Biopesticide Profile

LifeGard

Active ingredient
Bacillus mycoides isolate J (alive)

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: WG
Pests: Plant diseases
FRAC Code (Fungicide Resistance Action Committee): P 06
Mode of Action: Turn on resistance

ENVIRONMENT

Temperature tolerance in field: Any temperatures typical of NY growing season
Rainfastness: Bacteria need to be on the leaf for 3 hrs to induce plant resistance
UV tolerance: Not a concern, since bacteria only need to stay alive for 3 hrs

STORAGE

How to store: <77°F
Shelf life: 2 years if exposed to extreme heat; 3 years at room temperature

APPLICATION

Where to apply: Agricultural crops, outdoors or under cover including greenhouses and shadehouses; healthy, actively growing foliage, non-stressed plants
When to start applying: >2 days before expected initial infection (based on past experience); any time of day
How to apply: Avoid silicon spreaders.
Tank mix & application compatibility: Do not tank mix with antibiotics, peracetic acids, or hydrogen peroxides; compatible with many fertilizers, insecticides, herbicides, and fungicides.

RISK

Signal word: Caution
REI (Restricted-entry interval): 4 hr
PHI (Pre-harvest interval): 0 days
Impacts on beneficial insects: No known toxicity concerns for bees or other tested beneficial insects (lacewing)
**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)

<table>
<thead>
<tr>
<th>Disease</th>
<th>Active ingredient may be alive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insect</td>
<td>Active ingredient is alive!</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eat</th>
<th>Live microbe grows on/in pest</th>
<th>🪤</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poison</td>
<td>Biopesticide (or its products) kills the pest directly</td>
<td>🪤</td>
</tr>
<tr>
<td>Keep out</td>
<td>Live microbe grows on plant, leaving no room for pests</td>
<td>🪤</td>
</tr>
<tr>
<td>Turn on resistance</td>
<td>Turns on the plant’s defenses before pest attacks</td>
<td>🪤</td>
</tr>
<tr>
<td>Grow strong plants</td>
<td>Makes plant stronger, healthier, more resilient</td>
<td>🪤</td>
</tr>
<tr>
<td>Repel</td>
<td>Pest avoids plants treated with biopesticide</td>
<td>🪤</td>
</tr>
<tr>
<td>Stop feeding</td>
<td>Stops pest from feeding; pest eventually starves</td>
<td>🪤</td>
</tr>
<tr>
<td>Stop growth</td>
<td>Stops pest from growing or molting; pest eventually dies</td>
<td>🪤</td>
</tr>
<tr>
<td>Stop reproduction</td>
<td>Hampers pests’ ability to find a mate, lay eggs</td>
<td>🪤</td>
</tr>
</tbody>
</table>

**LEARN MORE**

- **Efficacy of biopesticides**
  go.nysipm.org/biopesticide-efficacy
- **Biocontrol Bytes blog**
  blogs.cornell.edu/biocontrolbytes/
- **Biocontrol**
  go.nysipm.org/biocontrol