cytozyme

Soil+™

Soil Treatment

Soil+ is effective on all soil types

Soil+ increases biological activity, leading to improved soil conditions

Through improved soil conditions Soil+ increases crop performance and yields

Soil+ is a concentrated liquid product obtained through Cytozyme's unique, proprietary technology.

Soil+ contains boron, cobalt, copper, iron, manganese, molybdenum and zinc. The benefits of **Soil+** are derived from the synergism of these essential mineral elements to aid growth of beneficial soil microorganisms.

Soil+ is designed specifically for direct application to a wide variety of soils to promote growth of beneficial soil microorganisms. Increased microbial activity results in biological, chemical and physical changes of the soil leading to reduced soil compaction, improved soil structure and increased nutrient availability and uptake. A better soil environment aids plant growth which leads to increased crop yields.

University studies show that **Soil+** increases the growth of beneficial bacteria, actinomycetes and fungi.

Benefits to the Soil Reported by Researchers & Farmers

- **Increased population of soil microbes**
- **Reduced compaction**
- **Improved soil structure**

Improved soil structure and less compaction leads to:

Benefits to the Crop Reported by Farmers

- **Increased yields**

Worldwide average yield increase

12%

Tested in over 100 trials, on 22 crops, in 19 countries, over 21 years, in a wide range of soil conditions

PROVEN PERFORMANCE • SAFE TO USE
EASY TO APPLY • COST EFFECTIVE

cytozyme™

AGBD

cytozyme

Soil+™

Field Results

Soil+ increased the growth of beneficial soil microorganisms, promoting better soil structure

Organism	Microorganism Count (CFU/g*)	
	Before Treatment	After Treatment
Bacteria	9.3×10^6	9.8×10^7
Actinomycetes	4.9×10^6	2.6×10^7
Fungi	6.2×10^3	7.8×10^3

**CFU/g = Colony forming units per gram of soil*

Field trials conducted at Northeast Louisiana University, USA, showed that Soil+ increased three major classes of beneficial soil microorganisms: actinomycetes, bacteria and fungi. The action of these microorganisms leads to improved physico-chemical characteristics of the soil including reduced compaction, better aeration, better absorption and retention of water, more available nutrients, thus creating a better environment for root growth and function.

Soil+ increased the growth of beneficial soil microorganisms involved in releasing plant-available nutrients

Laboratory tests performed at Northeast Louisiana University, USA, showed that Soil+ promoted proliferation of *Rhizobium* and *Clostridium* nitrogen-fixing bacteria which play an indispensible role in the nitrogen cycle by incorporating gaseous nitrogen from the air into forms available to the plants.

Soil+ also stimulated the activity of bacteria from genus *Bacillus*, *Clostridium*, *Flavobacterium* and *Micrococcus*. These bacteria participate in the decomposition of the organic matter, releasing essential nutrients and making them available to plants. Some species of *Bacillus* also play an important role in solubilization of phosphorus by changing it into forms available to the plants. In the study, Soil+ also inhibited proliferation of soil-borne bacteriophages, indicating better health of soil microflora.

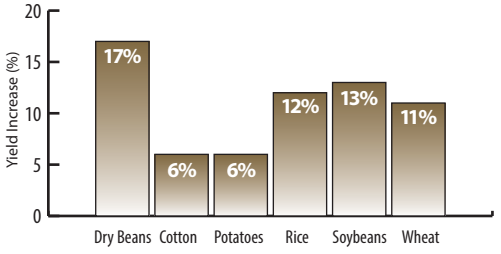
Organism	Microorganism Count (CFU/g*)	
	Before Treatment	After Treatment
Bacillus	10^5	10^7
Clostridium	10^3	10^5
Flavobacterium	10^6	10^7
Micrococcus	10^5	10^6
Rhizobium	10^4	10^6

**CFU/g = Colony forming units per gram of soil*

Through higher microbial activity, Soil+ improves soil environment for root growth and function. Better root system and function aids plant growth which leads to higher yields.

Average worldwide yield increase for selected crops:

Soil+ increased dry bean yield by an average of 17%, cotton by 6%, potatoes by 6%, rice by 12%, soybeans by 13% and wheat by an average of 11%.



Economic benefit of Soil+ for selected crops:

Crop	Economic Benefit		Soil+ Yield Increase	Crop Statistics	
	Per Hectare	Per Acre		Average Yield[a]	Crop Price
Dry Beans	**$190**		17%	1,928 kg/ha	$0.58/kg
		$76		1,716 lb/acre	$0.26/lb[a]
Cotton	**$75**		6%	988 kg/ha	$1.26/kg
		$30		879 lb/acre	$0.57/lb[a]
Potatoes	**$615**		6%	44,605 kg/ha	$0.23kg
		$247		397 cwt/acre*	$10.37/cwt[b]
Rice	**$332**		12%	7,692 kg/ha	$0.36/kg
		$140		6,846 lb/acre*	$0.17/lb[b]
Soybeans	**$176**		13%	2,764 kg/ha	$0.50/kg
		$70		41 bu/acre*	$13.50/bu[b]
Wheat	**$91**		11%	2,764 kg/ha	$0.30/kg
		$37		41 bu/acre*	$8.28/bu[b]

[a] Based on USDA, NASS 2007 [b] Based on USDA, NASS June 2008
**Conversions: 1 bu corn = 56 lb; 1 bu soybean/wheat = 60 lb; 1 cwt = 100 lb*

Soil+ Application

Soil+ can be applied any time, using any conventional spray equipment, or through sprinkler or drip irrigation systems.

To co-apply with agrochemicals, dilute 1 part Soil+ with 5 parts water prior to mixing with pre-diluted chemicals. Apply in as much water as possible for maximum coverage and penetration.

Soil+ Application Rates

Soil Type	Broadcast	
Sandy	16 fl oz/a	0.9-1.2 liter/ha
Loam	12 fl oz/a	0.6-0.9 liter/ha
Clay	8 fl oz/a	0.6 liter/ha

Soil Type	Banded	
Sandy	8 fl oz/a	0.5-0.6 liter/ha
Loam	6 fl oz/a	0.3-0.5 liter/ha
Clay	4 fl oz/a	0.3 liter/ha

For orchards, vineyards, alfalfa, clover and other perennial crops, apply Soil+ in the early spring. Apply at higher rates of the product to light soils with less organic matter.

Storage: Store Soil+ at a temperature below 110°F (43°C). Avoid freezing. Keep container tightly closed. Do not store diluted product. Do not store in direct sunlight.

Use Soil+ in combination with other Cytozyme products for optimal results

Soil+™ and Seed+™ increased yields by an average of 15%, based on 72 trials, on 11 crops, in 8 countries, over 11 years.

Soil+™ and Crop+™ increased yields by an average of 19%, based on 47 trials on 17 crops, in 12 countries, over 11 years.

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Cytozyme Laboratories, Inc.
2700 South 600 West
South Salt Lake City, UT 84115, USA
e-mail: cytozyme@cytozyme.com

Tel: (801) 533-9208
Fax: (801) 537-1312
www.cytozyme.com