Powered by Albion® Technology

A Series of Technical Information and Essential Plant Research

## WHY YOU SHOULD BE RECOMMENDING METALOSATE® PRODUCTS

## **WHY ANALYZE**

The Metalosate® products are patented amino acid chelated mineral products specifically designed for foliar application.

The advantage of using amino acid chelated forms of minerals is that the amino acids surround and protect the minerals from adverse interactions. These interactions can take place in a solution, in the soil or on the surface of the leaf. They often render non-chelated minerals unavailable to the plant. Because Balchem Plant Nutrition uses natural amino acids to chelate the minerals in the Metalosate products, they are rapidly absorbed, translocated, and metabolized by plants.

Solubility in water is essential for absorption by plants. This is true of the systemic chemicals as well as nutrients. The material must be soluble to pass through the surfaces and into the cells of the plant. Insoluble mineral salts, all oxides, most hydroxides, carbonates and phosphates, and some sulfates cannot be efficiently absorbed by the plant. When foliar application of these forms of minerals is made, they simply coat the external surfaces of the plant with the unavailable mineral. All of the Metalosate products are completely soluble in water and are consequently available for absorption by the plant.

Balchem's amino acid chelates are very small molecules. Consequently, they readily pass through the plants' barriers against absorption, including the cuticle, the cell walls and cell membranes. Balchem's research has indicated that plants can absorb 90% or more of foliar applied Metalosate products within two or three hours. Because absorption of the Metalosate products is so efficient, much lower doses can be applied to achieve measurable responses in the crops.

The Metalosate products are available as calcium, magnesium, potassium, zinc, iron, manganese, copper, and boron packaged as individual elements. For proven results and healthier profits, put them to work for you.



**Metalosate® Product Line** 

