

cytozyme™ Crop+™

Foliar Nutritional Supplement for Crop Production.

Crop+ is a foliar nutritional supplement to aid growth of agricultural crops.

Crop+ is applied at crucial stages of crop development to reduce impact of abiotic stress on crop yield and quality.

Crop+ gives 12% better results than competitor products (based on 22 competitor products, 18 trials, nine crops in six countries).

Crop+ is a liquid concentrate obtained through Cytozyme's unique, proprietary technology. It aids crop production through improvement of photosynthetic activity, increased nutrient uptake through the root system and higher antioxidant activity.

The genetic potential of a crop is rarely achieved due to the abiotic stress such as heat, cold, drought and excessive UV radiation, encountered during the growing season. Effects of abiotic stress disrupt the metabolism of the plant and reduce nutrient absorption and translocation. When nutrients are limited during crucial stages of plant development such as flowering, fruit set and fruit maturation, yields and crop quality can be dramatically reduced.

Crop+ is designed to be applied at crucial stages of crop development, to strengthen the plant against everyday environmental stress, leading to better yields and improved quality.

Crop+ contains sulfur, boron, cobalt, copper, iron, manganese, molybdenum and zinc. Sulfur is needed for flavor development and for protein and oil synthesis. Boron is needed for early growth, better flowering and higher seed and fruit set by promoting healthy cell walls and membranes. Cobalt activates several crucial enzymes. Copper contributes to color and flavor in fruits and vegetables. Iron promotes flowering and fruit set, activates enzymes and is essential for chlorophyll development. Manganese aids in sugar metabolism, chlorophyll development and is essential for phosphorus and magnesium uptake. Molybdenum is crucial for enzymes catalyzing oxidation-reduction reactions and helps plant utilize nitrogen. Zinc is needed for fruit size and is essential for uniform maturity and seed development. Zinc also aids in chlorophyll development and cell and internode elongation. Through its antioxidant activity **Crop+** reduces impact of abiotic stress, leading to better yields and improved quality of crops. **The synergism of all these elements makes Crop+ effective.**

Crop+ 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:

- Increased stress resistance
- Improved quality
- Increased yields
- Easy to apply
- Cost effective



Worldwide average
yield increase
15%

Tested in over 2,000 trials, over 30
years, in 32 countries



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

cytozyme™



Field and Laboratory Results

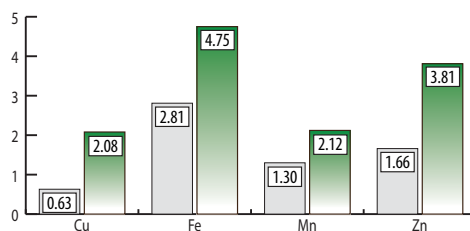
Crop	Photosynthesis (% increase in CO ₂ fixation over control)	Yield (% increase over control)
Cotton	15%	22%
Rice	17%	16%
Tea	15%	8%

Crop+ increases photosynthesis

Crop+ increased photosynthesis by average of 16% as indicated by CO₂ fixation, in crops tested in trials conducted at University of Arkansas, USA and UPASI Tea Research Institute, India. Increased photosynthetic activity resulted in yield increases in all tested crops.

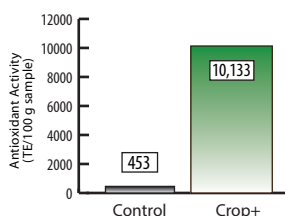
Crop+ increases nutrient uptake through roots

Plants treated with Crop+ absorbed 230% more copper (Cu), 69% more iron (Fe), 63% more manganese (Mn), and 130% more zinc (Zn)



Crop+ shows high antioxidant activity

Crop+ showed an average of 22 times higher antioxidant activity than control group consisting of six commercial products. High antioxidant activity in Crop+ indicates that the product would be more effective in reducing negative effects of abiotic stress than other products on the market.



Economic benefits of Crop+ on selected crops

Crop (Applications per year)	Economic Benefit		Crop+ Yield Increase	Crop Statistics	
	Per hectare	Per Acre		Average Yield ^a	Crop Price
Alfalfa (4)	\$122	\$51	10.8%	7,528 kg/ha	\$0.15/kg ^a
				6,700 lb/acre	\$0.07/lb
Apples (3)	\$2548	\$1033	10.0%	28,314 kg/ha	\$0.90/kg
				25,200 lb/acre	\$0.41/lb ^b
Dry Beans (1)	\$134	\$54	12.0%	1,928 kg/ha	\$0.58/kg ^b
				1,716 lb/acre	\$0.26/lb
Corn (1)	\$182	\$74	8.0%	9,501 kg/ha	\$0.24/kg ^b
				151 bu/acre*	\$6.12/bu
Cotton (4)	\$147	\$59	11.8%	988 kg/ha	\$1.26/kg ^a
				879 lb/acre	\$0.57/lb
Onions (3)	\$1513	\$616	6.8%	44,000 kg/ha	\$0.45/kg ^b
				16,820 lb/acre	\$0.206/lb
Peaches (3)	\$1100	\$441	9.7%	18,898 kg/ha	\$0.60/kg ^b
				16,820 lb/acre	\$0.27/lb
Potatoes (2)	\$831	\$333	8.1%	44,605 kg/ha	\$0.23/kg ^b
				397 cwt/acre*	\$10.37/cwt
Soybeans (1)	\$72	\$29	5.2%	2,764 kg/ha	\$0.50/kg ^b
				41 bu/acre*	\$13.50/bu
Sunflowers (1)	\$257	\$104	24.6%	1,634 kg/ha	\$0.64/kg
				1,454 lb/acre	\$0.29/lb ^b
Tomatoes (3)	\$4217	\$1704	9.0%	35,708 kg/ha	\$1.39/kg ^b
				300 cwt/acre*	\$63.10/cwt

^a Based on USDA, NASS 2007 ^b Based on USDA, NASS June 2008

*Conversions: 1 bu apples = 43 lb; 1 bu dry beans/soybeans = 60 lb; 1 bu corn = 56 lb; 1 cwt = 100 lb

Application Rate

Apply Crop+ at 500 to 1,600 ml/ha (8 to 20 fl oz/acre), depending on crop.

Application Timing: Make 1 to 4 applications depending on crop.

Application: Shake well before using. Spray diluted Crop+ evenly on foliage using any conventional spraying equipment. For best results, apply in evening or early morning. Avoid applying product under windy conditions. Heavy rain or overhead irrigation within 24 hours of application may reduce product effectiveness.

Compatibility: To co-apply with herbicides, pesticides or fertilizers, dilute 1 part Crop+ with 5 parts water prior to mixing with pre-diluted chemicals. Apply as directed above. A small test area should be treated prior to large scale mixing to determine that no phytotoxicity or undesirable effects occur.

Storage: Store Crop+ 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.

Published Articles

Wozniak, E.M. and J.R. Martineau. 2007. Cytozyme's Products for Sustainable Agriculture and their Advantages over Other Products on the Market. Plant Nut. for Sust. Agric. 10 (1):1-6.

Wozniak, E.M. and J.R. Martineau. 2008. Crop+TM Stimulates Photosynthesis. Key Process for Plant Growth, Development and Productivity. Technical Bulletin 4(1):1-3.