

Microbial Treatment in Agriculture

The challenge

Modern agriculture faces increasing pressure to maintain soil health and yields while reducing dependency on synthetic fertilizers. Many fields suffer from:

- Low microbial activity
- Nutrient lock-up (especially phosphorus)
- Poor root development and soil structure

High input costs and environmental impact



How the technology works

Addition of bacterial culture A blend of beneficial, non-GMO bacteria is applied to the soil or irrigation system. The mix is tailored to soil type, crop and timing.

Scolonization and biofilm formation

The bacteria colonize the root zone (rhizosphere) and leaf surface (phyllosphere), forming stable biofilms that activate biological processes.

Breakdown and mobilization

Bacteria mineralize organic material and mobilize nutrients like phosphorus, nitrogen and potassium, making them available for plant uptake.

 Suppression of unwanted microorganisms
The microbiome improves root health, reduces anaerobic zones and limits harmful organisms that cause disease or stress.



Documented results

- Up to 25% increase in yield (citrus, legumes, grass trials)
- Improved rooting and nutrient efficiency
- Reduced fertilizer demand (esp. nitrogen)
- Healthier plants with better stress resistance



Key benefits

- Natural, chemical-free and compatible with organic farming
- Activates biological cycles in soil and root zone
- Less nutrient leaching and better fertilizer efficiency
- Improved plant growth, rooting and uniformity



Application and flexibility

Applied as a liquid through irrigation, foliar spraying or directly on soil. Can also be mixed with slurry or organic fertilizers.

Recommended for:

- Row crops, vegetables and orchards
- Greenhouses and hydroponics
- Both conventional and organic systems

MBS treatment can be scaled and adapted to fit your specific setup, regardless of size or application. Contact us for advice, pilot projects, or full implementation.