



DATA SHEET #12

FOR NURSERY/GREENHOUSE/FIELD

DIEHARD™ Endo Drench



“The Industry's First Complete Mycorrhizal Drench”

DIEHARD™ Endo Drench is formulated with live beneficial endomycorrhizal fungi to inoculate the roots of containerized plants in the nursery. It contains highly selected species of low host specificity endomycorrhizal fungi that will quickly colonize the roots of containerized, bench, or field bed grown plants. When water and soluble nutrients are amply provided non-mycorrhizal seedlings can grow well in artificial growing media. However, until they form mycorrhizae, they do not adequately take up water and nutrients upon out planting. Routine nursery practices such as fumigation and high levels of water and nutrients produce non-mycorrhizal plants, or plants with “nursery fungi”, poorly adapted to individual species or field conditions. Horticultural Alliance, Inc. supplies DIEHARD™ Endo Drench spores of native mycorrhizal fungi that are specific to particular plants and function effectively in both nursery and field environments.

Product Benefits

IMPROVES

Survival
Rooting
Flowering
Water Absorption
Nutrient Availability
Yields and Production
Client Satisfaction
& Goodwill

REDUCES

Plant Losses
Fertilizer Use
Need Of Pesticides
Heat Stress Damage
Irrigation Frequency
Losses From Drought
Conditions

Directions For Use

Each pound treats 5,000 seedlings. Best application method is a 2 step process. Apply 1-2 weeks after sowing when roots have developed to the sides of cells. Mix with sufficient water to apply as a drench with a backpack sprayer. Care should be taken to insure that spores applied are drenched into the media to the level of the roots. Second application just as you are hardening off the crop for shipment. After use and one week before avoid use of phosphate fertilizers. Avoid the use of high phosphorus fertilizer as this treatment would have a negative effect on Endomycorrhizal colonization. Organic nitrogen fertilizers are recommended.

Non Plant Food Ingredient

Endomycorrhizal Fungi	100 Propagules per cc. <i>Glomus mosseae</i> (20), <i>Glomus intraradices</i> (20), <i>Glomus fasciculatum</i> (20), <i>Glomus dussii</i> (10), <i>Glomus clarum</i> (10), <i>Glomus deserticola</i> (10), <i>Glomus microaggregatum</i> (10).
Humic Acids	16% Derived from <i>Leonardite</i>
Soluble Sea Kelp Extract	12% <i>Ascophyllum nodosum</i>
Soluble Yucca Extract	17% <i>Yucca schidigera</i>
Fulvic Acid	Plant-derived mineral
<i>Trichoderma</i>	6,000,000 CFU's per cubic centimeter to include: <i>Genus Trichoderma</i> (6 species), <i>Gliocladium virens</i> (2 strains), <i>Trichoderma harzianum</i> (2 strains), <i>Trichoderma Viride</i> (2 strains).
Phosphate Solubilizing, Nitrogen Fixing and Growth Promoting Bacteria.	4,000,000 CFU's per cc to include: <i>Genus Bacillus</i> (32 species), <i>Genus Pseudomonas</i> (2 species), <i>Genus Streptomyces</i> (2 species).
Root Promoting Vitamin	B, B2, B3, B6, B7, B12, C, K, Biotin, Fulvic Acid
Natural sugars	Dextrose
Amino Acids	Animal and plant proteins

Compatibility

Species: All plants and shrub species except Rhododendrons, Azaleas, Heather, Blueberries, and Laurels. (These associate with ericoidmycorrhizae.)

Fungicides: Non-systemic fungicides normally have no effect. Foliar applied fungicides normally have no effect. Systemic fungicides may be applied 2 weeks before or after use of product. Fungicide use according to label instructions do not extinguish mycorrhizae, they only inhibit development for a short period of time.

Storage & Handling

Store in a cool, dry place. Avoid high temperatures and direct sunlight. Product shelf life is up to 18 months.



FOR NURSERY/GREENHOUSE/FIELD

DIEHARD™ Endo Drench



“Stimulates root growth naturally”

Health & Safety

- Inhalation If dusty conditions exist wear a dust mask.
- Ingestion Drink large amounts of water, induce vomiting, and seek medical attention.
- Eyes Flush with large amounts of water.
- Safety Product becomes very slippery when wet.

Other DIEHARD™ Inoculants

DIEHARD™ Ecto Drench

Ectomycorrhizae, stimulants, beneficial bacteria, soluble sea kelp, yucca plant extracts, and *Trichoderma* in a dry formulation to drench propagation media in the nursery/greenhouse to inoculant ecto plants with mycorrhiza.

DIEHARD™ Drench

Ecto and endomycorrhizae, stimulants, beneficial bacteria, soluble sea kelp, yucca plant extracts, and *Trichoderma* in a dry formulation to drench propagation media in the nursery/greenhouse to inoculant endo plants with mycorrhiza.

DIEHARD™ Starter Mix

Endo and Ectomycorrhizae, stimulants, beneficial bacteria, soluble sea kelp, yucca plant extracts, and *Trichoderma* in a dry formulation to mix with propagation media in the nursery/greenhouse to inoculant plants with mycorrhiza.

DIEHARD™ Ecto Starter

Ectomycorrhizae, stimulants, beneficial bacteria, soluble sea kelp, yucca plant extracts, and *Trichoderma* in a dry formulation to mix with propagation media in the nursery/greenhouse to inoculant ecto plants with mycorrhiza.

DIEHARD™ Endo Starter

Endomycorrhizae, stimulants, beneficial bacteria, soluble sea kelp, yucca plant extracts, and *Trichoderma* in a dry formulation to mix with propagation media in the nursery/greenhouse to inoculant endo plants with mycorrhiza.

DIEHARD™ Root Dips

Endo and ectomycorrhizae, stimulants, beneficial bacteria, soluble sea kelp, yucca plant extracts and Horta-Sorb® SM water management gel to protect the roots, slow release all soluble components of the formulation, and boost survival. Also available with just endo or ectomycorrhizae.

DIEHARD™ Root Reviver

Endo and ectomycorrhizae, stimulants, beneficial bacteria, plus a light portion of Horta-Sorb® MD to slow release the soluble components of the formulation. For use as a vertimulch application for trees and shrubs in decline and as a soil amendment for plantings, turf, and propagation mixes.

DIEHARD™ Injectables

Endo and Ectomycorrhizae, stimulants, beneficial bacteria, soluble sea kelp, yucca plant extracts and a slight amount of Horta-Sorb® SM gel to slow release all soluble components of the formulation. Also available with just endo or ectomycorrhizae.

DIEHARD™ BioRush®

A dry, water soluble root growth stimulant containing humic acid extracts, soluble sea kelp, yucca plant extracts, amino acids and nitrogen fixing, phosphate solubilizing and growth promoting bacteria to "energize" the microbial activity in the ground and promote cell division and lateral bud development as well as delay the aging process of plant tissue.

Limited Warranty: All information contained herein is offered in good faith. There are no warranties of merchantability of fitness for a particular purpose which extend beyond the information contained herein. Our liability is limited to replacement of any product which does not meet these specifications.

Distributed by: