Serifel® Biofungicide* for Managing Plant Diseases

What are Biologicals:

Biologicals are microorganisms and naturally occurring substances that control pests. Growers use biologicals as a fundamental part of crop protection programs for a variety of reasons such as:

- Chemical management
- New resistance strategies
- Prolonged flexibility and performance reliability

Biological crop protection offers highly targeted solutions and advanced resistant management strategies. New innovation has driven market development, and increased fungal protection on a larger scale. BASF's Serifel biofungicide has a unique component known as *Bacillus amyloliquefaciens MBI600* which covers a broad spectrum of disease control by setting the standard of purity and performance reliability.

What is Bacillus amyloliquefaciens:

Bacillus amyloliquefaciens is a bacterium containing active ingredients used to suppress diseases caused by fungi. The active ingredient is a spore-forming bacterium that colonizes the surface of the plants. Bacillus amyloliquefaciens reduces foliar fungal pathogens by reducing disease development. Serifel biofungicide manages disease organisms such as:

- Alternaria
- Fusarium
- Powdery Mildew

- Botrytris
- Rhizoctonia

Winning Science Winning Solutions

*Not for sale in California.



Technical Information Bulletin

■ BASF
We create chemistry

Serifel® Biofungicide

Serifel biofungicide is a biological fungicide that exhibits broad spectrum disease control and a novel mode of action.

- When integrated with a disease management system
 Serifel biofungicide provides unique solutions to address challenges in the food production value chain
- Serifel biofungicide is based on the Bacillus amyloliquefaciens (MBI600) strain covering a broad spectrum of disease control that sets the standard for quality purity and performance reliability
- The positive toxicological and environmental profile making it a flexible option for disease control
- Suppresses foliar diseases
- Protects leaf canopy

Serifel Biofungicide Foliar Applications in Grapes I *Powdery Mildew Control*

Vivando® fungicide 10 oz (14 day interval) 0.3

Elevate® 16 oz + Serifel 0.45 lb (14 day interval) 1.4

Serifel 0.23 lb (7–10 day interval) 2.7

Elevate 16 oz (14 day interval) 4.7

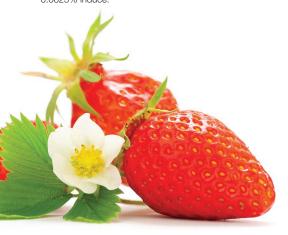
Serenade® Optimum 14 oz (7–10 day interval) 6.2

Untreated Check

20.3

Average Percent Severity of Powdery Mildew on Leaves
34 Days After Application

2014, BASF Trial – Hughson, CA. 34 days after application. All treatments applied with 0.0625% induce.



Anticipated Label Use Recommendations

- Primary Use Rate: 4 oz/A. Flexibility to increase rate up to 16 oz/A.
- Maximum Rate / Season: No Maximum
- PHI: 0 Day Preharvest Interval
- REI: 4 hours
- Active Ingredient: Bacillus amyloliquefaciens

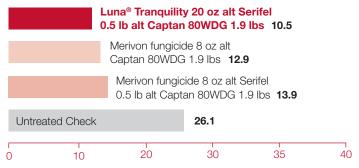
Target Crops

- Fruiting Vegetables
- Cucurbits
- Grapes
- Strawberries

Target Diseases

- Alternaria
- Botrytris
- Fusarium
- Powdery Mildew
- Rhizoctonia

Serifel Biofungicide and Merivon® Fungicide for Strawberry Botrytis Control



Season Average Botrytis Fruit Incidence (%)

2014–15 Dr. Mertley & Peres, U of FL. Variety = "Radiance." Applications made weekly from Nov. 21 to Feb. 20 (14 applications). Backpack CO2 sprayer 100 GPA @ 60 psi. Biological products inserted as sprays 4, 8, 11 and 14 and Captan was 1, 5, 10 and 12. Fruit harvested Dec. 9 to Feb. 27 (23 harvests). For the Merivon fungicide alternation with Captan, Captan was used for sprays 1, 4, 5, 8, 10, 11, 12 and 14.



