



## Microbebio Feed the World

**MicrobeBio® offers new solutions to modern agriculture.**

**At MicrobeBio®, we are harnessing the power of nature with our granular and liquid microbial soil amendments.**

MicrobeBio® is a microbial technology company dedicated to developing microbial solutions for the agricultural industry. We specialize in identifying and selecting the optimal collection of microbes to produce specialty microbial products that benefit the environment and create sustainable farming practices.

As the population of the earth continues to grow at an astounding rate, farmers are extremely busy looking for new and better ways to feed everyone. When you consider that, by the year 2050, there will be *9 billion* people living on the planet, and that agricultural yields will have to *increase by 70 to 100%* in order to feed them all, you instantly realize just how big a task it is that these farmers have before them. The scientific minds at Microbebio® have turned to the smallest creatures on earth for help; *microbes*.

In the past most scientists focused on plants themselves when looking for ways to increase yields. The team at MicrobeBio® has turned their attention to the environment around the plant, namely the soil.

The reason is microbial communities in the soil are what truly make a difference for plant health. When beneficial microbes are abundant and doing their job, root systems are stronger allowing plants to grow bigger, which in turn results in healthier, larger crops, naturally. More importantly, when the soil is microbially diverse and healthy, the need for chemicals to fertilize crops and control pests is reduced dramatically.



With a better understanding of the relationship between plants and microbes and how they interact, MicrobeBio® has proven to successfully increase crop yields, at the same time, reducing the use of chemical fertilizers, as well.

MicrobeBio® products work so well for one reason; *microbes*. Microbes are literally *everywhere* around us by the *trillions*, and are incredibly able-bodied farmers in their own right. Everyone concerned with agriculture, from farmers to landscapers, vintners to home growers, will benefit from MicrobeBio® soil-enhancing products. The microbes in our products produce more food while enriching the soil, providing sustainable farming and, most importantly, is at the forefront of helping the world meet its demand for food in the near future and beyond.

The fact is, there are many different kinds of microbes and they do many different things in the soil to help plants.

One thing is certain; plants grown in soil that have a diverse and thriving microbe community are healthier, more nutritious, and taste better than plants grown in soil that's not as diverse.

Microbes perform a wide variety of tasks in the soil, all of which help plants in one way or another. For example, some enable plants to better tolerate extreme fluctuations in temperature, while others help to control the spread of bacteria and viruses. Some microbes help improve resistance to drought and pests, while others increase a plant's ability to absorb necessary nutrients. Some microbes even break-down other elements in the soil, allowing their vitamins and minerals to be more easily absorbed by crops.

The simple fact is this; microbes have been helping plants to thrive since the very dawn of time itself here on earth. Indeed, when a seed begins to germinate in the soil, the call goes out immediately to the microbial 'community', and the dance of life begins. Scientists have even discovered that some microbes help other microbes to do their job, ultimately leading to healthier, more nutritious plants.

### **The Green Revolution is now!**

We've collected beneficial microbes from all over the planet, including the highest, coldest mountains and the deepest, hottest jungles, and packed 35 of them into our formulas. Because of our holistic approach, our products are on the cutting-edge of synergistic farming, where less input of non-natural products produces more in terms of growth and yield.

The most sought after microbes are those that can 'fix' nitrogen in the presence of oxygen, something that a mid-century process can achieve but, unfortunately, with wildly inefficient results. In fact, 2% of the earth's *total annual energy supply* is used every year in order to convert nitrogen for plant use, which is the true definition of the term 'grossly inefficient'.

If the right microbes could be found, and used, to fix nitrogen naturally, the decrease in energy use could be astounding.

It's a daunting task but, when you consider the population of the earth and the growing need for healthy, nutritious plants, it's one worth making.

At the MicrobeBio<sup>®</sup> Laboratory, we are doing just that. Led by top industry researchers, we aim to catalog the wide range of microbes and microbial life on the planet, as well as determine all of the complex relationships between microbes and plants.

When you consider that there are 30,000 species of microbes in the area surrounding the roots of plants (the rhizosphere) you begin to see what a challenging task our team of researchers have before them.

As the human population continues to increase the need for food solutions increases with it, and the importance of harnessing microbes becomes increasingly apparent.

Natural, organic and masters of helping plants to thrive, microbes are the best bet for a world that desperately needs agricultural solutions.

They may be some of the smallest creatures on earth, but microbes hold the biggest key to the survival of mankind. There's simply no doubt about it; microbes feed the world.



**The 6 functions of MicrobeBio<sup>®</sup> microbial soil amendments are:**

1. Biological Nitrogen Fixation
2. Phosphate Solubilization
3. Mobilization and Mineralization of Available Plant Nutrients
4. Phytohormone Production
5. Saprophytic Competence
6. Soil pH

MicrobeBio<sup>®</sup> is a biological soil conditioner that is used to reduce the effects of soil salinity, which is how much salt content is in the soil. It achieves this through the use of bacteria.

Microbes perform a wide variety of tasks in the soil, all of microorganisms begin to multiply exponentially which breaks down organic matter and transforms it into organic acids and amino acids. Then, these organic acids and amino acids start combining with other various matters include salt. This is known as chelating. Chelation is when a coating is formed around matter such as salt and metals. This coating allows plants to absorb more nutrients from it while taking in less salt.

As the bacteria continues to multiply and chelate, water starts to penetrate deeper which causes salt to move downward. This chain reaction allows water to reach deeper in the soil while also removing salt from top soil and moving it deeper into the ground giving your plants access to more nutrients.

How Effective is MicrobeBio® in increasing Water penetrates your soil?

MicrobeBio® will drastically increase how deep water penetrates your soil.

A recent sample from a field that was treated with MicrobeBio® for 10 days showed that water was penetrating almost 12 inches into the soil.

**Other MicrobeBio benefits include:**

- Significantly increase crop yields – up to 20% and often more
- Reduce fertilizer usage – by 50-100%
- Reduce pesticide usage
- Reduce water usage – minimum 20% savings
- Easy to apply
- Increases Cat-ion Exchange Capacity
- Reduces pest infestations of insects, harmful microbes and nematodes
- Reduce adverse environmental impact
- Improves crop health
- Increases photosynthesis function
- Increases healthy decomposition of organic matter
- Deeper, better developed root systems
- Increases food production to feed the ever-growing population
- Increase organic carbon to the soil.
- Reduce salt and heavy metals in the soil

We believe in helping farmers grow soil by harnessing the power of nature to drastically increase crop yields and produce sustainable food source.

Our products are organic, non-GMO, and non-toxic which makes them safe for use around humans, pets, and livestock.

**Join us in creating a lifestyle of health and sustainability, a billion microbes at a time.**