A Novel Biological Inoculant for Commercial Seed Treating That Helps Protect Crops Against Drought, Temperature and Salt Stresses

Agricultural Benefits
Better tolerance against drought, temperature and salt stresses

Applicability
Easy to use liquid formulation
Treats seeds with beneficial microorganisms
Compatible with common seed treatment chemicals and microbes

Guaranteed Analysis
CONTAINS NONPLANT FOOD INGREDIENTS
Active Ingredient:
*Trichoderma harzianum* (minimum of $1 \times 10^6$ viable spores/ml) . . . 0.5%
Inert Ingredients:
Water (H$_2$O) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ..

Net Weight: 2.2 lbs/qt (943.5g/l)

Expiration Date: ________________

Measurement
4, 8, 16 or 32oz (100, 250, 500 or 1000ml) depending on the amount of seeds to treat

General Information
Direct Biologicals has developed *Heat Shield* ™, a seed treatment containing fungal endophytes that enhance drought, temperature and salt stress tolerance of crop plants. Once coated onto the surface of seeds, our formulation keeps the fungus inactive until the seed is exposed to conditions that stimulate seed germination. Upon germination, the fungus activates and establishes a beneficial symbiosis with seedlings. The symbiotic plants become more tolerant to drought, temperature and salt stresses. *Heat Shield* ™ is formulated to be compatible with existing seed treatment equipment and chemicals and can be simply added as an additional component during the seed treatment process.

Mixing Instructions
*Seed Treatment:* To achieve optimal seed coverage, dilute *Heat Shield* ™ with water and apply directly to dry seed alone or in combination with other inoculants and/or other registered seed treatments (e.g., colorants, polymers, insecticides, nematicides and fungicides). Do not tank-mix *Heat Shield* ™ with fungicides or treatments containing biocides. Do not mix *Heat Shield* ™ with any product containing a label prohibiting against such mixing. When tank-mixing with any other registered seed treatments, always read and follow all use directions, restrictions, and precautions of both *Heat Shield* ™ and other products. After diluting, product should be applied within 8 hours. The resulting tank mix must be in accordance with the more restrictive label limitations and precautions. Do not exceed label dosage rates.
**In Furrow:** To achieve optimal seed coverage, dilute *Heat Shield™* with water or fertilizer and apply directly onto seeds during planting. After mixing, material should be applied within 8 hours. Do not tank-mix *Heat Shield™* with fungicides or products containing biocides. Do not mix *Heat Shield™* with any product containing a label prohibiting against such mixing. When tank-mixing with any fertilizer, always read and follow all use directions, restrictions, and precautions of both *Heat Shield™* and other products. The resulting tank mix must be in accordance with the more restrictive label limitations and precautions. Do not exceed label dosage rates.

**Use & Rate Recommendations**
Applied either in furrow, or as a seed treatment according to the table below:

<table>
<thead>
<tr>
<th>Crop</th>
<th>In Furrow (oz/10 acres)</th>
<th>Seed Treatment (oz/1,000 lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barley</td>
<td>1.00</td>
<td>0.50</td>
</tr>
<tr>
<td>Corn</td>
<td>1.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Cotton</td>
<td>0.50</td>
<td>2.00</td>
</tr>
<tr>
<td>Rice</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Soybean</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Wheat (spring &amp; winter)</td>
<td>1.00</td>
<td>0.50</td>
</tr>
</tbody>
</table>

**Application Notes**
Do not use with soil fumigants. Use *Heat Shield™* solution within 8 hours of mixing.

**Storage and Disposal**

*Product storage*
Keep from direct sunlight, from freezing and from exposure to elevated temperatures (>75°F/25°C). For long term storage best stored at refrigeration temperature. Store in unopened containers at refrigeration temperatures until applied to seeds.

*Product disposal*
All unused material should be treated with 1/4 volume of bleach for 30 minutes before disposal.

*Container disposal*
Do not reuse empty container. Triple rinse and discard container. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinance. If burned, stay out of smoke. Wash hands with soap and water after rinsing containers.

**Warranty Statement**
The seller warrants that this product contains a minimum number of viable beneficial microorganisms as indicated on this label. The seller makes no other warranty expressed or implied as to product viability or performance since storage, use and growing conditions are beyond the seller’s control. Seller’s guarantee is limited to the terms set out on the label and subject thereto. Buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

**Guaranteed By**
Direct Biologicals, Inc.
110 Capitol St.
Yankton, SD 57078

www.directbiologicals.com