BIO-BASED FERTILIZER & SEED TREATMENT:

Plant nutrition is only one of more than fifty factors which directly affect both crop yield and quality. The availability of required nutrients, together with the degree of interaction between these nutrients and the soil, play a vital role in crop development. A deficiency in any one required nutrient or, a soil condition that limits or prevents a metabolic function from occurring can limit plant growth.

A soil nutrient management plan should include analyzing soil deficiencies to determine the type, application rate, application interval, and the placement of any nutrients required to optimize short and long term productivity.

There is a significant difference between an induced deficiency and a real soil deficiency. For example, certain crops require the addition of molybdenum at a specific rate for optimum growth. This is a real deficiency. In other crops zinc or iron deficiencies, caused by high levels of phosphorus and active calcium, can result in reduced yield. This is an induced deficiency.

Typically, when deficiencies occur, the tendency is to foliar or soil apply copious amounts of product and hope for a favourable result. This “ad-hoc” approach seldom achieves the expected result and is certainly not cost effective.

The simple fact is: Diagnosis is the first step in determining an appropriate corrective action which many include;

1. a combination of treatments or
2. a program that incorporates several applications of different products at different application rates and intervals

When soil is depleted there are two methods for restoring its fertility:

1. it can be left idle for several years allowing it to rebuild naturally or
2. organic matter, in the form of crop residue, together with a microbial based inoculant can be applied from an external source.

In the latter case, the rebuilding process is accelerated and optimal conditions for soil biological activity and long term soil fertility are maintained

Soil organic matter is vital in rebuilding depleted soil as it ensures a continuous energy source for soil biomass. Soil biomass, consisting of microbes, fungi, algae, and protozoa that will transform organic molecules into mineral elements that are readily available to plants and help maintain good soil structure by transforming organic matter into humus and producing compounds that cement small soil particles together, promoting both increased drainage and moisture retention.

Soil nutrient management involves not only the physical properties and mineral structure of the soil, but also the balance between soil pathogens and beneficial microbes. Beneficial microbes increase nutrient availability, reduce disease, reduce nutrient losses, and help degrade toxic compounds. Plants thrive or suffer, depending on the type of microbes in the rhizoshere (the area around the roots.) In a healthy rhizoshere, dominated by beneficial microbes, plant life and soil life work together to produce healthy plants. Conversely, in unhealthy soil, dominated by pathogenic microbes, optimum plant growth is unattainable.

With the use of ESST -Seed Treatment and ESCF- Ceral Fertilizer.