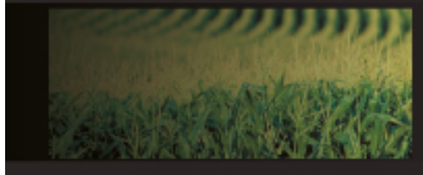
Bioamino-L®

Raspberry
Strawberry
Kiwifruit
Vineyard
Nut
Crops
Blueberry
Olive tree
Cherry
Pear
Plum
Almond
Peach

AminoChem S.A.
AminoCompany Fertilizers And Chemicals



www.aminochem.com

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Bioamino-L®

Organic Amendment/Biological Soil Activator

Derived from salmon protein

Fertirrigation
Chilean Product



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Bioamino-L®

Bioamino-L® is an Organic Liquid Amendment aimed at activating soils, obtained from proteins of marine origin (Salmon), with a high content of organic matter of a non-humic origin, fulvic acid, low molecular weight polypeptides of a very high biological quality, macro-nutrients (Nitrogen, Phosphorous, Potassium, Calcium, Magnesium) and micro-nutrients (Zinc, Manganese, Iron) easily assimilated by the vegetables.

Bioamino-L® is carefully filtered into 3 stages: 500, 200 and 100 microns. Bioamino-L® is intended for hydroponic uses.

GUARANTEED ANALYSIS	%w/w
Polypeptides	36%
Fulvic Acids	2.0%
Organic Matter	50%
Total Nitrogen (N)	5.0%
Ammonium Nitrogen	4.6%
Nitrate Nitrogen	0.4%
Available Phosphoric Acid (P_2O_5)	1.0%
Soluble Potash (K_2O)	0.5%
Calcium (Ca)	0.5%*
Magnesium (Mg)	0.5%
Iron (Fe)	0.08%
Zinc (Zn)	0.01%
Specific Gravity at 68ºF	1.15 Storage Stability at 68ºF
pH (1 gr/Lt at 20ºC)	3.8 – 4
Odor	Sea odor
Appearance and Color	Brown liquid

Derived from salmon protein
Stabilized with Formic Acid
Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.htm

GENERAL IRRIGATION USE GUIDE

CROPS	DOSE Lt/Ha	APPLICATION
Pomaceus (Apples – Pears - Quinces); Stone fruits (Plums – Peaches – Nectarines – Cherries); Dried Fruits (Walnuts – Almonds – Hazelnuts); Vines (table grapes – wine grapes)	100-200	Apply since sprouting begins and throughout the whole of the vegetative cycle of the crop Split up the dose with each weekly watering (10 Lt/Ha/Week)
Citrus fruits (Lemons – Oranges – Mandarins – Tangerines); Avocado, Olives and Pomegranates		With loosly textured soil use the higher dose
Smaller fruit (blueberries, raspberries, strawberries, cranberries)	100-150	
Leafy & Stalked Vegetables (Lettuce-Cabbage-Chard-Celery) Root Vegetables (Carrots-Beetroot-Radish) Flowering Vegetables (Cauliflower –Broccoli –Artichokes) Fruit Vegetables (Cucumber-Tomato-Peppers-Melon-Watermelon)	100-150	Apply as from 7 days after transplantation or after an emergency. Split up the dose with each weekly watering (8 Lt/Ha/Week) With loosly textured soil use the higher dose

* Application doses and frequencies are only suggestions and they do not necessarily represent any particular recommendation. The company will not be responsible for any misuse of the product or any adverse effects stemming there from. For the correct doses, you must inquire with your technical advisor.

Organic Matter

The organic matter is equal to the fraction of the total organic matter that is easily decomposed, also called "labile fraction". Its components include microbial biomass in the soil, polysaccharides, fulvic acids and other non humic substances. This fraction provides the majority of the energy in the micro-organisms and a large part of the mineralized nitrogen. What is more, it is responsible for the beneficial effects in the structure of the soil (aeration, water infiltration, resistance to erosion and the ease with which it can be worked). It acts as an indicator of the dynamics of the soil and its quality, because a good microbial activity is the reflection of the soil's optimum physical and chemical condition. This enables the development of metabolic processes of bacteria, fungi, algae and actinomycetes, as well as its action on the decomposition of organic substrates.

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CHARACTERISTICS OF Bioamino-L®

BIOAMINO-L® provides a substantial improvement of the physical and chemical properties of the soil.
BIOAMINO-L® stimulates the formation of a superficial organic layer in the soil due to its active organic matter.
BIOAMINO-L® enhances the organic life and micro-organisms of the soil.
BIOAMINO-L® increases aeration, cation exchange capacity (CIC) and the retention of humidity in the soil.
BIOAMINO-L® improves the growth of plants' radical system.
BIOAMINO-L® increases nitrogen mineralization rates in the soil; hence the nitrogen available in the soil.
BIOAMINO-L® improves plants' vitality, enabling them confront stressful situations.
BIOAMINO-L® replaces applications of composted or manure.

Evaluation of Bioamino-L on Chemicals and Biologicals Soil Properties

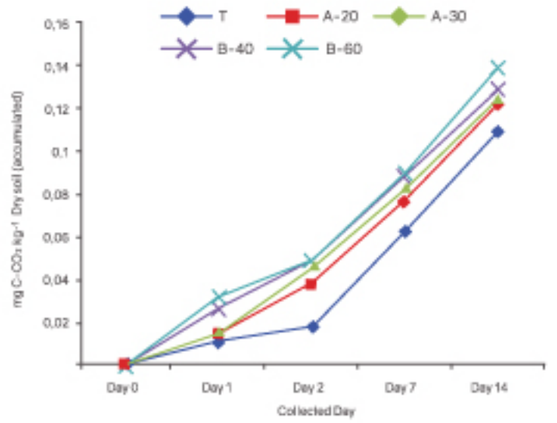
Iván Vidal P. Ing. Agrónomo,
M.Sc. Dr.Patricia Morales C. Ing. Agrónomo,
M.Sc Irrifer Ltda.

Objectives

- A in vitro experiment was conduced to determine mineralization rates of Nitrogen in the soil, active organic matter content, microorganism growing rates (the microbian breeding) and chemicals soil profiles.

Conclutions

- Bioamino-L increased the soluble potash concentration and interchangeable calcium in the soil.
- The nitrogen mineralization rates was increased in Bioamino-L treatment.
- Bioamino-L increased the organic matter and nitrogen content in the soil.
- Bioamino-L increased the microbial breeding in the treated soil.



Greenhouse Experiment: Effect of BioAmino-L on the Growth of Tomato and on Soil Properties Conducted by the Center for Rhizosphere Biology Colorado State University

Objectives

- A greenhouse experiment was conducted to determine the effect of BioAmino-L amendment on the growth of tomatoes and microbiological properties of the soil.

Conclutions

- Bioamino-L improved tomato growth in the greenhouse as evidenced by a significant increase in shoot biomass. The enhanced growth of the plant cannot be explained by the soil health indicators that we measured (mineralizable nitrogen, soil bulk density, fungi to bacteria ratio) or by the phytohormone profile.
- Hence, it is possible that Bioamino-L increased the tomato biomass by increasing the efficiency of the plant to uptake and utilize the existing soil nutrients and/or water. Furthermore, since Bioamino-L is high in free amino acids and peptides, these additional nitrogen sources may have also helped the plant.

Fig. 1. Effect of Bioamino-L on the shoot biomass (oven-dry basis) of tomato at 46 DAT (days after transplanting). Different letters denote statistical differences among treatments (ANOVA, Tukey's PostHoc test, n=7). Photo (a representative of what was visually observed) shows the differences in growth among treatments.