

cytozyme™ Seed+™

Nutritional Supplement for Seeds

Seed+ is a nutritional supplement to aid seedling emergence and growth.

Seed+ is applied just prior to planting.

Seed+ is available as a dry powder formulation (Dry Seed+) or as a liquid (Seed+ Extra).

Seed+ manufactured through Cytozyme's unique proprietary technology is designed to aid seedling emergence and growth. Ingredients contained in Seed+ product activate a number of crucial enzymes and help optimize metabolic pathways necessary for proper seedling development.

Seed+ contains calcium, magnesium, sulfur, cobalt, copper, iron, manganese, molybdenum, and zinc. Calcium is needed for root and leaf development and improved plant vigor. Magnesium regulates uptake of other nutrients and activates a number of crucial enzymes. Sulfur, zinc and copper are essential for formation of proteins and activation of enzymes necessary for seedling growth. Iron and manganese are crucial in sugar metabolism to produce energy for seedling emergence. Magnesium and molybdenum aid in the transport of phosphorus, which is important in energy transfer. Molybdenum is essential for nitrogen fixation. Cobalt influences plant resistance to stress. **The synergism of all these elements makes Seed+ effective.**

Our research also indicates that **Seed+**, when used in combination with commonly used pesticide and fungicide treatments, helps the seedling to overcome initial inhibitory effect of these compounds.

Seed+ helps plants overcome the negative effects of abiotic stress, the main cause of yield reduction in crops.

Seed+ is intended as a supplement to a regular fertilizer program and will not by itself provide all of the nutrients normally required by plants.

Benefits Reported by Farmers

- **Quicker emergence**
- **Better stands**
- **Increased seedling vigor**
- **Increased yields**



**Worldwide average
yield increase**

9%

**Tested in over 200 trials, for over
30 years, in 17 countries**

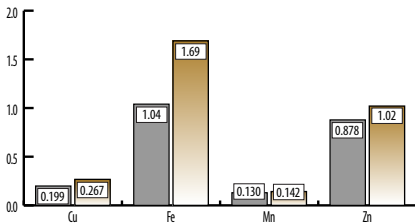


**PROVEN PERFORMANCE • SAFE TO USE
EASY TO APPLY • COST EFFECTIVE**

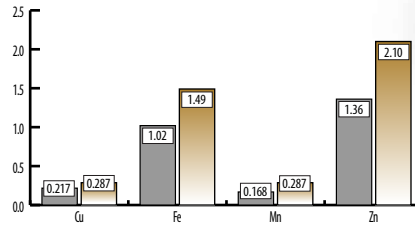
cytozyme™

Field and Laboratory Results

Seed+ increases nutrient uptake to the seedlings



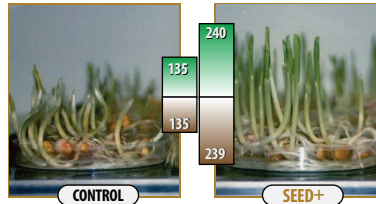
In roots Seed+ increased the content of copper (Cu) by 35%, iron (Fe) by 53%, manganese (Mn) by 9.2% and zinc (Zn) by 16% over untreated control



In shoots Seed+ increased the content of copper (Cu) by 32%, iron (Fe) by 46%, manganese (Mn) by 71% and zinc (Zn) by 54% over untreated control

Seed+ increased both root and shoot mass of corn seedlings

Corn seedlings grown from seeds treated with Seed+ showed 78% higher fresh shoot mass (240 vs. 135 mg/seedling) and 77% higher root mass (239 vs. 135 mg/seedling).



Method of Application for Dry Seed+:

Dry Seed+ can be conveniently applied right in the planter box. Apply Dry Seed+ to the seeds before planting. Application should be made in such a way that all seeds are thoroughly coated. Fill each box about half full of seeds. Apply about half of the recommended rate of Dry Seed+ and mix thoroughly. Add the rest of the seeds and the rest of the Dry Seed+ and mix again. Properly treated seeds will have a fine coating of powder.

Alternate method: Place seeds in a container. Add the correct dosage rate of Dry Seed+ and stir or mix until all seeds are uniformly coated.

Dry Seed+ application rates range from 2-8 grams/kg (3.5-12 oz/100 lb) of seed to 500 grams/1000 kg (16 oz/2000 lb) of vegetatively propagated crops, like potatoes, sugar cane, etc. (see label for details).

Method of Application for Seed+Extra: Shake well. Seed+Extra can be applied directly to the seed or in-furrow at planting time.

For on-seed application: Spray product as a fine mist to obtain thorough coating of seeds. Use any conventional spray equipment. Mix seeds until they are dry and do not stick together.

For in-furrow application: Dilute product in 100 to 150 liters of water per hectare (10 to 15 gallons per acre) and spray over seeds placed in furrow.

Seed+Extra application rates

Directly to the seed: 1.5 to 4 ml/kg (2 to 6 fl oz/100 lb) of seeds or 260 ml/1000 kg (8 fl oz/2000 lb) of vegetatively propagated crops, like potato, sugar cane, etc. (see label for details).

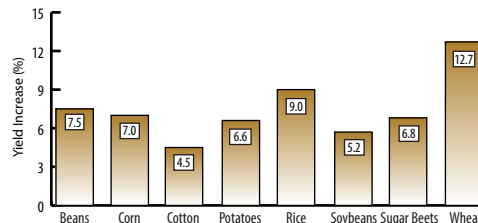
In-furrow: 300 to 900 ml per hectare (4 to 12 fl oz per acre)

Storage: Store Seed+ 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.

Through stronger, more vigorous seedlings, Seed+ helps plants to produce higher yields.

Average USA yield increase for selected crops:

Seed+ increased bean yield by an average of 7.5%, corn yield by 7%, cotton by 4.5%, potatoes by 6.6%, rice by 9%, soybeans by 5.2%, sugar beets by 6.8% and wheat by an average of 12.7%.



Economic benefit for selected crops:

Crop	Economic Benefit		Seed+ Yield Increase	Crop Statistics	
	Per Hectare	Per Acre		Average Yield ^a	Crop Price
Dry Beans	\$84		7.5%	1,928 kg/ha	\$0.58/kg
		\$33		1,716 lb/acre	\$0.26/lb ^a
Corn	\$160		7.0%	9,501 kg/ha	\$0.24/kg
		\$65		151 bu/acre*	\$6.12/bu ^b
Cotton	\$56		4.5%	988 kg/ha	\$1.26/kg
		\$23		879 lb/acre	\$0.57/lb ^a
Potatoes	\$677		6.6%	44,605 kg/ha	\$0.23/kg
		\$272		397 cwt/acre*	\$10.37/cwt ^b
Soybeans	\$72		5.2%	2,764 kg/ha	\$0.50/kg
		\$29		41 bu/acre*	\$13.50/bu ^b
Wheat	\$105		12.7%	2,764 kg/ha	\$0.30/kg
		\$43		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

Published Articles

Wozniak, E. M. and J. R. Martineau. 2004. Laboratory Evaluation of the Effects of Seed+ on Corn. CIJ Publication.

Wozniak, E. M. and J. R. Martineau. 2004. Seedling Development of Corn Seed Pre-treated with Poncho™ 600. CIJ Publication.