

# LifeGard® WG Biological Plant Activator Represents a New Class of Fungicide

LifeGard® WG is the first foliar-applied biological plant activator available on the market. LifeGard is a naturally occurring bacterium that triggers an induced resistance (IR) response in plants. This IR response reflects a new direction taken by a pesticide market that has rapidly increased its demand for biopesticides, because they offer efficacy, as well as resistance management materials, low residue levels and crop and worker safety. LifeGard is NOP Approved and OMRI Listed®. It is residue exempt, has a 4-hour REI, can be applied the day of harvest and the product is bee safe.

The active ingredient of LifeGard is a naturally occurring bacterium (*Bacillus mycoides* isolate J or BmJ) shown by discoverer Prof. Barry Jacobsen, Ph.D. of Montana State University to trigger a plant's natural immune response to pathogenic fungi, bacteria and viruses in the phenomenon known as IR. The BmJ bacterium "switches on" a plant's resistance genes causing a cascade of metabolic responses by the plant to limit infection and the development of disease. While some microbial bio-fungicides have been reported to also have moderate IR activity, LifeGard is unique in that it works entirely as a microbial IR activator with no direct antagonistic effect on plant pathogens. LifeGard should be applied early, ideally 3–5 days prior to disease development. LifeGard induces the same genetic resistance pathway as the class of chemical IR inducers known as benzothiadiazoles, but for longer periods and with lower risk of phytotoxicity.

## LifeGard Should be the First Spray of Your Disease Management Program

Crop	Target	Apply
Apples, Pears and Other Pome Fruits	Fire blight	When green tissue is present prior to infection period.
Grapes	Downy mildew	Spray 2 to 3 weeks before bloom.
Almond	Alternaria leaf spot	Before first symptoms appear.
Citrus	Citrus canker	At spring flush, before symptoms appear.
Leafy Vegetables	Downy mildew	Following emergence of the first true leaf. Or treat immediately before/ after transplanting in the greenhouse, nursery or field. On seed crops apply at the first sign of flowering.
Cucurbits	Anthracnose, powdery and downy mildews, gummy stem blight	
Fruiting Vegetables	Bacterial leaf spot, bacterial speck, early blight, gray mold, late blight	
Potatoes	Early blight and white mold	
Carrot	Alternaria Leaf Blight	Begin applications soon after plant emergence
Cole Crops	Downy Mildew	Refer to label for specific directions
Legumes	White Mold	Apply shortly after flowering
Pecans	Pecan scab	Apply in sufficient amount of carrier for maximum coverage
Sugar Beet, Table Beet	Cercosora leaf spot	Apply every 7-14 days, rotate with labeled fungicides
Tobacco	Blue mold	Apply preventatively every 7-14 days



■ LifeGard is applied early, ideally the first spray of your disease management program.

■ When the BmJ bacterium lands on the plant, induction or "activation" initiates within three hours.

■ The plant responds with a cascade of metabolites that resist infection and the development of disease.

■ Once the plant's natural immune response activates, it remains resistant to disease for more than 18 days.



**FRAC P6**

LifeGard is a FRAC P6 product, the only fungicide in this category.

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The Biopesticide Company

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Always read and carefully follow label instructions.