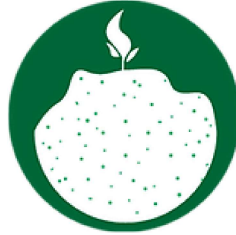


# BioMantra Soil



Apply **BioMantra Soil** once a year, in either the spring or fall, to restore the healthy microbial system that plants rely on.

Reduce Fertilizer Needs by up to 30%





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## BioMantra Commercial

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BioMantra Commercial is the best way to release the trapped NPK from your soil and reduce fertilizer needs by up to 30%.



[Learn More](#)

Commercial Crops

## Reduce Fertilizers

**BioMantra™ has key bacteria, enzymes, and humic acids to unlock the trapped nutrients in your soil and move them to ionic form for plant uptake.**

### **Apply Bacteria**

Microbes break down nutrients, making them easily accessible for plants (not locked in the soil.)

### **Bacteria Multiply**

This results in less need for manure or fertilizers and, therefore less cost.

### **Increase Nutrient Supply**

This helps plants survive disease and become resilient in the face of drought!

Reduce Input, Increase Profit

Healthy soil contains billions of living microbes in every teaspoon. These bacteria and fungi enhance the development of plant roots, cycle nutrients, fix nitrogen, and secrete “soil glue” to create a more porous soil that naturally retains water and traps carbon.

Learn More

FAQ

## Field Trials

In a 2020 trial on 90-day corn in Fond du Lac County, WI, whole plant analysis of 4-week-old plants showed a significant increase in the nutrient levels of plants grown in **BioMantra™** supplemented soil compared to a control field. At the end of the season, the **harvest yields were an extra 3-6 bu/acre on the corn.**

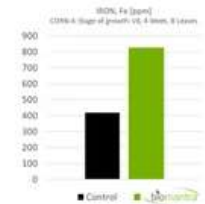
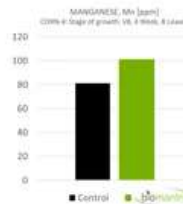
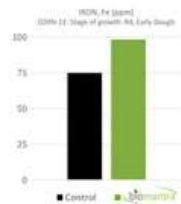
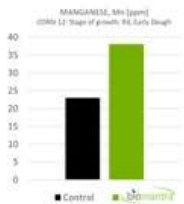
## Results

### Stalks & Leaves

had the following extra nutrients:

- 30% more Nitrogen
- 60% more Phosphorus
- 40% more Potassium
- 12% more Calcium
- 29% more Iron

These are extra nutrients that can be passed on in the feed.



The increased nutrient levels became apparent at the 4-week stage and remained consistent throughout the plant's life.



## Backed by Science

### **BioMantra soil composition:**

**Azotobacter chroococcum**

**Bacillus megaterium**

**Frateuria aurantia**

**Bacillus subtilis**

**Humic acids**

(Potassium Humate)

**Seaweed extract**

(sargassum weightii)

**Protein hydrolysates**

(non-GMO origin)

**Dextrose**

(microbial food)

### **Azotobacter chroococcum**

"A. chroococcum is the first aerobic free-living nitrogen fixer. These bacteria utilize atmospheric nitrogen gas for their cell protein synthesis. This cell

### **Frateuria aurantia**

"Biofertilisers such as potash solubilizing bacteria (KSB), Frateuria aurantia, have the potential to solubilize unavailable forms of K in the soil to forms that are readily absorbed by the plants. It enriches the other soil micro-flora and maintains a balanced population. It improves soil fertility, promotes plant growth, and enhances yield potential."

### **Humic acids (Potassium Humate)**

"improve soil aggregate structure, reduce soil compaction, and achieve good conditions; increase soil cation exchange capacity and fertilizer retention capacity to adsorb and exchange plant nutrients, improve fertilizer slowness, increase soil fertility and water retention capacity; provide soil beneficial microbial activities."

### **Seaweed extract (sargassum weightii)**

"weightii extract promoted the shoot length, root

the nitrogen availability of the crop plants."

"Additionally, **A. chroococcum** is plant growth promoting in stress conditions, especially saline soils."

### **Bacillus megaterium**

"Bacillus megaterium inoculation stimulated growth and development. In particular, inoculated plants developed a robust root system with proliferating lateral roots."

### **Bacillus subtilis**

"B. subtilis exhibit a synergistic effect on plant growth when they are applied in combination with AM fungi. The combined application results in greater promotion of plant growth, increased production of enzymes, antioxidants, P solubilization, biocontrol activity, root nodulation, and nitrogen fixation."

carotenoid, protein, amino acid, reducing sugar, total sugar,  $\alpha$ -amylase, and  $\beta$ -amylase activities in *Abelmoschus esculentus*."

### **Protein hydrolysates (non-GMO origin)**

"Plant-derived protein hydrolysates (PHs) have gained prominence as plant biostimulants because of their potential to increase the germination, productivity, and quality of a wide range of horticultural and agronomic crops. Application of PHs can also alleviate the negative effects of abiotic plant stress due to salinity, drought, and heavy metals."



**Call Our Experts!**

920-251-5916