

Post-harvest nutrition.

Many permanent crop growers & Agronomists will agree that how your trees or shrubs are “put to sleep” for the dormant winter season is critical to how the cropping system will start the following year.

Many growers will typically make the NPK applications and have seen legitimate benefits from those applications.

I would like to address the micronutrient component of cropping system requirements. Several years ago, Redox commissioned a study to determine the beneficial contributions of micronutrient applications in a permanent crop. The findings were significant.

First let's look at the roles of nutrients in plants.

Macro,

Nitrogen, a component of every plant cell. Amino acid production.

Phosphorus, photosynthesis, respiration, energy.

Potassium, translocation of water & nutrients, enzyme reactions, sugar metabolism.

Secondary Macro,

Calcium, cell wall integrity, reproductive tissue, root growth.

Magnesium, chlorophyll production.

Silicon, cell wall integrity, antioxidant production.

Sulfur, nitrogen metabolism.

Micro,

Boron, calcium metabolism, reproductive tissue.

Copper, photosynthesis & chlorophyll.

Molybdenum, nitrogen metabolism, phosphorus metabolism.

Iron, chlorophyll, oxygen carrier.

Nickel, nitrogen metabolism.

Manganese, phosphorus & calcium metabolism, enzyme systems.

Zinc, enzyme & hormone production.

Cobalt, nitrogen metabolism.

Chlorine, osmosis & ionic balance, role in plant nutrition not well understood.

As you will note, we have 4 nutrients that work to metabolize nitrogen in plants and another 3 for enzyme production. Nitrate reductase is a very important enzyme responsible for nitrogen assimilation into amino acid production.

Over the years I have analyzed more than 2,000 soil tests in agricultural settings from Southern California to NY state and many points in between, there is one common thread... Not one of these tests have shown adequate ranges in soluble micronutrient availability for plants. I have witnessed the gains of growers that understand this.

With Respect,
Eric Massey,
Redox Ag Agronomist,
Great Lakes Area
616-745-0821
eric@redoxchem.com