



Organic Grow: Do I Really Want to Use This?

by Rick Weller, Founder of Organically Done Plant Products

Humic acids (which are actually a family of different acids) can be thought of as million year-old compost (fully decomposed organic material) and are a foundation of fertile soil. These substances have a very complex molecular structure and are not fully understood by scientists nor is their interaction within the plant-soil environment. That said, almost everyone agrees that they are a critical element in the plant-growth process.

Humic acids are found in all soils to some degree and can be depleted through the natural microbial and plant-growth cycles if not replenished. Replenish is accomplished through the regular addition of organic matter and or the regular application of humic acid concentrates.

One of the most important characteristics of humic acids is their natural chelating capability. Without a chelator, many of the nutrients and trace minerals required for plant growth can be 'locked out' to the plant. Chelators bind to a mineral (like Mg, Ca, etc.) and prevent the mineral from forming an insoluble precipitate (not available to plant) and they also increase nutrient mobility in soil. The result of these processes is an improvement in plant uptake of nutrients.

Research has shown that humic acids (they are not a source of nutrients):

- Improve cation-exchange capacity (CEC) or the ability for soil to hold nutrients
- Act as a natural chelator
- Improve microbial activity
- Improve soil structure and pH buffering
- Suppress the growth of certain plant pathogens
- Improve soil retention of fertilizers and pesticides
- Detoxify certain heavy metals

Fulvic acid is a component of humic acid and is a very small, light molecule. It is less complex than the other humic acids and does not provide the breadth of value to the soil and plant environment. However, it is the primary chelator in humic acids and is very effective in improving the nutrient uptake of plants.

Sources

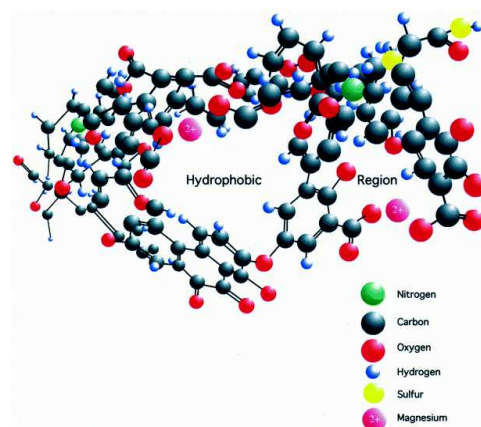
While humic acids can be found in most soils, a concentrated source is required to provide market products. Low-grade coal deposits (leonardite) provide a high concentration of humic acids and are the primary source of humic products.

There has not been an industry 'standard' analytical method to test humic and fulvic content making product comparisons difficult. This is beginning to change and the International Humic Substances Society (IHSS) is now proposing testing standards. Typically, granular humic will be between 60-80% humic, liquid humic between 3-12% humic and liquid fulvic between 0.01-0.02% fulvic.

Application

Humic acids are available in both granular and liquid form. The granular form is used much like other soil amendments and should be thoroughly mixed into the soil when applied – as an organic product, maximum soil contact allows maximum microbial access. Liquid humic (brownish-black color) is most effective as a soil drench and can normally be mixed with other liquid products (fertilizers or pesticides) if desired prior to application. It can be applied using typical methods and possibly through your regular irrigation lines if the product you are using is clear of sediment.

Fulvic acid is normally a liquid product and should not contain much sediment (a clean yellow color). It is most effective when used as a foliar spray (again, you can normally mix with other products) but can be used as a soil drench or in



hydroponics systems.



While neither humic nor fulvic acids will damage your soil or plants environments if over-applied (within reason), studies show that you gain little (if anything) by doing so, i.e., more is not better. Since growing environments vary significantly, yours may benefit differently than others. Start with manufacturer-recommended application rates and vary up or down until you are satisfied with your results.

Humic and fulvic acids are effective for both organic and chemical growers. Remember that you will see an improvement in plant uptake. You should be cautious when first starting out with these products and may find, especially if using chemical fertilizers, that your plants are over-feeding.

Testimonial

An acquaintance of mine farms about 2,500 acres, growing an assortment of food crops. He uses chemicals (fertilizers and pesticides) which account for a significant portion of the farm's expenses. He also uses dry humic, liquid humic (soil drench) and liquid fulvic (foliar spray). He has been able to cut his chemical inputs by almost 25% since adopting his humic protocol which he attributes to an improvement in plant uptake and a reduction in chemical run-off.

Organically Done believes in the power of humic/fulvic acids and we add them to all of our fertilizer products as well as selling them individually. Our fulvic acid is extracted with out the use of chemicals. Our products are analyzed using the IHSS proposed testing protocol.



Organically Done (www.organicallydone.com) is a Michigan manufacturer of organic fertilizers and soil amendments. Our mission is to produce high-quality truly organic products that provide what your plants need while being free of potential contaminating sources that are found in many of today's "organic" alternative – NOT ALL ORGANICS ARE CREATED EQUAL.