THE BENEFITS OF FULVIC ACID

MOBILIZER ™

The benefits of substances to plant growth have been extensively studied. The use of humic substances in agriculture have been observed to improve the cation exchange capacity of a soil, increase the aeration of a soil and hence the infiltration of water, decrease bulk density, buffer the soil against pH fluctuation and work as a chelating agent. These benefits all work towards aiding the plant in growth and production.

DEFINITIONS

Humic Substances: Naturally occurring, biogenic, ubiquitous, heterogeneous mixture of organic materials arising from the decay of plant and animal residues in the environment.

Humic Acid: Fraction of humic substances not soluble in water at a pH less than 2.

Fulvic Acid: That part of humic substances that is soluble in water under all pH levels.

Humin: That part of humic substance that is not soluble in water under any pH level.

FULVIC ACID RESEARCH

Some investigations have shown that fulvic acid is transported to the shoots of the plant to a greater extent than Humic Acids (M^C Carly et al., 1985).

FOLIAR APPLICATION TRAIL OF FULVIC ACID ON TOMATOES

Research done with tomato plants revealed that plants treated with fulvic acid had significant beneficial effects on roots and stem weight, surpassing the benefits of those plants treated with Humic Acid (Sladky, 1959). A foliar application of Fulvic Acid yielded a greater stem length, greater fresh weight, dry stem weight and root weight (Table 1).

Table 1. Comparative tomato plant stem, root length and weight measurements due to Humic and Fulvic Acid Treatments including control.

Treatment	Stem Length	Root Length	Stem Fresh Weight	Root Fresh Weight	Stem Dry Weight	Root Dry Weight
Control	20.9cm	13.1cm	6.4g	1.6g	0.52g	0.05g
FA 50mg/ L	56.8cm	14.0cm	17.5g	5.4g	1.6g	0.24g
HA 50mg/l	51.5cm	20.2cm	14.9cm	3.2g	1.07g	0.23g

REFERENCES

Humic substances in soil and crop sciences: selected readings. Proceedings of a symposium cosponsored by the International Humic Substances Society. Chicago Illinois. December 2, 1985. /editors, P. M^{c}Carly et al.

Sladky, Z. 1959. The effect of extracted humus substances on growth of tomato plants. Biol. Plant. 1:142-150