

Dry  
Technology



# BioNUTRIENTS TOTAL-PAK INJECTABLE FOR TREES WITH MYCORRHIZAL TECHNOLOGY

- CONTAINS ENDO & ECTOMYCORRHIZAE
- BENEFICIAL OF RHIZOSPHERE BACTERIA, YEAST

### GUARANTEED ANALYSIS:

Total Nitrogen (N)	3%
3% Slowly Available Water Soluble Nitrogen*	
Soluble Potash (K <sub>2</sub> O)	3%
Boron (B)	.002%
Copper (Cu)	.005%
Iron (Fe)	.05%
Magnesium (Mg)	.025%
Manganese (Mn)	.05%
Molybdenum (Mo)	.0005%
Zinc (Zn)	.005%

**Derived From:** Ferrous Sulfate, Condensed Plant Proteins, Fish Protein Hydrolysate, Potassium Humate, Sodium Molybdate, Boric Acid, Copper EDTA, Manganese EDTA, Zinc EDTA, Chelating Agent: EDTA.

\*3% slowly available Nitrogen derived from plant protein

### ALSO CONTAINS NON-PLANT FOOD INGREDIENTS:

10%	Kelp Extract (Ascophyllum nodosum)
50%	MaltoDextrin
1.5%	Natural Wetting Agent (Yucca schidigera)
	Bacillus subtilis .....1.5 x 10 <sup>6</sup> CFU per gram
	Bacillus licheniformis.....5 x 10 <sup>5</sup> CFU per gram
	Bacillus amyloliquefaciens.....1.5 x 10 <sup>6</sup> CFU per gram
	Bacillus pumilus .....1.5 x 10 <sup>6</sup> CFU per gram
	Pseudomonas putida.....1 x 10 <sup>5</sup> CFU per gram
	Pseudomonas fluorescens .....1 x 10 <sup>5</sup> CFU per gram
	Yeast (Saccharomyces cerevisiae) ...4.5 x 10 <sup>10</sup> CFU per gram
	Endomycorrhizal spores total.....71.4 spores per gram
	Glomus intraradices .....1.76 x 10 <sup>1</sup> spores per gram
	Glomus mosseae .....1.81 x 10 <sup>1</sup> spores per gram
	Glomus aggregatum .....1.81 x 10 <sup>1</sup> spores per gram
	Glomus etunicatum.....1.76 x10 <sup>1</sup> spores per gram
	Ectomycorrhizal spores.....4.14 million per gram
	Pisolithus tinctorius .....2.65 x 10 <sup>5</sup> spores per gram
	Rhizopogon villosulus .....4.85 x 10 <sup>5</sup> spores per gram
	Rhizopogon amylopogon ..5.29 x 10 <sup>5</sup> spores per gram
	Rhizopogon fulvigleba .....4.85 x 10 <sup>5</sup> spores per gram
	Rhizopogon luteolus .....4.85 x 10 <sup>5</sup> spores per gram
	Scleroderma cepa .....9.7 x 10 <sup>5</sup> spores per gram
	Scleroderma citrinum .....9.26 x 10 <sup>5</sup> spores per gram

\* Colony Forming Units

### PRODUCT DESCRIPTION

BioNutrients Total-Pak contains the top performing Endo and Ecto Mycorrhizae that are able to propagate in a broad range of soil temperatures including northern climates and in ph soil of 7 and above. It also contains seven prolific Rhizosphere beneficial bacteria, a micronutrient package, biologically active soil conditioners, natural wetting agent and rich organic supplements. Easy to

- COMPLETE MICRONUTRIENT PACKAGE
- NUTRIENT BOOST FOR FAST COLONIZATION

### Trees, Deciduous, Evergreen, Fruit & Nut, Shrubs & Palms

Caliper DBH	Root Ball Diameter	Rate Tank Mix per Tree	# of Injection Sites
2 inch	24"	1.5 gal.	6
3 inch	36"	2 gal.	8
4- 5 inch	48-50 "	3 gal.	12
6 inch	60"	4 gal.	16
7 inch	70"	5 gal.	20
8 inch	80"	6 gal.	24

apply on existing trees and landscaped areas to reduce stress of trees, large ornamentals and other landscape materials. Mycorrhizal will improve uptake of nutrients, minerals and absorption of water. Bacillus strains produce a variety of enzymes, PGRs and metabolites that aid in the breakdown of organic fertilizers and organic matter. Bacillus rapidly colonize the root's surface (niche occupation) and stimulate root growth, maintain healthy root system and crowd out invading pathogens.

### APPLICATION RECOMMENDATIONS:

Mix one packet of Total-Pak in 50 gallons of water. For ground area method, measure below drip line of tree. Use standard soil injection equipment. Pump requirements of between 100 - 200 psi is needed for good coverage. Be sure to calibrate your equipment by using a pre-measured container and time how long it takes to fill the container using the feeding needle.

### ROOT INJECTION RATES:

Total-Pak should be injected into the top 4" to 8" inches of soil where feeder roots extend. Start application approximately 2-3 feet from tree trunk. Extend the same distance beyond drip line. Lay out a grid pattern, and spacing should be every 2 1/2 ft. A minimum of 1 quart of tank mix should be applied per hole. Be sure to measure the tree DBH in order to calculate the total amount of mix needed. For difficult, compacted soils it is desirable to add a natural wetting agent such as Hydro-Max. BioNutrients are compatible with all Growth Products liquids.

**CAUTION:** Keep out of reach of children. In case of contact with eyes, flush immediately with copious amounts of water. Contact a physician. Do not take internally.

Manufactured in the USA By:

