



MetaGrow™ 5X+

Restore Your Soil

CONCENTRATED MICROBE INOCULANT

MetaGrow 5X+ is a Shelf-Stable, Liquid Inoculant

Highest microbial diversity (20,000 + species) and lowest cost per microbe available

Contains 5 billion microbes per drop (1×10^{11} cfu/ml)

- Includes 6 Nitrogen fixing species and 8 Phosphorous solubilizing species, as well as Iron chelators, Zinc chelators and many other microbes that deliver nutrients

Derived from earthworm castings and globally sourced natural microbe cultures

Produced in a highly aerobic process (excludes anaerobes) and delivered in stasis (shelf-stable for 2 years). Tested for pathogens prior to shipment.

Suitable for seed treatment and in-row application by high-speed planters, at 50 oz. per acre

Increases Beneficial Microbe Populations

Restores soil microbe population size and diversity for beneficial plant functions

- Increases seed germination rate.
- Promotes root and shoot growth and plant vigor
- Increases organic matter decomposition
- Improves soil structure and porosity

Improves Fertilizer Efficiency

Active populations of soil microbes unlock soil nutrient potential into plant available nutrition.

Microbes actively deliver nutrients requested by the plant which lowers fertilizer inputs and improves plant nutrient status.

Increases cation exchange capacity (CEC) and chelates cations (K, Ca, Mg, Mn, Fe, Cu, Zn)

Liquid product for use in any liquid application equipment

Application Apply with MetaGrow MFOOD or CFOOD, and other microbial food, e.g fish hydrolysate and molasses, for rapid colonization and metabolism. Typical rate is 50 fl. oz. per acre. Frequency varies by crop, objectives and fertility programs.

Plant Nutrition:

**Plant Directed and
Microbe Delivered**





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MICROBIAL NITROGEN FUNCTIONS

Nitrogen Fixing and Cycling

MetaGrow 5X+ has 6 species of free living nitrogen fixers (which pull nitrogen from the air) and over a dozen species of nitrogen cyclers (which change the form of nitrogen). Many of these nitrogen cyclers mineralize N into plant-available L-amino acid form, which is the most efficient for plants to use.

Total population of these species is over 1×10^9 cfu/ml.

Grown in a diverse microbial community (> 20,000 species) which supports their activity, so they hit the ground primed to perform their nitrogen functions.

Complementary species fix carbon and cycle other nutrients (like phosphorous) and improve soil structure — which assures better aeration and gas exchange (N availability).

Nitrogen Efficiency and Retention

N is conserved by microbial use: Microbes use nitrogen to build protein in their own bodies, and hold nitrogen to exchange with the plant for food.

Microbial N is released to the plant when the microbe dies.

Microbes and plant roots together fix carbon in the soil, which associates with nitrogen in non-leachable form

Includes a Proprietary Urease Inhibitor

Prevents N from moving into the ammonium form and volatilizing off

**Broad Spectrum Nitrogen Fixation
better than a silver bullet**

