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 root and foliar diseases caused by fungi. The active ingredient is a spore-forming bacterium that colonizes the developing root system in plants. *Bacillus amyloliquefaciens* reduces foliar fungal pathogens by reducing disease development. Serifel biofungicide manages disease organisms such as:

- Alternaria
- Botrytis
- Fusarium
- Rhizoctonia
- Powdery Mildew

*Not for sale in California.*
**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 root system up front to optimize growth
- Protects leaf canopy
- Promotes healthier soil

**Root:**
- Sprout development can only be successful if roots are healthy. Serifel biofungicide can promote healthy roots which can benefit the entire plant.

**Foliar:**
- During bulking phase any loss of foliage will decrease photosynthesis. Adding Serifel biofungicide to the fungicide program controls foliar disease, maximizing bulking rate.
- Serifel biofungicide can be tank mixed or used in rotation with hard chemistries

**Serifel Biofungicide In-Furrow Use in Potatoes**

<table>
<thead>
<tr>
<th>Rhizoctonia Severity (%)</th>
<th>Untreated Check</th>
<th>Priaxor® fungicide 6.75 oz</th>
<th>Quadris® 9 oz</th>
<th>Serifel biofungicide 0.22 lb + Priaxor fungicide 6.75 oz</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>38.4</td>
<td>26.4</td>
<td>20.1</td>
<td>18.2</td>
</tr>
</tbody>
</table>


**Anticipated Label Use Recommendations**

- **Use Rate:** 4 to 8 oz
- **Maximum Rate / Season:** No Maximum
- **PHI:** 0 Day Preharvest Interval
- **REI:** 4 hours
- **Active Ingredient:** *Bacillus amyloliquefaciens*

**Anticipated Crops on Initial Label**
- Fruiting Vegetables
- Grapes
- Potatoes
- Strawberries

**Target Diseases**
- Alternaria
- Botrytis
- Fusarium
- Powdery Mildew
- Rhizoctonia

**Serifel Biofungicide Foliar Applications in Potatoes**

<table>
<thead>
<tr>
<th>Early Blight Severity (%)</th>
<th>Bravo® WS only Check</th>
<th>Priaxor fungicide 5 oz</th>
<th>Luna® Tranquility 8 oz</th>
<th>Priaxor fungicide 5 oz + Serifel biofungicide 0.22 lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>40</td>
<td>27.5</td>
<td>5</td>
<td>4.3</td>
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</tbody>
</table>


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**Serifel**

Biofungicide

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Always read and follow label directions.
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