BioGrow

BioGrow PERU

BioGrow BRASIL

BioGrow ARGENTINA

BioGrow AUSTRALIA

BioGrow U.S.A.

BioGrow BIOCHEMICAL

BioGrow LATAM

BioGrow CORPORATION

USE RECOMENDATIONS

Crop	Dose lt / ha	Application
Table grapes, Wine Grapes	10	Apply in pre bloom, during fruit growth and in post harvest
Mango, Avocado	10	Apply during root growths
Apple tree, Pear tree, Cherry, Plum, Peaches, Nectarines	10	Apply during vegetative growth and post harvest
Nut trees	10	Apply during root growth, 3 to 4 applications,in mix with the fertilizers
Strawberry, Blueberry	5	Apply every 30 days throughout the crop
Coffee	10	Apply during vegetative growth
Tomato, Capsicum	5 - 10	Apply from transplant and throughout the vegetative growth, every 15 to 20 days
Melon, Watermelon, Squash		
Onion, Garlic	5	Apply after transplant and repeat every 15 days
Flowers	5	Apply during vegetative growth every 15 to 20 days
Turf	5	Application interval 15 days

SOIL AND ROOT PROBLEMS?

Bioactivator Root Promoter

biogrowcompany.com

BioGrow

SOIL ENRICHMENT

BIOGROWCOMPANY.COM

BIOGROW MOL

SOIL ENRICHMENT

BIOGROW MOL is a liquid fertilizer, 100 % soluble, which is applied through the irrigation system in fruit trees and crops, to improve the physical and chemical characteristics of soils with low organic matter content.

The manufacturing process of **BIOGROW MOL**, based on plant extracts, allows to obtain a product with a high organic matter content, higher than 42 % w/v, composed of fulvic acids, humic acids, L-amino acids, peptides and sugars.

BIOGROW MOL contains 37.0% w/v of total humic extract, which corresponds to 27.0% w/v of fulvic acid and 10.0% w/v of humic acid. With the added benefit of amino acids and sugars

GUARANTEED ANALYSIS

Element	% w/w	% w/v
Total Nitrogen (N)	5.20	6.81
Potassium (K_2O)	2.10	2.75
Calcium (Ca)	0.30	0.39
Inorganic Sulfur (S)	2.40	3.14
Organic Carbon (C)	18.00	23.58
Fulvic Acid	20,60	27.0
Humic Acid	7.50	10.0

pH: 5.2 / Density: 1.31

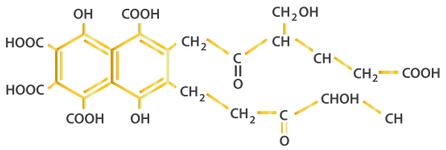
COMPARISON OF THE ACTION OF FULVIC ACID AND HUMIC ACID IN THE SOIL

FULVIC ACID	PLANT EFFECTS	HUMIC ACID
Molecular Weight: Small	Cellular Transport	Molecular Weight: Big
Functionals chemical groups: Many	Metals Chelation	Functionals chemical groups: Few
Mobility & Functionality: High	Metabolism	Mobility & Functionality: Low
Physiological Action: High	ROS protection and Growth	Physiological Action: Low
Microbial Activation: High	Mobilization of soil nutrients	Microbial Activation: Low
Soil Structure: Low	Water retention and Oxygenation	Soil Structure: High

EFFECTS OF FULVIC ACID ON PLANTS AND SOIL

- By having low molecular weight, fulvic acid can be easily absorbed by the root system of the plants.
- Fulvic acid promotes root growth through the inhibition of indole acetic acid (IAA) degradation.
- It is able to chelate metals such as iron and potassium and thus increase its bioavailability for plants.
- Reduces the effects of water stress.
- It has a persistent effect over time.

THE FULVIC ACID

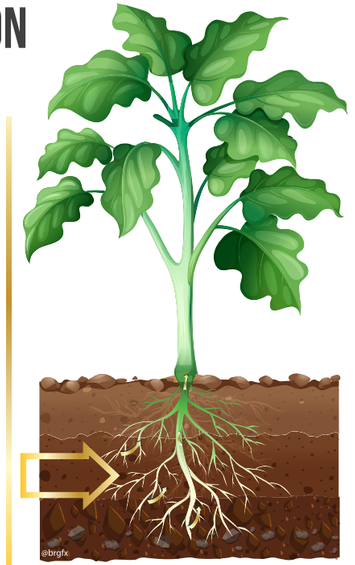


Molecular Weight: $C_{14}H_{12}O_8$
Molecular Formule: 308.24 g / mol

BENEFITS OF THE BIOGROW MOL APPLICATION

RADICULAR ACTION MECHANISMS

- Provides nutrients
- Metal chelation
- Increase the bioavailability of soil nutrients
- Increases the cation exchange capacity of the soil
- Increase water retention in the soil
- Promotes the growth of roots and stems
- Promotes the increase of soil microbiota
- Improves root moisturization
- Increase the content of Organic Matter in the soil.



PLANT SYSTEM RESPONSE

ROS Generation
Protection against oxidative stress generated by biotic and abiotic stimulation.

Membrane level stability
Protection against extreme temperatures

Osmoprotection
Hydric stress resistance

Ionic homeostasis
Temperature regulation and the balance between acidity and alkalinity (pH).