EcoGuard-GN™

BIO FUNGICIDE

For use on
Ornamental Plants

Active Ingredients:

Bacillus licheniformis SB3086* ........................................ 1.26% (w/w)
Indole-3-butyric Acid** ........................................... 0.002755% (w/w)

Other Ingredients: ............................................... 98.737245% (w/w)

Total ................................................................. 100.00%

*Contains 9 x 10⁶ Colony Forming Units (CFU)/ml
**A non-fungicidal plant growth regulating ingredient shown to improve the overall growth and health of turf and ornamental plants.

Keep Out of Reach of Children
CAUTION
See back panel for additional Precautionary Statements.

NET CONTENTS 2.5 GAL (9.46 L)

For information on product use, availability or MSDS requests, please contact
Novozymes Biologicals, Inc.
5400 Corporate Circle • Salem, VA 24153 • 1-800-342-6173
www.novozymes.com/roots

EPA Reg. No. 701273    EPA Est. 70127/VA-001    U.S. Patent No. 6,569,425
PRECAUTIONARY STATEMENTS:
Hazard to Humans and Domestic Animals - CAUTION:

Personal Protective Equipment (PPE):
- Applicators and other handlers must wear:
  - Long-sleeved shirt and long-pants
  - Shoes plus socks for handling activities use a non-powered air purifying NIOSH-approved respirator with any N, P, or R filter.

Follow the manufacturer's instructions for cleaning/maintaining PPE. If washer instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS
Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Wash thoroughly and put on clean clothing.

Environmental Hazards: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of residual product or equipment washwaters. Do not use this product on plants intended for food or feed. Do not feed treated plants to livestock or domestic animals.

DIRECTIONS FOR USE:

AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on the label about personal protective equipment (PPE), notification to workers, and restricted-entry intervals. The requirements in this box apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours. PPE required for easy entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, in coveralls and shoes plus socks and protective eyewear.

INCLUSION IN PEST MANAGEMENT PROGRAM:
- EcoGuard-GN also works well as part of an Integrated Pest Management (IPM) program, especially to help reduce the occurrence of disease resistance to other fungicide products. In addition, during times of high disease pressure, such combinations may provide optimal pest management while reducing overall pesticide application amounts. Such an integrated program may be achieved by regular rotation of the treatments using EcoGuard-GN with treatments of other fungicides. Another approach is to apply EcoGuard-GN until the onset of high disease pressure, then to substitute another fungicide (at standard application rates) for a brief period (1-4 treatments) followed by a return to standard applications of EcoGuard-GN.

Product Description:
EcoGuard-GN is a concentrated suspension of the bacterial spores of the organism Bacillus subtilis SB3066 (U.S. Patent No. 6,559,425), which has been found effective as a natural inhibitor of a variety of economically important fungal disease species.

Product Use Sites:
EcoGuard-GN is applied as a directed spray or soil drench on ornamental plants at the following sites: greenhouses, nurseries, and ornamental gardens. EcoGuard-GN is a preventative or curative treatment for the fungal diseases Rhizoctonia solani and Phytophthora drechsleri.

Ornamental Plants including Greenhouse Applications, and Nursery and Ornamental Garden Uses:
- Apply as a drench or directed spray using hand held, mechanical or motorized spray equipment after seeding or planting or after transplanting to beds, containers, pots, or trays. Thoroughly wet the growing media. Apply every 7-14 days for adequate crop protection. Rotate with other approved fungicides if disease conditions last for several months.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Days</th>
<th>OSR/100 gL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhizoctonia solani</td>
<td>Vinc, Zinic, Growmax, Impalpex</td>
<td>6-4</td>
</tr>
<tr>
<td>Phytophthora drechsleri</td>
<td>Poinsettia, Marigold, Pelunia, Impalpex</td>
<td>6-4</td>
</tr>
</tbody>
</table>

Irrigation Application:
EcoGuard-GN is a liquid concentrate that can be used through various irrigation systems such as drip (trickle), flood (basal) or sprinkler systems. EcoGuard-GN can be used on annual and perennial flowers, bedding and foliage plants, ground cover crops and trees and shrubs for indoor and outdoor landscaping.

EcoGuard-GN is compatible with fertilizers and pesticides. It is recommended that a jar test should be done if there is any question about compatibility. If a soil sterilizer or strong oxidizer is used, EcoGuard-GN should be applied after the recommended time for repelling.

<table>
<thead>
<tr>
<th>Injector Ratio</th>
<th>1:200</th>
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</thead>
<tbody>
<tr>
<td>EcoGuard-GN</td>
<td>04 oz.</td>
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</tbody>
</table>

Open for Continued Use Directions →
Direct Siphon:
When using EcoGuard-GN with a high ratio (1:200), a siphon can be drawn directly out of the container without dilution.

Soil Drench Application:
EcoGuard-GN can be used on annuals and perennial flowers, foliage crops, and ground cover crops as a drench or directed spray by various mechanical or automated equipment. For drench or directed spray, EcoGuard-GN may be applied using hand held, mechanical or motorized spray equipment. Direct spray applications may also use sprinkler irrigation systems. EcoGuard-GN applications should begin before or shortly after initial seeding, planting, or after transplanting to propagation beds, containers, pots or trays. Drench the planting media thoroughly. Apply every 7-28 days through the growing season or the part of the season when the plant is most susceptible to disease pressure.

<table>
<thead>
<tr>
<th>Crop</th>
<th>EcoGuard-GN Concentration</th>
<th>Application Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Flowers</td>
<td>64 fl oz/100 gal water</td>
<td>214 days</td>
</tr>
<tr>
<td>Perennial Flowers</td>
<td>- or -</td>
<td>14-28 days</td>
</tr>
<tr>
<td>Foliage</td>
<td>14-28 days</td>
<td></td>
</tr>
<tr>
<td>Ground Cover</td>
<td>0.5 fl oz./gal water</td>
<td>14-28 days</td>
</tr>
</tbody>
</table>

Apply this product only through sprinklers including solid set, or hand held flood (basin), furrow, border or drip (trickle) irrigation system(s). Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or others.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shut the system down and make necessary adjustments should the need arise.

Chemigation Systems Connected to Public Water Systems:
1. Public water systems mean a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) or the functional equivalent in the water supply line upstream of the point of pesticide introduction. As an option to the RPZ, the backflow from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) designed and constructed of materials that are compatible with pesticides and capable of being filled with a system interlock.
7. Do not apply the pesticide when wind speed favors drift beyond the area intended for treatment.

Light agitation is recommended in the pesticide supply tank directly after adding EcoGuard-GN to the tank. If using direct siphon method, the container should be shaken well before beginning the shaker.

EcoGuard-GN is to be applied continuously for the duration of the water application. Always shake EcoGuard-GN container well before metering out to the pesticide supply tank.

Sprinkler Chemigation:
1. The system must contain a functional check valve, vacuum relay valve, and low pressure drain appropriately located on the irrigation line to prevent water source contamination from back flow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.
3. The pesticide injection pipeline must contain a functional, normally closed, solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) designed and constructed of materials that are compatible with pesticides and capable of being filled with a system interlock.
7. Do not apply in windy conditions when wind speed favors drift beyond the area intended for treatment.
Light agitation is recommended in the pesticide supply tank directly after adding EcoGuard-GN to the tank. If using direct injection method, the container should be shaken well before beginning the injection.

EcoGuard-GN is to be applied continuously for the duration of the water application. Always shake EcoGuard-GN container well before metering out to the pesticide supply tank.

**Floor (Basin), Furrow and Border Chemigation:**

1. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from back flow when flow stops.

2. Systems utilizing a pressured water and pesticide injection system must meet the following requirements:
   a. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
   b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
   c. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
   d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
   e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distributions are adversely affected.
   f. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Light agitation is recommended in the pesticide supply tank directly after adding EcoGuard-GN to the tank. If using direct injection method, the container should be shaken well before beginning the injection.

EcoGuard-GN is to be applied continuously for the duration of the water application. Always shake EcoGuard-GN container well before metering out to the pesticide supply tank.

**Drip (Trickle) Chemigation:**

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.

2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

3. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distributions are adversely affected.

6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Light agitation is recommended in the pesticide supply tank directly after adding EcoGuard-GN to the tank. If using direct injection method, the container should be shaken well before beginning the injection.

EcoGuard-GN is to be applied continuously for the duration of the water application. Always shake EcoGuard-GN container well before metering out to the pesticide supply tank.

**Tank Mixing:**

Due to the nature of this microbial product (contains live spores), tank mixing of EcoGuard-GN with solutions containing strong acids, bases, oxidizing agents, or solvents should be avoided.

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**STORAGE AND DISPOSAL:** Do not contaminate water, food, or feed by storage and disposal.

**Pesticide Storage:** EcoGuard-GN is a stable suspension of microbial spores. For best results, store within the recommended storage temperature range of 40° F - 95° F (4° C - 35° C). Avoid longer-term storage at warmer temperatures or in direct sunlight. This product can also be stored at lower temperatures (40°F) for up to 2 weeks as freezing will not affect its effectiveness. Store product in original container in a secure location. Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Container Disposal: Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or incineration, or as allowed by state and local authorities, by burning. If burned, stay out of smoke.

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**WARRANTY:** The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. Novozymes Biologicals warrants that at the time of the sale of this product it conforms to the chemical description on the label and, when used according to the label directions under normal growing conditions is reasonably fit for the purposes referred to above. Buyers or Users of this product assume all risk for any use contrary to the specific directions. If this product does not perform as warranted above and to the extent consistent with applicable law, customer's sole remedy for breach of warranty shall be replacement of the product or refund of the purchase price paid, at the option of Novozymes Biologicals, except as provided elsewhere in writing. In no event shall Novozymes Biologicals, nor its officers, agents, or employees be liable for special, incidental, or consequential damages or lost profit or loss of use of equipment or loss of income or incurred, or for any claim made by another party. Novozymes Biologicals shall have prompt notice as soon as Buyer or User has reason to believe they may have a claim (not to exceed twenty-one days from date of application) so that an inspection of the affected property and growing crops may be made. Unless Buyer and User(s) shall promptly notify Novozymes Biologicals of any claim, the manufacturer does not intend to pay any damages.

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