Humates

Fulvic Acid

As a liquid

Is acidic

Is Compatible with acidic and alkaline spray mixes

Is Compatible with all fertilisers including sulfate based trace elements

Used as a foliar fertiliser improver

Organically certified in Australia as Huma-Tech Fulvic 1400™

Bacterial stimulant, use in brewing at the rate of 0.5 – 1%

Compatible with Hydroponic Nutrient Parts A, B, and C

Always Jar test if uncertain

As a dry powder

Should be mixed and screened prior to its addition to the spray tank

Can be included into compost tea brewing at the rate of 0.1 – 0.5 %

Ulmic Acid

Humins

Insoluble fraction of Humates

Humic Acid

As a dry granule

As an addition with ANY dry granule fertiliser (MAP, DAP, GRAN-AM, UREA, GUANO) at a rate of 5% of the total fertiliser weight (max of 5kg/ha) prior to application. LONG TERM STORAGE OF THE MIXTURE IS NOT RECOMMENDED

Can be added with Stubble tech to improve the stubble digestion at a rate of 2 – 5 kg/ha

As a liquid

Is alkaline

IS NOT COMPATIBLE WITH ACIDIC FERTILISERS

Is compatible with Urea, Soluble Octaborates (Solubor, Inkabor etc.), Potassium Silicate and Potassium Nitrate solutions

Suited to fertigation and buffering excess sodium

Organically certified in Australia as Huma-Tech Liquid Humus™

Fungal stimulant, use in brewing at the rate of 0.5 – 1%

Compatible with the NTS MMS range

Always Jar test if uncertain

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Terminology of Humus materials

Humus is the product of the decay of organic matter. It contains both humic and nonhumic material.

Humic acids (plural) is the collective name for the acid radicals found in humic matter. They may be separated from humic matter by alkaline extraction.

Humic acid (singular) is the acid radical found in humic matter which is soluble in alkali but insoluble in acid, methyl ethyl ketone, and methyl alcohol.

Humates are the salts of humic acids, collectively, or the salts of humic acid specifically. (The usage must be determined from the context.)

Fulvic acid is the acid radical found in humic matter which is soluble in alkali, acid, methyl ethyl ketone, and methyl alcohol.

Fulvates are the salts of fulvic acid.

Humin is the alkali-insoluble fraction of leonardite. (The usage of this term does not correspond exactly with the usage by other workers.) .There is also another fraction typically less often known and it is called **Ulmic acid** and it fits in between humic acid (singular) and fulvic acid. Our fractions are actually based upon molecular weights rather than solubilities in acid or alkaline solutions. Our humic acid has molecular weight of 1500-3500 with the fulvic acid fraction having the lowest molecular weight of around 300 and then ulmic acid fits in between with weights in the 800 – 1400 range. It is only humates with molecular weights below 5000 that have benefits in agriculture and the smaller the better.

Leonardite is a soft brown coal-like deposit usually found in conjunction with deposits of lignite.

Lignite is a type of soft coal.

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