

PMRA Approved Label SM

2019-5614

2020-07-06

# LifeGard<sup>®</sup> WG

Biological Plant Activator

Wettable Granules

COMMERCIAL

**ACTIVE INGREDIENT:**

*Bacillus mycoides* isolate J .....40%  
Equivalent to a minimum of 30 billion ( $3 \times 10^{10}$ ) viable spores per  
gram.

Warning contains the allergen sulfites

DANGER – EYE IRRITANT

POTENTIAL SENSITIZER

REGISTRATION NO 32526\_PEST CONTROL PRODUCTS ACT

READ THE LABEL BEFORE USING

KEEP OUT OF REACH OF CHILDREN



Manufactured by  
Certis USA LLC  
9145 Guilford Road  
Suite 175  
Columbia, MD 21046  
1-800-847-5620

Net contents: \_2.2 kilograms\_\_\_\_\_

Lot No. \_\_\_\_\_

Date of Manufacture \_\_\_\_\_

## BIOLOGICAL ACTIVITY

LifeGard<sup>®</sup> WG contains a biological disease control agent (*Bacillus mycoides* isolate J, or BmJ) that reduces the occurrence and severity of plant disease by inducing the plant's natural defense

mechanisms against pathogens through a mechanism known as Systemic Acquired Resistance (SAR). BmJ itself has no direct effect on plant pathogens, but preventative applications (before infection or appearance of disease symptoms) can reduce the incidence and severity of subsequent disease. LifeGard® WG is most effective when used in conjunction with or alternation with fungicides having other modes of action, registered for the control of labeled diseases.

## **DIRECTIONS FOR USE**

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

To protect pollinators, follow the instructions regarding bees in the ENVIRONMENTAL PRECAUTIONS section.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT apply by aerial application equipment.

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

These use directions must be in the possession of the user at the time of pesticide application.

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.

### **Mixing procedures:**

LifeGard® WG is a wettable granular (WG) formulation which must be mixed with water and applied as a foliar spray. Mix the recommended amount of LifeGard® WG in clean water with sufficient agitation to maintain a uniform suspension in the spray or mixing tank.

Prepare only the amount of spray mix that is required for the immediate operation. Do not allow the mixture to stand overnight in the spray tank.

### **Application timing:**

LifeGard® WG should be applied preventatively, when conditions are conducive to disease development, but before disease is observed in the field. Initial inducement of plant defense response occurs soon after application, but 3 – 5 days are required to attain maximum level of protection.

Apply to healthy, actively growing plants. Do not apply to plants that are stressed due to drought, excessive moisture, excessively hot or cold temperatures, demonstrated pesticide injury, or other environmental stress.

**Preharvest Interval (PHI) = 0 days.**

### **Application method:**

*Ground applications:* LifeGard® WG can be applied in most commonly-used ground application equipment, such as tractor-mounted boom, airblast, high clearance, hose-end, backpack, and other pressurized sprayers; hose-end or hand-held sprayers; and foggers or mist blowers. Apply in sufficient water (210 – 1,000 L/Ha) for uniform coverage.

*Chemigation:* LifeGard® WG can be applied to the crop canopy through stationary overhead sprinkler systems by injecting the recommended rate (see below) at the very end of the irrigation

period. Injection should occur only within the minimum time required to ensure complete flushing of the product from the system and onto the crop canopy. See “Chemigation Instructions” below for additional information about application of LifeGard® WG through sprinkler irrigation systems. **Do not apply LifeGard® WG through moving sprinkler systems such as center pivot or lateral move systems, or through any other type of irrigation system.**

**FOR MANAGEMENT OF DISEASES CAUSED BY CERTAIN FUNGI, OOMYCETES, OR BACTERIA IN CROPS GROWN OUTDOORS OR IN GREENHOUSES, SHADEHOUSES, OR OTHER COVER:**

**Application rate:** Mix LifeGard® WG at a concentration of **0.33 grams per litre of water** and apply by one of the methods described above. The amount of LifeGard® WG applied per hectare will depend on the spray volume (L/Ha) required to adequately cover the crop. Lower volume (210 – 500 L/Ha) may be sufficient for uniform coverage of newly emerged or transplanted crops, or smaller plants such as leaf lettuce or spinach. Crops with large canopies may require higher volumes (500 – 1000 L/Ha) if using ground spray equipment.

**Do not apply less than 70 grams or more than 333 grams of LifeGard® WG per hectare.**

**DO NOT apply to apple or grape by chemigation.**

**Rate Table:** This table can be used to determine the amount of LifeGard® WG required for different spray volumes:

<b>Volume of water (L/Ha):</b>	<b>210</b>	<b>250</b>	<b>300</b>	<b>350</b>	<b>400</b>	<b>500</b>	<b>750</b>	<b>1,000</b>
<b>LifeGard® WG rate (g/Ha):</b>	70	83	100	117	133	167	250	333
<b>Approximate dry measure (cc):</b>	96	115	138	161	184	229	344	459

<b>Crops</b>	<b>Target diseases</b>	<b>Additional information</b>
<b>Apples (field)</b>	Suppression: Fire blight <i>(Erwinia amylovora)</i>	Foliar applications only. Begin applications when green tissue is present, prior to infection period. For suppression of shoot blight, start applications of LifeGard® WG after petal fall and re-apply every 7 to 14 days during stem elongation. Do not apply during the bloom period (from pink stage to petal fall).
<b>Grapes (field)</b>	Control: Downy mildew <i>(Plasmopara viticola)</i>	Foliar applications only. Make first applications 2-3 weeks before bloom and prior to infection.  Repeat applications at 7-21 day intervals as part of a rotational program with fungicides labeled for this use.

Crops	Target diseases	Additional information
		<p>Continue applications until 2-4 weeks after fruit set.</p> <p>Applications can be made up to and including the day of harvest if necessary to maintain disease control.</p>
<p><b>Peppers</b> [all types] (field and greenhouse)</p> <p><b>Tomato</b> (field and greenhouse)</p>	<p><u>Suppression:</u> Bacterial leaf spot (<i>Xanthomonas euvesicatoria</i>)</p> <p>Early blight (<i>Alternaria solani</i>)</p> <p>Late blight (<i>Phytophthora infestans</i>)</p> <p><u>Partial suppression:</u> Bacterial speck (<i>Pseudomonas syringae</i> pv. <i>Tomato</i>)</p>	<p><i>For direct seeded crops:</i> Apply any time following emergence of first true leaf.</p> <p><i>For transplants:</i> Begin applications immediately before or after transplanting. Transplants may be treated in the greenhouse or nursery prior to transplanting in the field.</p> <p>For bacterial leaf spot, early blight and late blight repeat applications at 7-day intervals. For bacterial speck repeat applications at 7-14 day intervals. Use the 7-day interval under high disease pressure.</p>
<p><b>Potatoes (field)</b></p>	<p><u>Suppression:</u> Early blight (<i>Alternaria solani</i>)</p> <p>Late blight (<i>Phytophthora infestans</i>)</p> <p><u>Partial Suppression:</u> White mold (<i>Sclerotinia sclerotiorum</i>)</p>	<p>For early blight and late blight, repeat applications at 7-day intervals. For white mold apply at 7-14 day intervals. Use the shorter interval when high disease pressure is anticipated.</p>
<p><b>Spinach</b> (field and greenhouse)</p>	<p><u>Partial suppression:</u> Downy mildew (<i>Peronospora farinosa spinaciae</i>)</p>	<p>Begin applications at first true leaf or after thinning.</p> <p>Make preventative applications every 7 days.</p>

Crops	Target diseases	Additional information
Sugarbeet (field)	<u>Suppression:</u> Cercospora leaf spot ( <i>Cercospora beticola</i> )	Apply at 14 day intervals in rotation with fungicides labeled for this use.

LifeGard® WG is most beneficial when applied in alternation with other fungicides that are registered for the specific use/pathogen or in a tank mix program with labeled fungicides as part of a disease management program. Mix only with fungicides having label instructions that do not prohibit such mixtures. The use of LifeGard® WG in combination with other fungicides will help delay resistance to these fungicides.

In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user should contact Certis USA for information before mixing any pesticide or fertilizer that is not specifically recommended on this label.

### CHEMIGATION INSTRUCTIONS

#### **General information:**

Apply this product only through stationary overhead sprinkler irrigation systems (including impact or microsprinklers, overhead boom, or solid set, including mist-type systems), or with hand-held calibrated irrigation equipment (such as a hand-held wand with injector). Do not apply this product through any other type of irrigation system, including moving overhead sprinklers (center pivot or lateral move).

Lack of effectiveness can result from non-uniform distribution of treated water.

If you have questions about calibration, contact provincial agricultural specialists, equipment manufacturers or other experts.

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.

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.

“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.

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.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.

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.

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.

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.

Do not apply when wind speed causes non-uniform distribution and/or favors drift beyond the area intended for treatment.

Do not apply by chemigation if the area to be treated is within 100 metres of a residential area or park.

Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and injector system and flush with clean water before use. Failure to provide a clean tank, free of scale or residues may reduce effectiveness of this product.

### **Sprinkler chemigation:**

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer or other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Application should be continuous in sufficient water to apply the recommended rate evenly to the entire treated area.
8. Do not apply when wind speed favors drift beyond the area intended for treatment.

**FIRST AID**

If swallowed: Call a poison control centre 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 a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control centre or doctor for treatment advice.

If inhaled: 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 centre or doctor for further treatment advice.

If in eyes: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses if present after the first five minutes, and then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

**PRECAUTIONS**

**KEEP OUT OF REACH OF CHILDREN.** Severely irritating to the eye. **DO NOT** get in eyes. May cause sensitization. Avoid breathing spray mist. Avoid contact with skin and clothing.

Wear a long-sleeved shirt, long pants, shoes and socks, goggles, waterproof gloves, as well as a NIOSH approved mist filtering mask or respirator when mixing/loading, applying and during all clean-up and repair activities. Wash thoroughly with soap and water after handling the product. Remove contaminated clothing and follow manufacturer's directions for cleaning/maintaining personal protective equipment (PPE) before reuse. If no such instructions are available, use clothing detergent and hot water for cleaning all washable PPE. Keep and wash PPE separately from other laundry.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

Re-entry Interval: **DO NOT** re-enter or allow re-entry into treated areas for 4 hours or until sprays have dried, unless wearing appropriate personal protective equipment including long-sleeved shirt, long pants, shoes and socks, and waterproof gloves.

**ENVIRONMENTAL PRECAUTIONS**

Toxic to bees. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to the evening when most bees are not foraging. Avoid applications when bees are foraging in the treatment area in ground cover containing blooming weeds. To further minimize exposure to pollinators, refer to the complete guidance "Protecting Pollinators during Pesticide Spraying – Best Management Practices" on the Health Canada website ([www.canada.ca/pollinators](http://www.canada.ca/pollinators)).

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

## **TOXICOLOGICAL INFORMATION**

Treat symptomatically

### **STORAGE:**

Store in a dry area inaccessible to children. Store in original container only. Keep container closed when not in use. Store at temperatures below 25°C. The product should be used within 16 months from the date of manufacture. Store this product away from food or feed.

### **DISPOSAL**

#### **Disposal of Container:**

DO NOT reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

### **NOTICE TO USER**

This pest control product is to be used only in accordance with the directions on the label. It is an offense under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.