This information is not meant to be a substitute for reading the label. Always read and follow all pesticide labels. Ensure the pesticide is currently registered in your state.

**Biopesticide Profile**

**Serifel**

**Active ingredient**
*Bacillus amyloliquefaciens* strain MBI 600 (live bacterial endospores)

This information is not meant to be a substitute for reading the label. Always read and follow all pesticide labels. Ensure the pesticide is currently registered in your state.

**PRODUCT**

- **Formulations:** Serifel
- **Pests:** Plant diseases
- **FRAC Code (Fungicide Resistance Action Committee):** BM 02 (formerly 44)
- **Mode of Action (see next page):** Poison; Keep out; Turn on resistance; Grow strong plants

**ENVIRONMENT**

- **Temperature tolerance in field:** 50-120 °F
- **Rainfastness:** Within 3 hrs
- **UV tolerance:** Up to 7 days; prefers low UV exposure

**STORAGE**

- **How to store:** Cool dry place (room temperature)
- **Shelf life:** 3 years if unopened and stored correctly

**APPLICATION**

- **Where to apply:** Agricultural; Foliage, soil
- **When to start applying:** 4 days before expected disease onset in cool weather (50’s °F); 1 day in warm weather (70’s °F)
- **How to apply:** Do not allow mixture to sit overnight; agitate continuously during application; if possible, apply in the morning; use nozzle screen filters > 50-mesh; use with spreader
- **Tank mix & application compatibility:** Do not tank mix with metalaxyl/mefenoxam, ethylene bisdithiocarbamates (e.g., mancozeb), or chlorothalonil

**RISK**

- **Signal word:** Caution
- **REI (Restricted-entry interval):** Was 4 hrs, will be changing to 12 hrs on product produced in 2023; follow REI on the label
- **PHI (Pre-harvest interval):** 0 days
- **Impacts on beneficial insects:** No known toxicity concerns for bees or other tested beneficial insects (ladybug, lacewing, predatory mite)
**About biopesticides**

### USING BIOPESTICIDES

- Apply preventatively.
- Use as part of an IPM strategy, including cultural management practices, other pesticides, etc.
- Mix only what you need; don’t leave in spray tank overnight.
- Don’t expose to excessive heat in storage.
- When tank mixing, follow label instructions for all products. Check with company rep or distributor if you have questions. Do a “jar test” to determine physical compatibility if you want to mix two products for which you cannot find information on their compatibility.
- Proper cleaning of spray tanks after any pesticide application is always important. Pay special attention to tank cleaning when a biopesticide is applied after another incompatible product.

### HOW BIOPESTICIDES WORK

**Modes of action (MOAs)**

- **Eat**
  - Live microbe grows on/in pest
  - Active ingredient may be alive

- **Poison**
  - Biopesticide (or its products) kills the pest directly
  - Active ingredient is alive!

- **Keep out**
  - Live microbe grows on plant, leaving no room for pests
  - Active ingredient is alive!

- **Turn on resistance**
  - Turns on the plant’s defenses before pest attacks
  - Active ingredient is alive!

- **Grow strong plants**
  - Makes plant stronger, healthier, more resilient
  - Active ingredient may be alive

- **Repel**
  - Pest avoids plants treated with biopesticide
  - Active ingredient is alive!

- **Stop feeding**
  - Stops pest from feeding; pest eventually starves
  - Active ingredient is alive!

- **Stop growth**
  - Stops pest from growing or molting; pest eventually dies
  - Active ingredient is alive!

- **Stop reproduction**
  - Hampers pests’ ability to find a mate, lay eggs
  - Active ingredient is alive!

### LEARN MORE

**Efficacy of biopesticides**

go.nysipm.org/biopesticide-efficacy

**Biocontrol Bytes blog**

blogs.cornell.edu/biocontrolbytes/

**Biocontrol**

go.nysipm.org/biocontrol