



created from prehistoric plant material

**What is Ful-Humix?** Ful-Humix is a premium humic/fulvic powder made by BioAg. Average contents contained in Ful-Humix in dry form is 75%+ total humic acid(s,) including both humic and fulvic fractions. However listed guarantee is by the CDFA method which discludes the fulvic fraction.

**Why add Ful-Humix to my fertilizer program?** Ful-Humix concentrated humic/fulvic powder is a powerful soil conditioner that will help maximize your outdoor gardening potential. It increases nutrient efficiency and creates a healthier growing environment, resulting in stronger plants. In geek speak, it buffers the soil with organic colloid biopolymers, preventing tie-up caused primarily by chemical salts reacting in an inorganic form. Included in this action is a SIGNIFICANT INCREASE IN SOLUBILITY OF BOUND PHOSPHORUS AND CHELATION OF MICRONUTRIENTS. Additionally, Nitrogen leaching is reduced, keeping it in the root zone longer and out of our water tables. Plants can grow within a larger pH range when humic acid(s) are present because of its ability to hinder precipitation of elements across the range. Not only are elements made more available, but coupled with increased respiration and chlorophyll production, utilization and uptake of nutrients is catalyzed resulting in accelerated growth and health of the plant.

**How does Ful-Humix effect soil biology?** Ful-Humix adds carbon. Carbon is not only essential for balancing the carbon to nitrogen ratio, but is also invaluable for maintaining an optimum microbial community. It has been demonstrated that humic and fulvic acids in Ful-Humix STIMULATE BENEFICIAL SOIL BACTERIA AND FUNGAL BIOMASS AND ACTIVITY.

**Is Ful-Humix water soluble and readily available?** Ful-Humix is ~85% water soluble. Unlike raw humate or "suspendable", which can take many years to break down, it's readily available, and concentrated. Because of a unique manufacturing method that improves product efficacy, approximately 15% is insoluble humin and mineral. Settle this portion out if using a sprayer and add it to your garden.

**Does Ful-Humix expire or go bad?** Because it is in dry form Ful-Humix has no expiration date unlike most liquid humic products.

**Favorite Uses:** Ful-Humix can be used in a wide variety of systems. It's very beneficial for outdoor or greenhouse soils and compost tea. When using humic substances it's best to use at intervals throughout the plant growth cycle.

**Stimulates microbial activity**  
**Improves soil structure**  
**Promotes growth and yields**  
**Increases nutrient uptake**  
**Reduces nutrient leaching**  
**Induces drought tolerance**  
**Builds plant immunity**  
**Stimulates Root Growth**  
**Acts as soil buffer**

**SHOP AND COMPARE:**

100 g Ful-Humix =	1-2 Quart competitors Liquid
300 g Ful-Humix =	1-2 Gallon competitors liquid
1 kg Ful-Humix =	2.5-5 Gallon competitors liquid
5 lb Ful-Humix =	5-10 Gallons competitors liquid
1 lb Ful-Humix =	~ 33lbs of raw humic acid product



## Effective, Easy to Apply, Ready to Work

At BioAg we deliver increased product performance at a cost effective price. Ful-Humix is a dry, mostly soluble humic product derived from agricultural grade, raw (non-soluble) humates. Our mother source is estimated to be 45 million years old. Unwinding and solubilizing this ancient material using typical extraction methods, such as high heat, denatures and reduces efficacy. Instead, we developed a dry to dry conversion method for creating Ful-Humix without the aid of heat, resulting in a product that has superior performance in the field. And, unlike raw humic substances, Ful-Humix is concentrated, easy to blend, cost effective to ship and readily available for today's crops. Only pounds are needed instead of tons! In it's dry form, Ful-Humix is stable indefinitely (liquid humic acids degrade).

## Location, Location, Location

Humic substances vary greatly in source, concentration and quality. The best sources for agriculture are formed in the presence of fresh water where large-leafed plants (cycads, euphorbia etc) grew during the cretaceous period. Most deposits around the world, including Leonardite, were formed in salt water where grasses (sedge and reeds etc) grew during the older carboniferous period. This older material is more closely related to coal and oxidized slack lignite and very low in the biostimulating fraction. There are few working deposits that have both desirable attributes: fresh water formation and protection from weathering and oxidation. BioAg uses premium humic substances, formed in fresh water, that have been protected from cracking and uplift. They are high in all the important fractions. Even in a single formation, deposits a few miles apart can have significantly different qualities. Because of the large degree of differences in source materials it's important to work with specialists who understand what to look and test for.

## Knowledge & Experience at your fingertips

Owner Dr. Robert Faust, agronomist and bioag specialist, has been studying humates for nearly 40 years and has applied them from Egypt to Oregon. We've tested much of the raw humic substances from across the globe and scoured thousands of research papers. Amazingly, there are still new aspects of humic substances discovered regularly. We continue to keep tabs on the latest research as well as performing our own research here at BioAg.



**not all HUMIC products are equal**



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