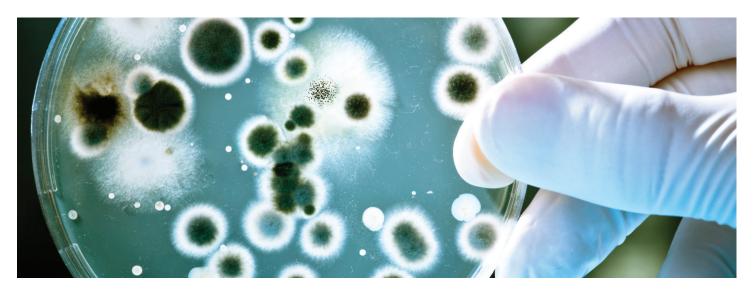


## **INTRODUCTION TO SUMAGROW®**



Planet Earth is facing many challenges when it comes to agriculture and the world's food supply. The world needs more food with greater nutrition content. This food needs to be grown at a reasonable cost, without over reliance on unsustainable inputs, and with an aim toward reducing damaging environmental impacts.

To some, a solution seems highly improbable.

Others see the need for additional new technologies which will fundamentally change our food supply, such as Genetically Modified (GM) crops, "petri-dish" meats, heavier reliance and greater adoption of fertilizer and pesticides regimes in lesser developed countries, or even urban farming.

However, Bio Soil Enhancers, Inc. (BSEI) believes that sometimes a step backwards is progress. Additionally, BSEI believes significant improvements – higher yield, dramatically reduced inputs and alleviation of environmental damage – can be made to existing farms and farming methods with the use of its award winning products containing SumaGrow<sup>®</sup>. BSEI products containing SumaGrow<sup>®</sup> can increase crop yields, reduce or eliminate fertilizer, and allow crops to grow with reduced water and nutritional inputs. Additional benefits include higher nutrient levels in the crops, greater profits to farmers and cleaner water and healthier soil.

Products containing SumaGrow<sup>®</sup> have been successfully used throughout the United States and in over 40 countries around the world. Perhaps most importantly, almost all end users who have used the product remain loyal customers.

Microbes contained in SumaGrow® are both environmentally responsible and user friendly, promoting plant and soil health.

BSEI was founded on the principle and commitment that we should have options that are environmentally sound and stable, yet still able to satisfy and even exceed market expectations. Our answer is the technology of SumaGrow<sup>®</sup>.

## SUMAGROW MICROBIAL FORMULATION

SumaGrow is a multifunctional and complementary polymicrobial formulation of naturally occurring soil microbes in a unique and unprecedented combination and concentration.

## **ADVANTAGES AND BENEFITS INCLUDE**

- ♦ Increase food production to feed a booming world population
- Decrease food production costs by increasing revenues (yield) and decreasing input costs
- Increase nutrition levels by growing healthier crops
- ♦ Increase shelf life of crops
- 💧 Restore and maintain soil health and fertility
- ♦ Reduce nitrate runoff and groundwater pollution
- Climate change alleviation via a reduction in petrochemical based fertilizers; higher yield of existing land reduces the need for deforestation of land for additional crop or grazing land; carbon sequestration in the soil

Microbes contained in SumaGrow are both eco-friendly and user friendly, promoting plant and soil health. The multiple strains of beneficial microbes uphold atmospheric nitrogen fixation and availability, phosphate solubilization and mobilization, organic matter decomposition, plant nutrient cycling and uptake, and phyto-hormone production.

Benefits from this soil-microbe interaction include healthier soil that promotes healthier plants and maximum crop performance. The microbial consortium act synergistically and have saprophytic competency in soil. This includes supporting the plants' ability to better withstand extreme environmental conditions such as extreme temperatures and drought.

The microbes are suspended in liquid humates, stabilized at a pH around 7.0, allowing SumaGrow to be used in diverse soil types. Application of SumaGrow increases humus content of the soil and provides for an improved soil CEC.

SumaGrow Soil Microbial Formulation has been functionally characterized and identified and tested using a broad spectrum of crops including cereal grains, row crops, forage crops, vegetables, legumes, and switch grass by leading research universities, and independent third party lab trials.