

# LIQUID BIOLOGICAL **N-P-K** FORMULATIONS

## MULTI-PURPOSE LIQUID PLANT NUTRIENT

### GENERAL INFORMATION:

Plants have the same needs than that of humans. Plants like all living creatures were developed by nature to receive and utilize basics elements to function and complete it's life cycle. These basic functions and requirements include, an emergence from seed, growth stage, a balanced nutritional diet with water, air and sunlight throughout their life cycle and than they need maturity to develop their fruit, all within a healthy sustaining environment. Plants require, from a nutritional standpoint, a well balanced diet applied in the right proportions at its different growth stages. If plants do not receive this at the critical stages of it's development, they are more susceptible to diseases and insect attacks and will become sick and possibly die prematurely. University studies have shown that unhealthy weaker plants with low brix (sugar) readings are more prone to disease and insect attacks than that of healthy plants. Incomplete or low grade NPK fertilizer application can weaken a plants immune system resulting in a lower survival rate during stressful conditions, such as abnormal climatic and/or temperature conditions, during transplanting and throughout out each stage of the plants life cycle. We all know that if the human body does not get the right nutrients and vitamins in the right proportions, we would not feel or operate efficiently and we would be sick more often.

Plants have tiny mouth openings under the leaf called the stomata. It is used to exhale and inhale but also to take in nutrients, right where the plants need it the most, in their vascular system. This is where a good quality foliar nutrient is needed. A healthy plant after a foliar spray releases Hydrogen ions and CO<sub>2</sub> through the roots into the soil. The positively charged hydrogen ion combines with a negatively charged soil colloid particle (see the CEC information sheet page 21) releasing another element for the roots to pick up. This benefits the plant as well.

***When spraying any foliar spray have your sprayer set at a high enough pressure to achieve a swirling action from the spray nozzles, using fine spray nozzle will help to create this swirling action.***

### **The CROPMASTER EDGE**

CROPMASTER has developed a series of foliar spray products to feed the plant via foliar spraying throughout the crop's (plant) life cycle. We have developed our products with a superior edge over the competition. We have added bio-stimulants to each of our hot mix homogenized NPK formulations. We also use only natural nontoxic food grade raw materials in our products. A united Agricultural Services standard in our manufacturing process is to go through a series of control steps to accomplish our end result. With each step we carefully monitor and do quality control tests to ensure that at all times the customer receives the highest quality product, purchase after purchase. . We also do quality checks during formulation as safeguards. Last we do a final test to ensure it meets our standards of analysis and quality. After our random intermediate checks during its manufacture to when it is completed, we do a final test to check to ensure it meets our standards for analysis and quality. We have taken our industry into the future through our quality control testing of our products. With these inspections we always guarantee the customer a uniform high quality product. Our biological Npk's includes a compliment of Fish, Seaweed, Humic Acids, Vitamins B-1, B-12, growth promoters, regulators and Molasses. Each contains trace elements such as Boron, Iron, Zinc, Cobalt, Copper, Manganese, Molybdenum, and Sulfur.

### ***Custom Formulations and blends available and supplied by request***

Each NPK is specially developed for a different stage in the plants life cycle. Similar to humans who need different diets at different stages in their life cycle. We emphasize changing your spray formulation at each cycle. Each cycle in the plant life is different from growth to bloom to fruiting. Therefore it needs more or less different elements to complete its job at each cycle. Plant growth energies can be divided into two separate parts during its life cycle. Continued next page....

**ANIONIC** In this stage the plant is in the growth mode. It starts from the time the plant emerges from the seed to the point where the plant has matured or begins to flower. Higher nitrogen is needed to aid the plant in this stage.

**(N) NITROGEN - GROWTH STAGE (Use 10-8-8, 16-4-8, 15-0-15, 21-0-0, 20-4-4)**

Young plants need growth right up until maturity, which is usually just before blooming, or bud initiation stage. The plants at this stage need a higher NITROGEN NPK. The Nitrogen element is needed for growth, along with a proportionate combination of PHOSPHORUS and POTASSIUM. By supplying the plant with extra nitrogen via foliar sprays you are helping the plant in growth by supplying that extra nitrogen. This can mean quicker blooming and healthier plants.

**CATIONIC** In this stage of the plant life from flowering to harvest, the plant is in the production mode and no longer actively growing. Higher PHOSPHORUS & POTASH is needed in this stage.

**(P) PHOSPHORUS PRODUCTION STAGE (Use 6-14-6, 5-30-10, 0-25-0)**

Once your plants have started to produce buds or blooms you have a plant that is matured and is ready for the production of your crop. This is where we change from higher nitrogen to a higher PHOSPHATE product. The idea being is not to allow your fruit coming from the blossoms to grow too fast with high nitrogen. You want to be more concerned at this stage to form a fruit that contains higher pound solids and more body. Phosphate will supply the cells that are being formed at this stage to fill in with body, giving more weight and mineral value. Too much Nitrogen at this stage will just make the cells grow and not form the body or mineral content, making the produce sour and shortens the shelf life. The right concentration of Nitrogen PHOSPHORUS and potash is needed to give a complete balance in this stage.

**(K) POTASH (Use 3-18-18, 0-31-23, )**

Once your plants have produced fruit and that fruit has formed and begins to grow or mature. High POTASH with high PHOSPHORUS is needed with just the right combination of nitrogen to allow a good balance. This will help build quality in your crop.

Once you place all these sprays together in a CROPMASTER™ program you can, with the right environmental conditions shorten the growing time of your crop from planting to harvest. The end result is more markets, better health, better taste, better color, longer shelf life, and earlier markets and in many cases more yield. This all means more profits to the farmer.

*All NPK's liquid is available in 2.5 gal, 5 gal, 30 gal, 55 gal, 275 gal*