# **INFORMATION**

Agri-boost Organic fertilizers are manufactured from Ceres certified sterilized cattle blood and bone as main ingredients.

The final product is further fortified with Sea Kelp, Fulvic acid, Humic acid, Nano micro elements and Soil micro organism to ensure a well balanced organic food source for plants and soil.

Agri-boost therefore supply the soil and plant with essential organic elements needed for life, normally depleted due to the overuse of only chemical fertilizer.

Blood is a high protein source and the main supply of Carbon and Nitrogen in Agri-boost in the form of peptides and L-amino acids.

Bone is the main source of Phosphorus and Calcium.

This combination insures a well balanced organic source of NPK with high carbon content.

## Agri-boost is available in:

4:1:3 (17) Liquid 4:1:3 (17) 25g Tablet

#### ADVATAGES OF AGRI-BOOST ORGANIC FERTILIZER

- Able to be used in full organic farming or in combination with chemical fertilizer
- Easy to apply in the liquid form via pivot, drip irrigation, pivot or tractor spraying. In tablet form the Agri-boost can be introduced about 20mm into the soil near the plant
- · Liquid Agri-boost can be used as a foliar or root feed
- Supply fast and slow release organic NPK for sustainable growth
- Enhances aggregate stability, improve water infiltration and soil aeration, reduce runoff and soil erosion
- Improve water holding capacity of soil
- Reduce surface crusting and improve seed germination
- Increase soil CEC (cation exchange capacity) and its ability to hold onto essential plant nutrients. Carbon has a negative charge and most of the nutrients like Mg, Ca, K and trace elements have a positive charge. Without enough carbon the essential element just loot out of the soil
- Chelates micro elements and trace elements to improve absorption
- Improves soil C:N ratio
- Provide food for soil micro organisms and a skeleton for them to live on, therefore improve soil organism biodiversity
- Stimulate root health and growth and increase plant stress resistance
- · Safe for animals, birds and bees

#### PHYTO GROWTH METABOLITES:

Auxin, Gibberellin, Cytokinin

## **INGREDIENTS:**

Animal Blood, Bone, Kelp, Fulvic acid, Humic acid, Nano micro elements, Soil micro organisms

# EFFECT OF VITAMIN B ON PLANTS.

As Bloodmeal is one of the Main Ingredients of Agriboost the Vitamin B Levels in Agriboost is just naturally part of it. (Below a table of standard vitamins in bloodmeal).

Vitamin A	0	1000 IU/kg
Vitamin E	1	1.1 mg/kg
Vitamin B1 thiamin	0.6	0.6 mg/kg
Vitamin B2 riboflavin	2.4	2.5 mg/kg
Vitamin B6 pyridoxine	4.5	4.8 mg/kg
Vitamin B12	34.13	36.54 mg/kg
Niacin	26	21.8 mg/kg
Pantothenic acid	2.3	2.4 mg/kg
Folic acid	0.2	0.2 mg/kg
Biotin	0.2	0.2 mg/kg
Vitamin C	0	0 mg/kg
Chlorine	681	135 mg/kg

The B-vitamins stimulate the metabolism of the root cells, and help activate the plant's natural defence mechanisms against environmental stress and foreign invaders. For example, scientists now know that thiamine (B1) activates the plant's systemic acquired resistance in a process called "priming". When treated with B1, the plant becomes highly "sensitized" so that it can respond more quickly against various pathogenic bacteria, fungi and even viruses.

The best time for a farmer to use a B-vitamin mix is before environmental stress or a pathogen attack occurs. Under normal conditions, plants produce all of the vitamins that they need, but under stress, plant cells at the growing tips tend to shut down to conserve energy. Therefore, under drought stress, heat stress, UV stress and salt stress, B-vitamin production may cease and growth rates become stalled. Adding a little B-vitamin blend directly to the nutrient solution or as a foliar spray before the stress occurs helps the plant recover from stress much faster, stimulating the plant to keep growing instead of remaining semi-dormant. So it might be best to think of B-vitamins as an insurance policy for your plants. A little extra B-vitamin blend in your feeding schedule can't hurt, but it could make a big difference if things start to go wrong!

Taking it one step further, B-vitamins amplify the beneficial effects when used in combination with other growth promoters. In addition to B-vitamins, plant-growth-promoting rhizobacteria produce natural growth hormones, amino acids, mineral chelators and other growth factors. When used in combination, they can have a dramatic effect on quality and yield. A good B-vitamin blend should always be on the advanced farmer's shelf!



## **EFFECT OF AMINO ACIDS ON PLANTS**

Agriculture production is a very intensive business and is related to better quality and better yield leading to better profitability. Every farmer's dreams to achieve this goal. However to achieve this goal with advancement of technology, use of fertilizer and pesticides in not adequate. Now is the time to look at Bioenergetics and Biochemical aspects of plants, to achieve the goal of Farmers. Every plant like any organism needs certain components for growth over and above soil, sun, rain and air. The basic component of living cells is proteins, with building block material, Amino Acids, Proteins are formed by sequence of Amino Acid.

Plants synthesize Amino Acids from the Primary elements, the Carbon and Oxygen obtained from air, Hydrogen from water in the soil, forming Carbon Hydrate by means of photosynthesis and combining it with the Nitrogen which the plants obtain from the soil, leading to synthesis of amino acids, by collateral metabolic pathways. Only L-Amino Acids are part of these Proteins and have metabolic activity.

The requirement of amino acids in essential qualities is well know as a means to increase yield and overall quality of crops. The application of amino acids for Foliar use is based on its requirement by plants in general and at critical stages of growth in particular. Plants absorb Amino Acids through Stomas and is proportional to environment temperature.

Amino Acids are fundamental ingredients in the process of Protein Synthesis. About 20 important Amino Acids are involved in the process of each function. Studies have proved that Amino Acids can directly or indirectly influence the physiological activities of the plant.

Amino Acids are also supplied to plant by incorporating them into the soil. It helps in improving the microflora of the soil thereby facilitating the assimilation of nutrients.

Foliar Nutrition in the form of Protein Hydrolysate (Know as Amino Acids Liquid) and foliar spray provide readymade building blocks for Protein Synthesis.

#### **EFFECT ON PLANTS:**

- 1. Protein Synthesis
- 2. Stress Resistance
- 3. Effect of Photosynthesis
- 4. Action on the Stomas
- 5. Chelating Effect
- 6. Amino Acids & Phytohormones
- 7. Pollination and Fruit formation
- 8. Equilibrium of soil flora
- 9. General



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