Rot (*Phyllosticta vaccinia*)
- Crown and Foot Rots (*Pseudocercospora herpotrichoides*, *Rhizoctonia*)
- Crown gall (*Agrobacterium tumefaciens*)
- Curvularia leaf spot (*Curvularia cymbopogonis*) (*Curvularia lunata*)(*Cochliobolus lunatus*)
- Cylindrosporium blight (*Cylindrosporium spp.*) (*Cylindrosorium cannabinum*)
- Damping off (*Aspergillus flavus*) (*Botrytis cinerea*) (*Botryotinia fuckeliana*) (*Fusarium spp.*) (*Fusarium oxysporum*) (*Fusarium solani*) (*Nectria haematococca*)(*Macrophomina phaseolina*) (*Pellicularia filamentosa*) (*Phytophthora sp.*) (*Pythium spp.*) (*Pythium aphanidermatum*)(*Pythium debaryanum*) (*Pythium ultimum*) (*Rhizoctonia spp.*) (*Rhizoctonia solani*) (*Thanatephorus cucumeris*)
- Dichondra Rust (*Puccinia dichondrae*)
- Diplodia Boll Rot (*Diplodia spp.*)
- Diseases from pruning wounds including *Eutypa* (*Eutypa lata*), *Botryosphaeria rhodia*, *Phaeoacremonium aleophilum* and *P. chlamydospora*
- Dollar Spot (*Lanzia spp.*) (*Moellerodiscus spp.* formerly *Sclerotinia homeocarpa*)
- Downy Mildew (*Bremia lactucae*), (*Peronospora spp.*) (*Peronospora destructor*) (*Peronospora mansherica*) (*Peronospora parasitica*) (*Peronospora trifoliorum*) (*Plasmopara viburni*) (*Plasmopara viticola*) (*Pseudoperonospora cubensis*) (*Pseudoperonospora humuli*)
- Downy mildew (*Pseudoperonospora cannabina*)(*Pseudoperonospora humuli*)
- Early Blight (*Alternaria solani*)
- Early Blight of celery (*Cercospora apii*)
- Early Leaf Spot (*Cercospora arachidicola*)
- Early Rot in Cranberry (*Phyllosticta vaccinii*)
- Eastern Filbert Blight (*Anisogramma anomala*)
- *Eutypa* (*Eutypa lata*)
- Eye Spot (*Aureobasidium zeae*)
- Fire Blight (*Erwinia amylovora*) – suppression only
- Flyspeck (*Zygophiala jamaicensis*)
- Foliar Blight
- Frog-eyed Leaf Spot (*Cercospora sojae*)
- Fruit Finish
- Fungal Disease Complexes (*Bipolaris spp.*, *Monographella spp.*, *Phaeosphaeria spp.*)
- Fusarium foot rot and root rot (*Fusarium solani*)
- Fusarium Head Blight (*Fusarium graminearum*)
- *Fusarium oxysporum*

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

- Fusarium Patch (*Fusarium nivale*)
- *Fusarium proliferatum*
- Fusarium root and stem rot
- *Fusarium solani*
- *Fusarium spp.*
- Fusarium stem canker (*Fusarium sulphureum*) (*Gibberella cyanogena*)(*Gibberella saubinetii*)
- Fusarium wilt (*Fusarium oxysporum f.sp. cannabis*) (*Fusarium oxysporum f.sp. vasinfectum*)
- *Fusarium wilt (Fusarium oxysporum)*
- *Glomerella tucumanensis*, also known as *Colletotrichum falcatum* (Suppression Only)
- Gray leaf spot (*Cercospora sorghi*) (*Pyricularia grisea*) (*Cercospora zeae-maydis*)
- Gray Mold (*Botrytis cinerea*) (*Botrytis spp.*)
- Greasy Spot (*Mycosphaerella citri*)
- Green Fruit Rot (*Botrytis cinerea*)
- Gummy Stem Blight (*Didymella bryoniae*)
- Hard Lock
- Hard Lock, Boll Rot (*Fusarium spp.*)
- Hemp canker (*Sclerotinia sclerotiorum*)
- Hemp Leaf Spot (*Bipolaris sp.*)
- Hull Rot (*Rhizopus stolonifer* and *Monilinia spp.*)
- Late Blight (*Phytophthora infestans*) (*Septoria apiicola*)
- Late Leaf Spot (*Cercosporidium personatum*)
- Late Rot in Cranberry
- Leaf Blight (*Pseudocercospora vitis*) (*Septosphaeria turcica*)
- Leaf Rust (*Pucciniastrum vaccinii*) (*Tranzschelia discolor*)
- Leaf Spot (*Alternaria spp.*) (*Cercospora spp.*) (*Cercospora beticola*) (*Corynespora cassicola*) (*Entomosporium spp.*) (*Mycosphaerella fragariae*) (*Myrothecium spp.*) (*Septoria spp.*)
- Leaf Spots (*Drechslera*, *Cochliobolus*, *Cercospora*)
- Leafspots and Blotches (*Pseudopeziza medicaginus*, *Stemphyllium spp.*, *Cercospora spp.*, *Stagonospora spp.*)
- Leptosphaeria blight (*Leptosphaeria cannabina*)(*Leptosphaeria woroninii*)(*Leptosphaeria acuta*)
- Melanose (*Diaporthe citri*)
- Melting Out Leaf Spot (*Bipolaris spp.*), (*Drechslera spp.*)
- Miscanthus blight
- Miscanthus streak virus
- Mosaic viruses
- Mummy Berry (*Monilinia vaccinii-corymbosi*),
- Necrotic Ring Spot (*Leptosphaeria korrae*)
- Northern Leaf Blight (*Exserohilum turcicum*)
- Northern Leaf Spot (*Cochliobolus carbonum*)
- Olive Knot (*Pseudomonas savastanoi*)
- Olive leaf spot (*Cercospora cannabis*) (*Pseudocercospora cannabina*)
- Onion Downy Mildew (*Peronospora destructor*)
- Onion Purple Blotch (*Alternaria porri*)
- Ophiobolus stem canker (*Ophiobolus cannabinus*)(*Ophiobolus anguillides*)
- Orange Rust (*Puccinia kuehnii*)
- Panicum mosaic virus
- Peg
- *Pencilium*
- Phoma Blight
- Phoma Blight, Boll Rot (*Phoma spp.*)
- Phoma stem canker (*Phoma herbarum*) (*Phoma exigua*)
- Phomopsis
- Phomopsis Fruit Rot (*Phomopsis viticola*)
- Phomopsis Leaf Blight (*Phomopsis obscurans*)
- Phomopsis Leaf Spot, Twig Blight, and Fruit Rot (*Phomopsis spp.*)
- Phomopsis stem canker (*Phomopsis cannabina*)(*Phomopsis achilleae*)(*Diaporthe arctii var. achilleae*)
- Phymatotrichum root rot (*Phymatotrichopsis omnivora*)(*Phymatotrichum omnivorum*)
- Phytophthora Blight (*Phytophthora capsici*)
- Phytophthora Root Rot and Crown Rot (*Phytophthora spp.*)
- Phytophthora (*Phytophthora spp.*)

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

- Pin Rot Complex (*Alternaria/Xanthomonas*)
- Pink Patch (*Limonomyces roseipellis*)
- Pink Rot (*Phytophthora ervrhoseptica*)(*Sclerotinia sclerotiorum*)
- Pink rot (*Trichothecium roseum*)(*Cephalothecium roseum*)
- Pithomyces blight
- Pod and Stem Blight (*Diaporthe phaseolorum var. sojae*) (*Phomopsis longicola*) (*Diaporthe spp.*)
- Pod and Stem Blight (*Diaporthe spp.*)
- Postbloom Fruit Drop (*Colletotrichum acutatum*)
- Powdery Mildew (*Erysiphe spp.*) (*Erysiphe betae*), (*Erysiphe cichoracearum*) (*Erysiphe cruciferarum*) (*Erysiphe graminis*) (*Erysiphe polygoni*) (*Leveillula taurica*) (*Microsphaera alni*) (*Oidium spp.*), (*Oidopsis taurica*) (*Podosphaera spp.*) (*Podosphaera leucotricha*) (*Sphaerotheca spp.*) (*Sphaerotheca fuliginea*) (*Sphaerotheca macularis*) (*Sphaerotheca pannosa*) (*Uncinula necator*)
- Powdery Mildew (*Golovinomyces*) (*Erysiphe cichoracearum*)(*Leveillula taurica*)(*Oidiopsis taurica*)(*Sphaerotheca macularis*)(*Sphaerotheca humuli*)(*Oidium spp.*)
- Powdery Mildew / Rusty Spot (*Podosphaera spp.*), (*Sphaerotheca pannosa*)
- *Puccinia spp.*
- Purple spot (*Stemphylium vesicarium*)
- Pythium (aerial blight phase) (*Pythium spp.*)
- Pythium (*Pythium spp.*)
- *Pythium acanthicum*
- *Pythium aphanidermatum*
- Pythium Blight, Pythium Root Rot (*Pythium aphanidermatum*), (*Pythium spp.*)
- *Pythium dissoticum*
- *Pythium myriotylum*
- Pythium root and damping off
- Ramularia (*Ramularia spp.*)
- Ramularia Leaf Spot (*Ramularia cynarae*)
- Red boot (*Melanospora cannabis*)
- Red Rot (*Glomerella tucumanensis*, also known as *Colletotrichum falcatum*)
- Red Thread (*Laetisaria fuciformis*)
- Rhizoctonia Foliar Blight, Peg, and Root Rot (*Rhizoctonia solani*)
- Rhizoctonia Large Patch (*Rhizoctonia solani*)
- Rhizoctonia soreshin and root rot (*Rhizoctonia solani*)
- *Rhizoctonia spp.*
- Rice Blast (*Pyricularia grisea*)
- Ripe Rot (*Colletotrichum gloeosporioides*)
- Root and collar rots (*Phytophthora*, *Pythium*, *Fusarium*, *Rhizoctonia*)
- Rot (*Rhizoctonia spp.*), (*Pythium spp.*), (*Fusarium spp.*), (*Cylindrocarpon spp.*)
- Rust (*Aecidium cannabis*)(*Uredo kriegneriana*)(*Uromyces inconspicuus*)
- Rust (*Phykopsora spp.*) (*Puccinia spp.*) (*Puccinia asparagi*) (*Puccinia menthae*) (*Puccinia porri*) (*Tranzschelia discolor*) (*Uromyces appendiculatus*) (*Uromyces betae*)
- Rusty Spot (*Podosphaera leucotricha*)
- Scab (*Cladosporium carpophilum*) (*Sphaceloma perseae*) (*Elsinoe australis*) (*Elsinoe fawcetti*) (*Elsinoe mangiferae*) (*Venturia spp.*)
- Sclerotinia (*Sclerotinia Sclerotiorum*)
- Sclerotinia Head and Leaf Drop (*Sclerotinia minor*) (*Sclerotinia sclerotiorum*)
- Sclerotinia stem and crown rot (*Sclerotinia sclerotiorum*)
- Sclerotium root and stem rot (*Sclerotium rolfsii*)(*Athella rolfsii*)
- Seedling and Damping Off Disease Complex, including Root and Crown Rots (*Pythium*, *Phytophthora*, *Rhizoctonia*, and *Stagonospora spp.*)
- Septoria Brown Spot (*Septoria glycines*)
- Septoria Leaf/Speckled Leaf Spot/Blotch (*Septoria spp.*)
- Sheath Spot and Blight (*Rhizoctonia oryzae*), (*Thanatephorus cucumeris*)
- Shot Hole (*Wilsonomyces carpophilus*)
- Sigatoka (*Mycosphaerella fijiensis*)
- Smut (*Tilletia spp.*) (*Tilletia barclayana*)
- Smuts and Bunts (*Tilletia spp.*)
- Snowmold, Gray (*Typhula spp.*)
- Snowmold, Pink (*Microdochium nivale*)

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

- Sooty Blotch (*Geastrumia polystigmati*), (*Leptodontium elatius*), (*Peltaster fructicola*)
- Sorghum downy mildew (*Peronosclerospora sorghi*)
- Sour Rot (*Alternaria tenuis*) (*Aspergillus spp.*) (*Botrytis cinerea*) (*Cladosporium herbarum*) (*Penicillium spp.*) (*Rhizopus arrhizus*)
- Southern Blight (*Sclerotium rolfsii*)
- Southern blight (*Sclerotium rolfsii*) (*Athella rolfsii*)
- Southern leaf blight (*Bipolaris spp.*) (*Cochliobolus heterostrophus*)
- Spring Black Stem (*Phoma medicaginus*)
- Spring Dead Spot (*Leptosphaeria korrae*), (*Leptosphaeria narmari*), (*Ophiosphaerella herpotricha*), (*Gaeumannomyces graminis*)
- Spur Blight (*Didymella spp.*), (*Phoma spp.*)
- Stem Rot (*Sclerotium oryzae*)
- Stemphylium leaf and stem spot (*Stemphylium botryosum*) (*Pleospora tarda*) (*Stemphylium cannabinum*)
- Stemphylium Leaf Blight (*Stemphylium vesicarium*)
- Stemphylium Leaf Spot (*Stemphylium spp.*)
- *Striatura ulcerosa* (*Pseudomonas amygdali pv. mori*)
- Stripe Smut (*Ustilago striiformis*), (*Urocystis agropyri*)
- Summer Bentgrass Decline
- Summer Patch, Poa Patch (*Magnaporthe poae*)
- Switchgrass Mosaic Virus
- Take-All Patch (*Gaeumannomyces graminis*)
- Tan Spot (*Pyrenophora tritici-repentis*)
- Tar spot (*Phyllachora cannabis*)
- Target Spot (*Corynespora cassicola*) (*Rhizoctonia solani*)
- Tropical rot (*Lasiodiplodia theobromae*) (*Botryodiplodia theobromae*)
- Twig blight (*Dendrophoma marconii*) (*Botryosphaeria marconii*)
- Verticillium wilt (*Verticillium spp.*) (*Verticillium albo-atrum*)
- *Verticillium spp.*
- Verticillium wilt (*Verticillium albo-atrum*) (*Verticillium dahliae*)
- Walnut Blight (*Xanthomonas campestris*)
- White leaf spot (*Phomopsis ganjae*)
- White Mold (*Sclerotinia sclerotiorum*) (*Sclerotium rolfsii*) (*Sclerotinia minor*) (*Sclerotinia trifoliorum*)
- white mold stem rot
- White Mold/ Sclerotinia Stem Rot (*Sclerotinia sclerotiorum*)
- White Rot (*Botryosphaeria dothidea*)
- White Rust (*Albugo occidentalis*)
- *Xanthomonas campestris*
- Xanthomonas leaf spot (*Xanthomonas campestris pv. cannabis*)
- Xanthomonas Leaf Spot (*Xanthomonas campestris*)
- *Xanthomonas spp.*
- Yellow leaf spot (*Septoria cannabis*) (*Septoria cannabina*)
- Yellow Patch (*Rhizoctonia cerealis*)
- Yellow Tuft/Downy Mildew (*Sclerophthora macrospora*)
- Zoysia Patch (*Rhizoctonia solani*)

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

---

**Pre-harvest Interval (PHI) = 0 days**

---

**ROOT, TUBER AND CORM CROPS:** Potato, Beet, Carrot, Cassava, Ginger, Ginseng, Horseradish, Radish, Sweet Potato, Turnip (including those for seed production), and other root and tuber crops

For suppression of Early Blight, Black Root Rot/Black Crown Rot, and Late Blight, begin application of this product in 25-100 gallons of water per acre soon after emergence when conditions are conducive to disease development. Repeat on a 5-7 day interval or as needed. For improved performance, use this product in a tank mix with other registered fungicides.)

---

**SUGAR BEETS** (includes crop for seed production)

---

**LEAVES OF ROOT AND TUBER VEGETABLES:** Beet, Chervil, and other leaves of roots and tubers

---

**BULB VEGETABLES:** Onion (Bulb and Green), Garlic, Leek, Shallot and other bulb vegetables

---

**LEAFY VEGETABLE CROPS (except Brassica vegetables):** Arugula, Celery, Chervil, Cilantro, Corn Salad, Cress, Dandelion, Dock, Edible Chrysanthemum, Endive, Fennel, Garden Peas, Head Lettuce, Leaf Lettuce, Parsley, Purslane, Radicchio, Rhubarb, Spinach, Swiss Chard, Turnip, Watercress and other leafy vegetable crops

West of the Rocky Mountains – For aerial applications, apply this product at 5.0–20 fluid ounces per acre in a minimum of 10 gallons of water per acre.

East of the Rocky Mountains – For aerial applications, apply this product at 5.0–13.33 fluid ounces per acre in a minimum of 5 gallons of water per acre.

For California – For aerial application apply REGALIA® 12 Biofungicide at 5.0–20 fluid ounces per acre in 10–20 gallons of water per acre.

**Restrictions:**

REGALIA® 12 Biofungicide should be applied to healthy, actively growing plants. Do not apply REGALIA® 12 Biofungicide to plants that are stressed due to cold weather, drought, excessive moisture, etc. Do not apply when extended/unseasonably cold or cold and cloudy conditions are expected.

---

**BRASSICAS (COLE) LEAFY VEGETABLES:** Broccoli, Broccoli Rabe, Brussels Sprouts, Cabbage, Chinese Broccoli, Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavalo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens, and other cole crops

---

**LEGUME VEGETABLES, succulent or dried (not including soybeans and peanuts) (not including peanuts):** Chickpeas, Dry Beans, Garbanzo Beans, Green Beans, Lentils, Lima Beans, Peas, Shell Beans, Snap Beans, Split Peas (including those grown for seed or oil production), and other legume vegetables

---

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

---

## SOYBEAN

---

**FOLIAGE OF LEGUME VEGETABLES (not including soybeans and peanuts):** Garden peas and other foliage of legume vegetables

---

**FRUITING VEGETABLES:** Tomato, Pepper, Eggplant, Ground Cherry, Okra, Tomatillo and other fruiting vegetables

Phytophthora Blight – Apply this product in combination with labeled rates of a copper fungicide or with another fungicide labeled for Phytophthora Blight control.

---

### **CUCURBITS:**

**Includes all types and hybrids of:** Chayote, Chinese waxgourd, Cucumber, Citron melon, Gherkin, Pumpkin, Watermelon, Chinese okra, Cucuzza, Hyotan, Balsam apple, Balsam pear, Bitter melon, Chinese cucumber, Cantaloupe, Casaba, Crenshaw melon, Golden pershaw melon, Honeydew melon, Honey balls, Mango melon, Persian melon, Pineapple melon, Santa Claus melon, Snake melon, Crookneck squash, Scallop squash, Straightneck squash, Vegetable marrow, Zucchini, Acorn squash, Butternut squash, Calabaza, Hubbard squash, Spaghetti squash, and other cucurbits

Downy Mildew – Tank-mix this product with another fungicide labeled for Downy Mildew control and re-apply at a 7-day interval or according to the label directions of the tank mix ingredient.

Phytophthora Blight – Apply this product in combination with labeled rates of a copper fungicide or with another fungicide labeled for Phytophthora Blight control.

---

**CITRUS CROPS:** Orange, Grapefruit, Kumquat, Lemon, Tangelo, Tangerine, Pummelo, and other citrus crops

---

**POME FRUITS:** Apple, Crabapple, Loquat, Oriental Pear, Pear, Quince, Mayhaw, and other pome fruits

(Begin applications when conditions are conducive to disease development but not prior to petal fall. Repeat applications on a 7-10 day intervals)(Additional sprays beyond second cover may be needed on susceptible varieties, or when environmental conditions are conducive to rapid disease development. Use high label rate and shorter spray intervals when conditions are conducive to rapid disease development.)

Fire Blight – For suppression, apply 5.0–26.66 fluid ounces of this product in 50–100 gallons of water per acre (beginning at petal fall) (prior to bloom) (at a lower rate) (at 13.33 fl.oz. per acre) (as part of a tank mix). For maximum control, use this product prior to infection events. During periods of rapid development and frequent infection periods, use spray intervals of 3–7 days.

- Apply in sufficient water to provide full coverage. For improved performance, use this product in a rotational program with antibiotics registered for Fire Blight control such as but not limited to oxytetracycline or streptomycin.
  - Proper orchard cultural practices are essential to eliminate Fire Blight-infected tissue from the orchard to assure good performance of any crop protection product. Remove and destroy dead and diseased wood from the orchard prior to and during the growing season.
-

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

Scab – For suppression, apply 1 quart of this product in 50–100 gallons of water per acre at green tip and through bloom when environmental conditions become favorable for primary Scab development and repeat on a 7–10-day interval or as needed. Use this product in a tank mix or rotational program with other fungicides labeled for Scab control. Following bloom, this product can be applied at 5.0–53.33 fluid ounces per acre.

Use caution when selecting spray adjuvants. Select only those adjuvants which through prior experience do not affect fruit finish when combined with this product.

Dilute applications: this product can be applied by ground equipment to tree crops in dilute applications of 100–400 gallons of water. Apply this product at a rate of 5.0–53.33 fluid ounces per acre when applied alone, or at 5.0–53.33 fluid ounces per acre when tank mixed with another fungicide. Avoid excessive amounts of water that result in the runoff of spray material.

Some sensitive tree fruit varieties have exhibited petal staining and/or necrosis after application of higher use rates. To minimize petal staining and/or necrosis:

- Use adjuvants that improve coverage, not penetration; follow the manufacturer's mixing instructions.
  - Use adjuvants that through prior experience do not affect petal integrity when combined with this product.
- Apply 1 quart of this product in 50–100 gallons of water per acre in Pome Fruit, from 10% bloom to full bloom.

---

**STONE FRUITS:** Apricot<sup>†</sup>, Cherry (sweet and tart), Nectarine, Peach, Plum, Plumcot, Prune, and other stone fruits

Do not exceed a concentration of 0.41% v/v.

Bacterial Blight – Apply this product in 50–100 gallons of water per acre postharvest before Fall rains.

Brown Rot Blossom Blight – Begin application of this product in 50–100 gallons of water per acre at early bloom and repeat through petal fall on a 7-day interval or as needed.

Powdery Mildew – Begin application of this product in 50–100 gallons of water per acre at popcorn stage and repeat on a 7-day interval or as needed. For improved performance, use this product in a tank mix or rotational program with other registered fungicides for powdery mildew control.

Scab – Begin application of this product in 50–100 gallons of water per acre at petal fall and repeat on a 7–10-day interval or as needed. For improved performance, tank mix this product with another fungicide labeled for Scab control.

For all other diseases – Begin application prior to disease development when environmental conditions and plant stage are conducive to rapid disease development and repeat on a 7–10-day interval or as needed. Use in a tank mix or rotational program when disease conditions are severe.

Dilute applications: this product can be applied by ground equipment to tree crops in dilute applications of 100–400 gallons of water. Apply this product at a rate of 5.0–53.33 fluid ounces per acre when applied alone, or at 5.0–53.33 fluid ounces per acre when tank mixed with another fungicide. Avoid excessive amounts of water that result in the runoff of spray material.

<sup>†</sup>Some sensitive apricot varieties have exhibited fruit spotting as a result of application. Spray a test strip to confirm your variety is not susceptible to spotting before spraying.

Some sensitive tree fruit varieties have exhibited petal staining and/or necrosis after application of higher use rates. To minimize petal staining and/or necrosis:

- Use adjuvants that improve coverage, not penetration; follow the manufacturer's mixing instructions.

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

- Use adjuvants that through prior experience do not affect petal integrity when combined with this product.
- Apply 1 quart of this product in 50–100 gallons of water per acre in:
  - Cherries, from white bud (first white, popcorn) to full bloom,
  - Stone fruit, from 10% bloom to full bloom.

---

**BERRIES (AND SMALL FRUIT):** Blueberry, Blackberry (all varieties), Cranberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Ligonberry, Loganberry, Raspberry (red and black), Salal and cultivars and/or hybrids of these and other berries. Grape, Strawberry and other smallfruit

Do not exceed a concentration of 0.41% v/v.

Mummy Berry – Initiate application at bud break stage of development. Apply this product preventatively and repeat on a 7–10-day interval or as needed. For best performance, tank mix this product with other registered fungicides for Mummy Berry control.

Botrytis Blight – Apply this product preventatively when the first disease symptoms are visible and reapply every 7–14 days.

Bacterial Canker – Apply this product prior to Fall rains and repeat applications during dormancy before Spring growth. This product can be tank mixed with another registered fungicide for improved control of bacterial canker.

Anthracnose Fruit Rot and Alternaria Fruit Rot on blueberries – Initiate application at green tip and continue applications on a 7–10-day interval

Anthracnose – For suppression, apply this product preventatively in 50–100 gallons of water per acre and repeat on a 7–10-day interval or as needed. For best performance, tank-mix this product with other registered fungicides for Anthracnose control.

---

**TREE NUT CROPS:** Walnut (Black and English), Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio and other tree nut crops

Walnut Blight – For preventative control, apply this product in 50–100 gallons of water per acre. Repeat applications at 7–10-day intervals. Under conditions of heavy disease pressure, tank-mix this product with a copper-based fungicide.

Dilute applications: this product can be applied by ground equipment to tree crops in dilute applications of 100–400 gallons of water. Apply this product at a rate of 5.0–53.33 fluid ounces per acre when applied alone, or at 5.0–53.33 fluid ounces per acre when tank mixed with another fungicide. Avoid excessive amounts of water that result in the runoff of spray material.

---

**CEREAL GRAINS:** Barley, Buckwheat, Grain Amaranth, Milo, Oat, Millets, Rice, Rye, Sorghum (sweet sorghum and other varieties), Triticale, Wheat and other cereal grains

**CORN:** Sweet Corn, Field Corn, Popcorn, Silage Corn, Seed Corn

---

**FORAGE, FODDER AND STRAW OF CEREAL GRAINS:** Corn, Wheat, and any other cereal grain crop

---

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

**GRASS FORAGE, FODDER, AND HAY:** Bermuda grass, Bluegrass, Bromegrass, Fescue, Pasture and range grasses grown for hay or silage, Sudangrass, Timothy, and other grass forage, fodder, and hay

---

**NON-GRASS ANIMAL FEED:** Alfalfa, Clover, Kudzu, Lespedeza, Lupin, Sainfoin, Trefoil, Vetch, and other non-grass animal feed

---

**HERBS (field):** Angelica, Balm, Basil, Borage, Burnet, Chamomile, Catnip, Chervil, Chive, Clary, Coriander, Costmary, Cilantro, Curry, Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage, Marjoram, Nasturtium, Parsley (dried), Peppermint, Rosemary, Sage, Savory (summer and winter), Sweet Bay, Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood and other herbs

---

**SPICES (field):** Allspice; anise (seed); anise, star; annatto (seed); caper (buds); caraway; caraway, black; cardamom; cassia (buds); celery (seed); cinnamon; clove (buds); coriander (seed); culantro (seed); cumin; dill (seed); fennel, common; fennel, Florence (seed); fenugreek; grains of paradise; juniper (berry); lovage (seed); mace; mustard (seed); nutmeg; pepper, black; pepper, white; poppy (seed); saffron; vanilla and other spices

---

**OIL SEED CROPS (not including cotton, peanut, or soybean):** Canola, Castor, Flax, Jojoba, Rapeseed, Safflower, Sesame, Sunflower, and other oil seeds

---

## **COTTON**

For ground applications for foliar and Boll Rot disease control, apply this product preventatively in 15–40 gallons of water per acre prior to disease development using sufficient volume for thorough coverage.

---

**STALK, STEM, AND LEAF PETIOLE VEGETABLES:** Asparagus, celery and other stalk, stem and leaf petiole vegetables

---

**TROPICAL AND SUBTROPICAL FRUITS, EDIBLE PEEL:** Olive and other tropical and subtropical fruits with edible peel

---

**TROPICAL AND SUBTROPICAL FRUITS, INEDIBLE PEEL:** Avocado, Banana, Kiwi, Mango, Papaya, Plantain, Pineapple, Pomegranate and other tropical and subtropical fruits with inedible peel

Sigatoka – Initiate applications when leaves first appear and repeat on a 7–10-day schedule. Apply in sufficient water by ground or air to obtain thorough coverage of foliage. For improved disease control, this product may be tank-mixed with oil or other fungicides registered for Sigatoka control at label rates

---

**(Other crops [outside crop groups])**

---

## **ARTICHOKE**

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

---

## HOPS

Minimum spray volumes for hop growth stages are as follows:

Emergence to Training: Apply 5.0–26.66 fluid ounces this product per acre using a minimum spray volume of 20 gallons per acre. Coverage will vary with the size of the vines and the type of spray equipment. Apply adequate spray volume to achieve complete spray coverage.

Training to Wire-Touch: Apply 5.0–26.66 fluid ounces this product per acre using a minimum spray volume of 50 gallons per acre. Coverage will vary with the size of the vines and the type of spray equipment. Apply adequate spray volume to achieve complete spray coverage.

Wire-Touch through Harvest: Apply 5.0–53.33 fluid ounces of this product using a minimum of 100 gallons of water per acre. Higher water volumes may be necessary to achieve thorough coverage after side arms develop. Do not apply more than 53.33 fluid ounces of product per acre per application. Apply adequate spray volume to achieve complete spray coverage. Use the higher rates when moderate to high disease pressure is present or expected.

For control of downy mildew, tank-mix this product with another fungicide labeled for Downy Mildew control and re-apply at a 7-day interval or according to the label directions of the tank mix ingredient.

---

## PEANUT

---

## HEMP

---

## SUGARCANE

---

## CROTALARIA, SESSBANIA, KENAF

---

## FLOWERING PLANTS

Begin applications preventatively (before disease symptoms become visible) at the 4 to 6-leaf stage and treat at 7–14-day intervals as needed prior to sale or harvest. Spray until just before point of runoff.

(The following plant species have been treated with Regalia® 12 Biofungicide to prevent disease.)

**Plants investigated:**

**Annual and Perennial Flowering Plants:** Begonias, Freesias, Geraniums, Gerbera, Impatiens, *Lamium*, Lisianthus, Petunias, Poinsettias, Roses, Salvias, Snapdragons, Zinnias.

**Trees and Shrubs:** Azalea, Boxwood, Crape Myrtle, Dogwood, Indian Hawthorne, Jumbo Azalea, Lilac, Loropetalum, Japanese Maple, Japanese Privet, *Photinia*, Rhododendron, *Rosaceae*, Soft Touch Holly, Spirea, *Viburnum*.

**Tropical Foliage:** *Aglaonema*, *Dieffenbachia*, *Dracaena*, English Ivy, *Hibiscus*, Leatherleaf Fern, *Spathiphyllum*.

Since it is not possible to test all ornamental species or varieties grown, test Regalia® 12 Biofungicide on a few plants prior to large-scale usage.)

---

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

## BEDDING PLANTS

Begin applications preventatively (before disease symptoms become visible) at the 4 to 6-leaf stage and treat at 7–14-day intervals as needed prior to sale or harvest. Spray until just before point of runoff.

(The following plant species have been treated with Regalia® 12 Biofungicide to prevent disease.

**Plants investigated:**

**Annual and Perennial Flowering Plants:** Begonias, Freesias, Geraniums, Gerbera, Impatiens, *Lamium*, Lisianthus, Petunias, Poinsettias, Roses, Salvias, Snapdragons, Zinnias.

**Trees and Shrubs:** Azalea, Boxwood, Crape Myrtle, Dogwood, Indian Hawthorne, Jumbo Azalea, Lilac, Loropetalum, Japanese Maple, Japanese Privet, *Photinia*, Rhododendron, *Rosaceae*, Soft Touch Holly, Spirea, *Viburnum*.

**Tropical Foliage:** *Aglaonema*, *Dieffenbachia*, *Dracaena*, English Ivy, *Hibiscus*, Leatherleaf Fern, *Spathiphyllum*.

Since it is not possible to test all ornamental species or varieties grown, test Regalia® 12 Biofungicide on a few plants prior to large-scale usage.)

---

## FOLIAGE PLANTS

Begin applications preventatively (before disease symptoms become visible) at the 4 to 6-leaf stage and treat at 7–14-day intervals as needed prior to sale or harvest. Spray until just before point of runoff.

(The following plant species have been treated with Regalia® 12 Biofungicide to prevent disease.

**Plants investigated:**

**Annual and Perennial Flowering Plants:** Begonias, Freesias, Geraniums, Gerbera, Impatiens, *Lamium*, Lisianthus, Petunias, Poinsettias, Roses, Salvias, Snapdragons, Zinnias.

**Trees and Shrubs:** Azalea, Boxwood, Crape Myrtle, Dogwood, Indian Hawthorne, Jumbo Azalea, Lilac, Loropetalum, Japanese Maple, Japanese Privet, *Photinia*, Rhododendron, *Rosaceae*, Soft Touch Holly, Spirea, *Viburnum*.

**Tropical Foliage:** *Aglaonema*, *Dieffenbachia*, *Dracaena*, English Ivy, *Hibiscus*, Leatherleaf Fern, *Spathiphyllum*.

Since it is not possible to test all ornamental species or varieties grown, test Regalia® 12 Biofungicide on a few plants prior to large-scale usage.)

---

## ORNAMENTALS

Begin applications preventatively (before disease symptoms become visible) at the 4 to 6-leaf stage and treat at 7–14-day intervals as needed prior to sale or harvest. Spray until just before point of runoff.

(The following plant species have been treated with Regalia® 12 Biofungicide to prevent disease.

**Plants investigated:**

**Annual and Perennial Flowering Plants:** Begonias, Freesias, Geraniums, Gerbera, Impatiens, *Lamium*, Lisianthus, Petunias, Poinsettias, Roses, Salvias, Snapdragons, Zinnias.

**Trees and Shrubs:** Azalea, Boxwood, Crape Myrtle, Dogwood, Indian Hawthorne, Jumbo Azalea, Lilac, Loropetalum, Japanese Maple, Japanese Privet, *Photinia*, Rhododendron, *Rosaceae*, Soft Touch Holly, Spirea, *Viburnum*.

**Tropical Foliage:** *Aglaonema*, *Dieffenbachia*, *Dracaena*, English Ivy, *Hibiscus*, Leatherleaf Fern, *Spathiphyllum*.

Since it is not possible to test all ornamental species or varieties grown, test Regalia® 12 Biofungicide on a few plants prior to large-scale usage.)

---

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

---

## GRASS (GROWN FOR) SEED

---

## SWITCHGRASS, MISCANTHUS

---

## TOBACCO

---

### SHRUBS AND TREES: Conifers, Broadleaves

Begin applications preventatively (before disease symptoms become visible) at the 4 to 6-leaf stage and treat at 7–14-day intervals as needed prior to sale or harvest. Spray until just before point of runoff.

The following plant species have been treated with Regalia® 12 Biofungicide to prevent disease.

**Plants investigated:**

**Annual and Perennial Flowering Plants:** Begonias, Freesias, Geraniums, Gerbera, Impatiens, *Lamium*, Lisianthus, Petunias, Poinsettias, Roses, Salvias, Snapdragons, Zinnias.

**Trees and Shrubs:** Azalea, Boxwood, Crape Myrtle, Dogwood, Indian Hawthorne, Jumbo Azalea, Lilac, Loropetalum, Japanese Maple, Japanese Privet, *Photinia*, Rhododendron, *Rosaceae*, Soft Touch Holly, Spirea, *Viburnum*.

**Tropical Foliage:** *Aglaonema*, *Dieffenbachia*, *Dracaena*, English Ivy, *Hibiscus*, Leatherleaf Fern, *Spathiphyllum*.

Since it is not possible to test all ornamental species or varieties grown, test Regalia® 12 Biofungicide on a few plants prior to large-scale usage.

---

### INTEGRATED PEST MANAGEMENT (IPM)

Many conventional fungicides have been tested in an IPM regime with REGALIA® 12 Biofungicide with very satisfactory results. One of the major objectives of IPM has been to reduce the probability of disease resistance development to a particular active ingredient.

The alternate use of (1–2 sprays) followed by a conventional, registered fungicide (1–2 sprays) has been successfully used in many crops. In addition, the use of tank mixes with a conventional fungicide has also been successful.

Follow label instructions of the particular registered product: Do not exceed amounts or treatment intervals on the label.

### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in a cool, dry place. Avoid freezing.

**Pesticide Disposal:** To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**Container Handling (under 5 gallons):** Non-refillable 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 and drain for 10 seconds after the flow begins to drip. 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

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

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.

**Container Handling (over 5 gallons):** Non-refillable container. Do not reuse or refill this container Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. 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.

Marrone Bio Innovations is a member of the Ag Container Recycling Council.

Visit <http://www.acrecycle.org/contact.html> for information on how to arrange pick-up of this empty pesticide container.



#### **WARRANTY**

To the extent consistent with applicable law, the seller makes no warranty, expressed or implied, of merchantability, fitness or otherwise concerning use of this product. To the extent permitted by the applicable law, the user assumes all risks of use, storage or handling that are not in strict accordance with the accompanying directions.

Label date:

Made in the U.S.A.

US Patents No. 4,863,734 and No. 5,989,429

REGALIA® is a trademark of Marrone Bio Innovations, Inc.

Marrone Bio Innovations' name and logo are registered trademarks of Marrone Bio Innovations, Inc.

© **Marrone Bio Innovations, Inc.**

1540 Drew Ave., Davis, CA 95618

1-877-664-4476

[www.marronebio.com](http://www.marronebio.com)

[info@marronebio.com](mailto:info@marronebio.com)

**LOT (#XXXX)(printed on container)**

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

**Sublabel C: Home & Garden Use**

**REGALIA® 12 Biofungicide**

A plant extract to boost the plants’ defense mechanisms to protect against certain fungal and bacterial diseases, and to improve plant health.

Active ingredient: Extract of *Reynoutria sachalinensis*..... 12 %  
Other ingredients: ..... 88 %  
Total ..... 100 %

EPA Reg. No. 84059-3

EPA Est. No. 085970-FL-001

EPA Est. No. 084059-MI-001

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

See back/side/top/bottom [panel/label] for additional precautionary statements.

<b>FIRST AID</b>	
<b>IF SWALLOWED:</b>	Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
<b>IF ON SKIN OR CLOTHING:</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control center or doctor for treatment advice.
<b>IF INHALED:</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
<b>IF IN EYES:</b>	Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
<b>HOTLINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor, or if going for treatment. Contact the poison control center hotline at 1-800-222-1222; 24 hours a day, 7 days a week for emergency medical treatment information.	

(USDA BioBased logo placeholder) \* [with] \*This mark is not an indication of safety. Read and follow all label instructions.)

(Can be used in organic gardening/NOP logo placeholder) (OMRI Placeholder)

**LOT (#XXXX)(printed on container)**

**[superscript is first letter of lot number] or [LOT #: \_\_\_\_\_]**

**Net Contents: 1 pint, 1 quart, 1 gallon, 2.5 gallon,**

**Marrone Bio Innovations, Inc. 2121 Second St. Suite B-107, Davis, CA 95618**

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

## PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS – CAUTION:** Causes moderate eye 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 contaminated clothing and wash before reuse.

**ENVIRONMENTAL HAZARDS:** To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid runoff to water bodies or drainage systems.

## DIRECTIONS FOR USE

It is a violation of Federal law to apply this product in a manner inconsistent with its labeling.

### OPTION 1

#### HOME AND GARDEN USE DIRECTIONS

REGALIA® 12 Biofungicide is a broad spectrum (biological/bio) fungicide used for the control or suppression of a broad range of foliar diseases. REGALIA® 12 Biofungicide may be used on vegetable crops, roses, fruits, nuts, flowers, bedding plants, foliage, houseplants, trees and shrubs located in residential landscapes. REGALIA® 12 Biofungicide can be applied up to and on the day of harvest on all fruits and vegetables.

#### WHEN TO USE

For best results, apply REGALIA® 12 Biofungicide prior to disease development or at the first sign of diseases and continue applying on a 7-day schedule or as needed.

#### BEFORE YOU USE

Read and follow these directions when using:

Do not allow spray to drift from application site.

Use only with pressurized hand-held sprayers or spray trigger bottles.

Do not allow spray mixture to stand overnight or for prolonged periods.

REGALIA® 12 Biofungicide can be applied in commonly used pressurized hand-held sprayers, spray trigger bottles and hose-end sprayers.

#### HOW TO USE FOR HAND-HELD SPRAYERS AND SPRAY TRIGGER BOTTLES

Shake well before use.

Fill sprayer or bottle with appropriate amount of water and concentrate.

Mix the spray solution thoroughly.

Keep the spray solution agitated during application.

#### HOW TO USE FOR HOSE-END SPRAYERS

Shake well before use.

Follow hose-end sprayer instructions to determine how to fill, set dial, clean and disconnect from hose.

Set dial on sprayer to deliver rate as directed below.

#### HOW MUCH TO USE FOR ALL APPLICATIONS:

1 fluid ounce (2 TBSP.) of REGALIA® 12 Biofungicide per gallon of water.

Spray plants to complete wetness, covering both top and bottom leaf surfaces to ensure complete coverage.

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

Some pesticides (garden care products)(plant protection products) can cause phytotoxic effects ranging from slight burning or browning of leaves to distorted leaves, fruit, flowers or stems. Damage symptoms may vary with the type of plant that has been treated. It is impossible to test all plant species for phytotoxicity. To assure that the plants to be treated are not sensitive to the treatment, apply a small amount of the product to a few leaves or the above ground portion of the plant and check back in 2–4 days for signs of phytotoxicity. Use product according to label directions.

## **OPTION 2**

### **HOME AND GARDEN USE DIRECTIONS**

REGALIA® 12 Biofungicide is a broad spectrum (biological/bio) fungicide used for the control or suppression of a broad range of foliar diseases. REGALIA® 12 Biofungicide may be used on vegetable crops, roses, fruits, nuts, flowers, bedding plants, foliage, houseplants, trees and shrubs located in residential landscapes. REGALIA® 12 Biofungicide can be applied up to and on the day of harvest on all fruits and vegetables.

#### **WHEN TO USE**

For best results, apply REGALIA® 12 Biofungicide prior to disease development or at the first sign of diseases and continue applying on a 7-day schedule or as needed.

[As a preventative, apply every 7 to 14 days until the potential for disease has passed. To control disease that is already present, apply on a 7-day schedule until disease symptoms are gone. Then continue spraying every 14 days to prevent disease recurrence.]

#### **BEFORE YOU USE**

Read label [before use]

Do not allow spray to drift from application site.

Use only with pressurized hand-held sprayers/[hand-held] trigger-spray bottles/hose-end sprayers.

Do not allow spray mixture to stand overnight or for prolonged periods as REGALIA® 12 Biofungicide may settle out of solution. Shake spray mixture before use.

#### **HOW TO USE [for pressurized hand-held sprayers/[hand-held] trigger-sprayers]**

Shake [concentrate] before use

Fill sprayer with 1fl.oz. (2 TBSP.) of REGALIA® 12 Biofungicide per gallon of water [(or 1 1/2 tsp. per 32 fl. oz. of water)]

Mix thoroughly –or – Mix, mix, mix it up

Spray both tops and bottoms of leaves/leaf surfaces [thoroughly] until dripping wet.

Shake sprayer occasionally during application [to keep product well mixed]

#### **HOW TO USE [for hose-end sprayers]**

Shake [concentrate] before use

Follow hose-end sprayer instructions to determine how to fill, set dial, clean and disconnect from hose.

Set dial on sprayer to deliver 1fl.oz. (2 TBSP.) of REGALIA® 12 Biofungicide per gallon of water

Spray both tops and bottoms of leaves/leaf surfaces [thoroughly] until dripping wet.

#### **HOW TO USE [for Pre-Plant Dip Applications]**

REGALIA® 12 Biofungicide can be applied as a pre-plant dip for improved health and suppression of certain soil-borne diseases when transplanting. Shake [concentrate] before use. Mix 1oz. (2TBSP) REGALIA® 12 Biofungicide per gallon of water, briefly submerge roots in mixture immediately before transplanting.

#### **HOW TO USE [for Soil Drench Applications]**

Shake [concentrate] before use. Mix REGALIA® 12 Biofungicide at a concentration of 1oz (2 TBSP.) per gallon of water and apply at a sufficient rate to thoroughly soak the soil and root zone. Make an initial application of REGALIA® 12

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

Biofungicide during or shortly after transplant to reduce transplant shock, suppress soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10-14-day interval.

[HOW IT WORKS/MODE OF ACTION]

REGALIA® Biofungicide Concentrate contains an extract from the plant *Reynoutria* spp., that when applied according to label directions triggers an immune response that protects treated plants from numerous diseases. The induced resistance provided by REGALIA® is not systemic, therefore thorough coverage of above-ground plant parts is important to achieving optimal control. Repeat foliar applications at 7–14-day intervals to maintain induction and to protect new plant growth. Use REGALIA® 12 Biofungicide as a preventative treatment prior to the development of disease symptoms.

[Phytotoxicity Note:]

Some pesticides (plant protection products) (garden care products) can cause phytotoxic effects ranging from slight burning or browning of leaves to distorted leaves, fruit, flowers or stems. To assure that the plants to be treated are not sensitive to REGALIA® 12 Biofungicide, apply a small amount of the product to a few leaves or the above ground portion of the plant and check back in 2–4 days for signs of phytotoxicity.

or

Some garden care products can cause adverse effects such as (yellowing) (browning) (slight burning of leaves). (Some sensitive plant varieties may be slightly burned by garden care products.) In general, plant damage can be avoided by following labeled rates. Plants to be treated can be checked for sensitivity to REGALIA® by applying the product to a few leaves and checking back in 2–4 days for signs of damage.

DISEASES CONTROLLED OR SUPPRESSED<sup>†</sup> [ON VEGETABLES, FRUITS, TREE NUTS, ORNAMENTAL PLANTS, TREES, SHRUBS, FLOWERS, BEDDING PLANTS, FOLIAGE AND TROPICAL PLANTS]

Anthraxnose (*Colletotrichum* spp.)

Bacteria (*Erwinia* spp., *Pseudomonas* spp., *Xanthomonas* spp.)

Bacterial Leaf Blight (*Xanthomonas campestris*)

Bacterial Speck (*Pseudomonas syringae* pv. Tomato)

Bacterial Spot (*Xanthomonas* spp.)

Bean Rust (*Uromyces appendiculatus*)

Black Mold (*Alternaria alternata*)

Black Rot/Black Crown Rot (*Alternaria* spp.)

Black Spot of Rose (*Diplocarpon rosea*)

Botrytis (*Botrytis* spp.)

Botrytis Leaf Blight (*Botrytis squamosa*)

Botrytis Neck Rot (*Botrytis* spp.)

Brown Rot (*Monilinia* spp.)

Downy Mildew<sup>†</sup> (*Bremia lactucae*, *Peronospora* spp., and *Plasmopara viticola*)

Early Blight (*Alternaria solani*)

Fire Blight<sup>†</sup> (*Erwinia amylovora*)

Gummy Stem Blight (*Didymella bryoniae*)

Gray Mold (*Botrytis cinerea*)

Greasy Spot (*Mycosphaerella citri*)

Late Blight<sup>†</sup> (*Phytophthora infestans*)

Leaf Spots (*Alternaria* spp., *Cercospora* spp. *Septoria* spp.)

Onion Downy Mildew (*Peronospora destructor*)

Onion Purple Blotch (*Alternaria porri*)

Pin Rot (*Alternaria/Xanthomonas* complex)

*Phytophthora* spp.

Powdery Mildew (*Uncinula necator*, *Erysiphe* spp., *Sphaerotheca* spp., *Oidiopsis taurica*, *Leveillula taurica*,

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

*Podosphaera leucotricha, Oidium spp., Podosphaera spp.)*

Rust (*Puccinia* spp.)

Scab<sup>†</sup> (*Venturia* spp.)

Sclerotinia Head and Leaf Drop<sup>†</sup> (*Sclerotinia* spp.)

Sour Rot (*Alternaria tenuis, Aspergillus spp., Botrytis cinerea, Cladosporium herbarum, Penicillium spp., Rhizopus arrhizus*)

Target Spot (*Corynespora cassiicola*)

Walnut Blight (*Xanthomonas campestris*)

#### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in a cool, dry place. Avoid freezing.

**Pesticide Disposal and Container Handling: If empty:** Non-refillable container. Do not reuse or refill this container. Place in trash and offer for recycling if available.

**If partially filled:** Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

#### WARRANTY

To the extent consistent with applicable law, the seller makes no warranty, expressed or implied, of merchantability, fitness or otherwise concerning use of this product. To the extent permitted by applicable law, the user assumes all risks of use, storage or handling that are not in strict accordance with the accompanying directions.

-or-

(\*)The (insert company name) Guarantee – If for any reason you are not satisfied with this product, send proof of purchase to the address shown and we will gladly refund your purchase price.

#### OPTIONAL CLAIMS

**The following claims may appear on any label panel**

1. Boost plants' defenses [for stronger healthier plants]
2. Strengthens plants' immunity
3. Improves plant health
4. Controls/Prevents common garden diseases [and improves plant health]
5. Controls/Prevents powdery mildew, leaf spot and rust
6. Controls/Prevents black spot on rose
7. Fungal and bacterial disease control
8. Defends gardens by boosting plant defenses
9. Defending gardens against bacterial and fungal diseases...on fruits, vegetables and ornamentals one plant at a time!
10. Use on fruits, vegetables and ornamentals
11. Can be applied as a pre-plant dip [for improved plant health]
12. Can be applied as a soil drench application
13. [Can be] use(d) as a preventative to protect [growing] plants from common garden diseases
14. For use on ornamental plants and edible crops/fruits/vegetables.
15. For use on vegetables, roses, fruits, berries, nuts, flowers, bedding plants, houseplants, (ornamental) trees and shrubs [located in residential landscapes].
16. REGALIA® 12 Biofungicide may be used on vegetable(s) [crops], roses, fruits, berries, nuts, flowers, foliage, houseplants, (ornamental) trees and shrubs [located in residential landscapes].
17. REGALIA® 12 Biofungicide is a broad spectrum fungicide used for the control or suppression of a broad range of foliar [fungal and bacterial] diseases.
18. (Active ingredient is) a plant extract to boost the plants' defense mechanisms to protect against certain fungal and bacterial diseases, and to improve plant health.
19. Active ingredient (is) made from a plant extract (botanical extract)(plant-based)

Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.

20. REGALIA® 12 Biofungicide is an extract from the plant Reynoutria spp.
21. REGALIA® 12 Biofungicide can be applied up to and on the day of harvest [on all fruits and vegetables].
22. Made in the U.S.A.
23. This container is made with X% recycled material
24. Guaranteed results(\*)
25. Label date:
26. US Patents No. 4,863,734 and No. 5,989,429
27. REGALIA® is a trademark of Marrone Bio Innovations, Inc.
28. Marrone Bio Innovations' name and logo are registered trademarks of Marrone Bio Innovations, Inc.
29. © insert company copyright information
30. World rights reserved
31. Distributed by: insert company name and address
32. company website
33. [For] questions/comments



34.  Can be used for organic gardening
35.  For (use in) organic gardening

37.  "can be used in organic production"
38. GENERAL INFORMATION: REGALIA® Bioprotectant Concentrate is an extract from the plant Reynoutria sachalinensis. REGALIA® Bioprotectant Concentrate applied to actively growing plants will improve plant health, and will help make the treated portions resistant to certain plant diseases. [Plant health benefits often result in greater yields at harvest, especially when crops/plants are stressed by pathogens or environmental conditions].
39. MODE OF ACTION: The extract obtained from Reynoutria sachalinensis plant material contains active chemical compounds. The extract, when applied to the host plant, increases the plant's defense system due to a five-fold increase in phenolics and antioxidants, and strengthens cell walls. This induced resistance against important diseases is not systemic, but provides some translaminar protection. The resistance induction takes place within one to two days of application.
40. MODE OF ACTION: REGALIA® Bioprotectant Concentrate contains an extract from the plant Reynoutria sachalinensis, that when applied according to label directions triggers an immune response that protects treated plants from numerous diseases. The induced resistance provided by REGALIA® is not systemic, therefore thorough coverage of above-ground plant parts is important to achieving optimal control. [Repeat foliar applications at 7–14-day intervals to maintain induction and to protect new plant growth]. Use REGALIA® Bioprotectant Concentrate as a preventative treatment prior to the development of disease symptoms.
41. REGALIA® Bioprotectant Concentrate is (an extract from the plant Reynoutria sachalinensis) for use on (ornamental plants), (turf), (agricultural crops), (edible crops), (non-edible crops), (food crops), (non-food crops), (feed crops), or (non-feed crops).
42. Optional Language: (\*) and (\*= Not for use in California)
43. Repackaging or relabeling of this product without express written permission from Marrone Bio Innovations is prohibited.
44. Biofungicide
45. UPC code
46. RF code
47. Bio with Bite
48. For disease control
49. For fungal control
50. Can be used in sustainable production
51. For use in sustainable production
52. For maximum harvest
53. US MRL exempt
54. Minimal PPE
55. Protection from Multiple Diseases
56. Leaves no detectable residues

*Optional/Alternate text appears within parentheses, editorial text appears within brackets and is not intended for final printed label.*

57. Product(s) thoroughly tested
58. Proven results, since 2007
59. Trial Tested
60. (number)+ trials
61. Read full label before use
62. Prevents (disease) and (fungal) build up
63. Protection from bacterial and fungal disease
- 64 REGALIA® Bioprotectant Concentrate can be applied by (any labeled use pattern) to protect against (diseases) and (fungal pathogens) (any labeled pest).
65. 2-10 tablespoons per 1,000 sq. ft. [must be consistent with rates to be listed on label]
66. For turf
67. For recreational turf and landscapes [when crop is listed]
68. For professional lawn care [when crop listed]
69. (Specify pest:) (Tank-mix) (or rotate) with a (fungicide) for improved control.
70. Refer to the table in the SOIL TREATMENT USE DIRECTIONS (In-Furrow Applications) section to determine the proper rate per 1000 foot of row.
71. REGALIA® Bioprotectant Concentrate should be used as part of an Integrated Pest Management System.
72. REGALIA® Bioprotectant Concentrate can be applied following a soil fumigant.
73. Use the high(er) labeled rate when high(er) (disease)(fungal pathogen) pressure is expected.
74. Optional Language: (\*) and (\*= Not labeled for this use in California)
75. WSDA seal/logo/tagline

Label date:

Made in the U.S.A.

US Patents No. 4,863,734 and No. 5,989,429

REGALIA® is a trademark of Marrone Bio Innovations, Inc.

Marrone Bio Innovations' name and logo are registered trademarks of Marrone Bio Innovations, Inc.

**© Marrone Bio Innovations, Inc.**

1540 Drew Ave., Davis, CA 95618

1-877-664-4476

[www.marronebio.com](http://www.marronebio.com)

[info@marronebio.com](mailto:info@marronebio.com)