



*A Novel Biological Inoculant for Commercial Crops*

**Agricultural Benefits**

Gives crops a higher tolerance to abiotic stresses  
Increases nutrient use efficiency and crop yields

**Applicability**

Easy to use liquid formulation  
Treats crops 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<sub>2</sub>O) . . . . . 99.5%

Total . . . . . 100.0%

Lot # and Expiration Date: \_\_\_\_\_

**Net Volume:** 4 or 169 fl. oz. (118 or 4,998 ml)

**Purpose**

*HeatShield™* is a dynamic microbial inoculant that imparts the power of beneficial symbiosis to plants. This relationship gives them a natural ability to tolerate abiotic stresses, as well as increasing nutrient use efficiency. Crops gain an increased tolerance to extreme hot and cold temperatures, as well as drought. And because they are operating more efficiently yields naturally increase. *HeatShield™* is also designed to increase tolerance to poor soils, including low fertility, salty and sodic soils.

*HeatShield™* is formulated to be compatible with existing seed treating equipment and certain chemicals (see below). However, the following mixing instructions must be followed for maximum benefit.

**Mixing & Application Instructions**

**If done from a separate tank** *HeatShield™* can be applied with other registered seed treatments (e.g., colorants, polymers, insecticides, nematicides and fungicides). **Product mortality will occur if mixed in same tank as chemicals.** Use *HeatShield™* solution within 4 hours of any mixing. Do not use with soil fumigants. Do not exceed label dosage rates.

**Seed Treatment:** To achieve optimal seed coverage, dilute *HeatShield™* with water and apply directly to dry seed alone within 4 hours. **If done from a separate tank** *HeatShield™* can be applied with other registered seed treatments (e.g., colorants, polymers, insecticides, nematicides and fungicides). **Product mortality will occur if mixed in the same tank as these chemicals.**

**In Furrow:** To achieve optimal seed coverage, dilute *HeatShield*<sup>TM</sup> with water or fertilizer and apply directly onto seeds during planting. Use *HeatShield*<sup>TM</sup> solution within 4 hours. *HeatShield*<sup>TM</sup> can be mixed only with approved chemicals, ask AST for details.

**Foliar Spray:** To achieve optimal coverage, dilute *HeatShield*<sup>TM</sup> with water and directly apply onto plant tissue during vegetative, or reproductive growth stages. Use *HeatShield*<sup>TM</sup> solution within 4 hours. *HeatShield*<sup>TM</sup> can be mixed only with chemicals approved by AST.

**\*Ask Direct Biologicals for approved chemicals tested for compatibility with HeatShield. Do not mix with non-approved agrochemicals or product mortality may occur. Always use separate tanks when other chemical treatments are necessary.**

#### **Application Rates:**

Apply either in furrow, as a foliar spray, or a seed treatment according to the table below:

| <b>Crop</b>                 | <b>In Furrow<br/>(oz/10 acres)</b> | <b>Foliar Spray<br/>(oz/10 acres)</b> | <b>Seed Treatment<br/>(oz/100lbs)</b> |
|-----------------------------|------------------------------------|---------------------------------------|---------------------------------------|
| Alfalfa                     | 1.00                               | 1.00                                  | 0.25                                  |
| Canola                      | 1.00                               | 1.00                                  | 0.60                                  |
| Corn                        | 1.00                               | 1.00                                  | 0.20                                  |
| Cotton                      | 1.00                               | 1.00                                  | 0.40                                  |
| Pasture grass & Legume seed | 1.00                               | 1.00                                  | 0.25                                  |
| Rice                        | 1.00                               | 1.00                                  | 0.25                                  |
| Soybean                     | 1.00                               | 1.00                                  | 0.10                                  |
| Wheat (Spring & Winter)     | 2.50                               | 2.50                                  | 0.15                                  |

#### **Storage and Disposal**

Keep from direct sunlight and exposure to temperatures above 75°F (25°C). For long-term storage product is best kept at refrigeration temperatures (40°F /4°C). Follow any local applicable waste disposal regulations for inoculants and plant amendments. This product contains living microbes, for best results follow storage and directions and use by expiration date on product package.

#### **Handling**

The microbes in this product are NOT harmful to humans. However, in the rare instance of an allergic reaction, we recommend gloves, eye protection and mask be used when handling material. Wash hands with soap and water after using. Do not swallow, avoid contact with eyes and open skin. Keep out of reach of children and pets.

#### **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.

#### **Guaranteed By**

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