

# **Xtra-Edge**

**HIGH PERFORMANCE HYDROPONIC  
LIQUID PLANT FOOD**

**4-1-3 Growth**

**0-5-3 Blossom**

**3-0-1 Micro (5% Calcium)**

**0.5-2-10 Hard Water Micro**

**Concentrated Hydroponic  
Nutrient Solutions  
for**

**Hydroponics  
Aeroponics  
Soil / Fertigation**

**FOOD GRADE PURITY  
WITH  
CHELATED MICRO-NUTRIENTS  
pH STABILIZERS  
HUMIC / FULVIC ACIDS**

## Xtra Edge

### High Performance Liquid Plant Food

The best of both food grade compounds and natural organic growth enhancing stimulants. The 16 elements required by plants to complete their life cycle are all included. The reason we call it Xtra-Edge is that additional micro-trace elements are included, as well as humic acids, soluble silicon and Vitamin B1.

#### Why are there 4 separate formulas?

One reason is that at extreme concentrations the calcium will combine with sulfur or phosphorous to produce insoluble clumps of precipitate. Also by having high nitrogen in one formula and high phosphate in another the ratio of nitrogen to phosphate can be adjusted at will to optimize the plants nutrition and growth at each stage. The last reason is that some people have very hard water, and some people use Reverse Osmosis (R.O.) water. The **3-0-1 Micro** contains a full **5% calcium** for use with almost any water.

The **0.5-2-10 Micro** contains no calcium and is mostly used where the tap water is over 300 PPM (Parts Per Million) of dissolved solids, usually mostly calcium. The formula can be fine tuned by using various amounts of the 4 different formulas to achieve an optimum growth rate. The ratios of nitrogen to potassium and nitrogen to phosphate can be easily altered. The ratio of potassium to calcium can also be altered to compensate for how much calcium is in the tap water. Normally the ratio of potassium to calcium should be about 1.5 to 1 depending of the crop & stage of growth. The calcium should be about equal to nitrogen for vegetative plants.

#### 3-0-1 Micro (5% Calcium)

The original Micro was first introduced in 1988 and has been going strong ever since. It works with tap water or R.O. water. It contains 0.05% humic acids, 0.005% soluble silicon and vitamin B1. The nitrogen is all in the form of nitrates, which are readily absorbed and acts as a carrier for many micronutrients. Contains all known trace elements in the correct amounts, with EDTA chelates. The silicon helps plants cope better under warm conditions.

#### 0.5-2-10 Hard Water Micro (no Calcium)

Since we have many customers whose tap water is over 400 PPM we found that they would have an excess of calcium and a slight lack of potassium when in heavy fruiting or flowering when using the **3-0-1 Micro**.

This led to the **0.5-2-10 Hard Water Micro** formula. The potassium content is very high. The new micro also has a full **0.5% fulvic acid** content which helps micro nutrient absorption in hard water environments.

Contains all trace elements in the correct amounts. Fulvic acid reduces the interaction of phosphates with iron and calcium. It also increases the permeability of cell walls and causes a similar increase in cell division. This formula contains the highest amount of Fulvic acid of any hydroponic nutrient formula concentrate.

Experienced growers find that when used in the final ripening stage weight increases and the aromatic flavor as well, due to the low nitrate. This formula also contains the more expensive magnesium chelate instead of the much more common magnesium sulfate. These exotic chemicals produce a bright purple color, even with no dye added!

#### 4-1-3 Growth Formula

This is a high nitrogen / high potassium formula which is mixed with either Micro formula, or combined with Micro and Bloom according to the stage of plant growth. It contains 2.7% nitrate nitrogen and 1.3% ammoniacal nitrogen which accelerates vegetative growth in bright light with added carbon dioxide enrichment. The growth formula also contains 0.5% magnesium to help chlorophyll production. It is also indicated when using the Hard Water Micro / Blossom formulas to raise the nitrogen levels. This formula has food grade green dye to make identification easy. Use 10 drops per quart foliar spray for indoor house plants to maintain vigorous glossy leaves.

#### 0-5-3 Blossom Formula

This is a zero nitrogen / high phosphate formula which is used to boost the phosphorous levels in the solution. It contains 2% magnesium and 1% sulfur to accommodate heavy flowering and fruiting plants. It is used with either Micro formula and lowers the pH, since it contains both sulfuric and phosphoric acids in addition to the other ingredients. Flowering plants in heavy bloom respond well to this formula. Herbs like basil and chives maximize oil production due to the sulfur content.

*General Purpose Mixture for hard tap water use one teaspoon / gallon each **Grow, Bloom** and **Hard Water Micro***

*General Purpose Mixture for R.O. / rainwater use one teaspoon / gallon each **Grow, Bloom, Hard Water Micro** and **3-0-1 Micro***

**Xtra -Edge Hardwater Micro**  
dilution ratios - teaspoons per gallon

**Xtra -Edge 3-0-1 Micro**  
dilution ratios - teaspoons per gallon

<b>Growth Stage</b>	<i>4-1-3 Growth</i>	<i>0.5-2-10 Micro</i>	<i>0-5-3 Blossom</i>	<i>pH</i>	<i>PPM (parts per million)</i>	<i>E. C. w electrical conductivity</i>	<i>4-1-3 Growth</i>	<i>3-0-1 Micro</i>	<i>0-5-3 Blossom</i>
<b>Delicate seedlings</b>	1/2	1/2	1/2	5.5 to 6.5	500 / 800		1/2	1/2	1/2
<b>General Purpose</b>	1	1	1	5.8 to 6.8	900 to 1300		1	1	1
<b>Vigorous Vegetative</b>	2 1/2	1 1/2	—	5.8 to 6.5	1100 to 1600		2 1/2	1 1/2	—
<b>Blossom Booster</b>	1	2	1	5.8 to 6.3	1100 to 1600		—	2	2
<b>Fruit Set to pre Harvest</b>		1 1/2	3	6.0 to 6.7	1000 to 1600		—	1 1/2	3