

THE IMPORTANCE OF AMINO ACIDS

It is not the amount of minerals in the soil, or on the leaf, that is critical to plant development. It is the level of minerals in the plant tissue.

Tissue nutrition is diminished during plant growth and as this growth can be faster than roots can deliver extra minerals, the plant can be weakened, reducing yield.

Amino acids can overcome these deficiencies by providing nutrients in ready to use form. They have the efficiency of penetrating these nutrients directly into plant cells.

Amino acids also assist with the uptake of synthetic elements.

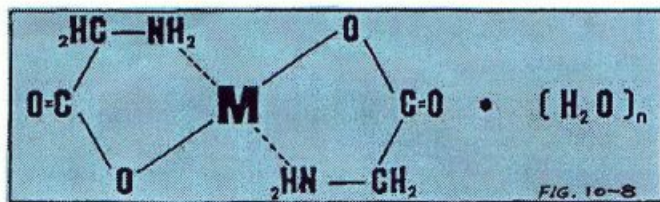


Figure 10-8 shows, that once chelated with Amino acids, a cation is now part of the Amino acid/peptide molecule and as such, is capable of being "smuggled" into the plant cell, by way of the Amino acid/peptide pathway.

There are two major advantages in applying Amino acid chelates as mineral nutrients rather than free cations.

A. To be biologically active, minerals must be chelated or complexed to Amino acids or other organic molecules within the cell. As a component of the Amino acid peptide molecule, the up-take into the plant tissue is more rapid and more efficient than equivalent amounts of uncomplexed cations.

B. The Amino acid chelate is biologically active upon entering the cell giving more rapid response by the plant to the nutrient. This process promotes faster plant maturity and improved crop yield, due to extra nutrients at critical times.

SUMMARY:

The penetration of Amino acids directly into plant cells, is the most efficient and effective form of delivering nutrients in useable form.