

Verti-Gro's organic and organic based fertilizer and soil supplements are now available in a wide variety of formulations in small and large quantities. All liquid fertilizers and supplements are blended with a natural organic base such as Seaweed Extract or Humic Acid. All dry formulations are from natural occurring earth deposits or agricultural waste. These liquid and dry fertilizers and supplements can be used in a total organic system, a hydroponic/organic system or in soil. The dry fertilizers are slowly soluble over a period of time and the amount available to the plant is based on temperature, moisture and beneficial bacteria. Not all dry formulations contain micronutrients. "**Humic Acid**" and "**Seaweed Extract**". Is the base for all the liquid supplements and they both contain an abundance of nutrients in a form available to the plants immediately.

The importance of "**Humus**" is not new. Humus is the final result of decomposed organic matter. It is high in carbon, essential nutrients and bacteria. Humus has been referred to as "the most important source of human wealth on this planet" yet we make very little use of this phenomenal product. The basic reason is that its benefits are not readily apparent in many cases, particularly if the dry material is used. It takes time for the dry material to become available to the plants. Therefore, the dry humus or "**leonardite**" is dissolved and made into a concentrated liquid for easier use and faster availability to the plants. It becomes a good source of fertilizer supplement and is a "virtual storehouse of essential elements and beneficial bacteria". Even though it is referred to as an "**acid**" it is not acidic, but basic, and when used in the diluted form it will not burn plants. "**Super Hume**" is 5% humic acid and 15% fulvic acid. Super Hume is a natural surfactant and can reduce the amount of pesticides and fungicides used and act as a wetting agent for foliar fertilizer applications. Dissolve almost any standard inorganic fertilizer in Super Hume and the results of the foliar application will be noticeable.

The importance of "**Seaweed Extract**" is also well known. Seaweed is another source of hundreds of vitamins and minerals in their natural form. Dry seaweed is not readily available to the plants so it is also made into a concentrated solution for ease of use. Seaweed, when dried and dissolved under low temperatures is one of the best fertilizer supplements and liquid foliar sprays available. Seaweed is a good source of plant hormones such Cytokinin, Indole, Gibberellin and Auxins. Seaweed extract (8%) is safe to use on almost any plant at the ratio of 1 ounce/gallon. More concentrated forms (12-24%) are available for the commercial grower.

To obtain higher levels of micronutrients for special applications seaweed extract and humic acid is used to chelate or bond certain elements such as Iron, and Magnesium. Both seaweed and humic acid are approved by OCIA and FOG. Chelating by natural means improves the availability of the nutrient. Sometimes natural sugar based organic chelating agents such as Lignosulfonate and Glucoheptanate are used. This makes the trace mineral very soluble and safe to use on almost any plant. You may select from a long list of natural and safe organic based fertilizers and supplements. The instructions are on each container. The normal use ratio is 1 ounce per gallon making the **Verti-Gro** formulations very economical to use.

Vertical Gardening

Finally, soil is the most unpredictable. No one knows what is in soil naturally and what has been put in it. Raw, unused land is hard to find and even harder to cultivate. This is why hydro-organic growing with a soil substitute is so simple. Coconut fiber, that has been aged and washed with rainfall for up to 50 years, is a totally organic growing media that contains no soil. One 13 pound block that measure only 12" x 12" x 6" and expands 7 times to approximately 25 gallons. It holds a lot of water yet has high porosity. For only \$30.00, 50 gallons of an almost perfect soil is available. When mixed with perlite up to 400 plants can be grown in a media that cost less than \$40.00.