



REGION

West

CROP

Vegetables, Field,
Permanent Crops,
Landscaping

TIMING

Broadcast, Foliar

RATE

See label

PACKAGE

2.5 Gal., 265 Gal. tote

Natural amino acid complexed micronutrients for protection and “on-demand” availability of crucial micronutrients.

Organic and conventional offerings available in a full range of crucial micronutrients.

HOW AND WHY POLYAMINES WORK

BIO-BASED AMINO ACID: Polyamines utilizes the same carrier molecule the plant normally uses to intentionally transport metallic cations

NEUTRAL CHARGE: Neutrally-charged ions for energy efficient leaf and root absorption and plant utilization

HYDROPHILIC ADJUVANT: Enables repeated wetting for optimum polyamine solution uptake

SMALL MOLECULE: Results in optimal uptake and leaf penetration

FOLIAR-APPLIED NUTRIENT PATHWAY

In order for the applied nutrient to be plant available it must be in solution on the plant surface.

Plant entry and assimilation via stomata and other micro-channels is enhanced due to the neutral charge of the polyamine complexed micronutrients.

Early-season application further enables immature “sink” leaves to develop into mature “sources” of readily available and required micronutrients.

OPTIMIZE ACCESSIBILITY, ASSIMILATION AND UTILIZATION WITH FOLIAR APPLICATION

- Foliar application is most effective for nutrients with low mobility in phloem (Fe, Mn, Zn and Cu)
- Nutrients with high mobility in plants are easily translocated with foliar application
- Soil pH can restrict nutrient availability with soil application
 - pH < 6.0 Phosphate and Boron can be leached
 - pH > 7.5 Zn, Cu, Mn, Fe become fixed in the soil

OPTIMIZED MOLECULAR SIZE AND CHARGE FOR PLANT ABSORPTION

Neutrally-charged,
small particles
are easily absorbed
by the leaf surface

- / +

Positively charged,
larger molecules
are less
readily absorbed

+

UREA


POLYAMINE

EDTA

ASK US ABOUT THE
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**PERFORMANCE
GUARANTEE**

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FORMULATION	Crucial Plant Process Influenced by Micronutrients								pH	lbs/Gal
		CALCIUM	BORON	COPPER	IRON	MAGNESIUM	MANGANESE	ZINC		
Polyamine Calcium	Cell wall structure strength	5.00%							2.08	9.70
Polyamine Boron	Bloom set, pollination, bud set, fruit set		5.00%						8.10	9.57
Polyamine Copper	Reduce fruit drop key in photosynthetic enzymes			2.00%					2.70	9.19
Polyamine Iron	Chlorophyll synthesis and multiple enzyme functions				5.50%				2.40	10.08
Polyamine Magnesium	Central molecule in chlorophyll, phosphate metabolism					2.00%			3.10	9.48
Polyamine Manganese	Photosynthesis, respiration, nitrogen assimilation, pollen germination						5.60%		2.82	10.09
Polyamine Zinc	New blooms, shoots, leaves. Synthesis of auxins and enzymes for protein synthesis							5.80%	8.10	9.57
Polyamine Micro-Pak	Broad combination of micronutrients to correct deficiencies			0.30%	0.30%	0.50%	1.00%	1.20%	2.74	9.68
Polyamine MultiMineral	Photosynthesis and growth enhancement with added Sulfur				0.20%	2.50%	1.20%	1.20%	1.7	10.51
Polyamine Tree Nut Mix	Combination of micronutrients to address unique needs of nut trees		0.29%	1.45%		1.60%		2.15%	2.00	10.53



Organic formulations available for all formulations except Tree Nut Mix.

APPLICATION RATES			
	MILD DEFICIENCY	MODERATE DEFICIENCY	SEVERE DEFICIENCY
WATER / IRRIGATION	10-16 oz/acre	3.1 oz/acre	24-42 oz/acre
FOLIAR	6-12 oz/acre	16-24 oz/acre	24-38 oz/acre



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