

## White Paper Content by product

BioScientific, Inc.

# Farmer's Secret

*"The Farmer's Secret"*

*"Things that Farmers know and you should too"*

*A line of All Natural plant fertility products.*

*The EZ way to grow better plants.*

### I. EZ Compost

- Farmers know about Carbon – The most influential element, in nature, that effects plant productivity is carbon. Carbon is directly used by plants, from the atmosphere, for its respiration. Plants also benefit by the indirect utilization of carbon by soil microorganisms from soil organic matter. Through the plant's process of respiration the carbon is fixed into molecules, that create many useful things, and Oxygen is released. Among these useful things are sugar (sweet fruit), protein (nutritious grains), and cellulose (lumber). Carbon is such an important element that its study is called the study of Organics. Indeed the word organic only means "carbon containing". When one says "this is an organic fertilizer" they mean that it has carbon as part of its molecular makeup. For the last 60 years, productive conventional agriculture uses primarily fertilizers that are inorganic. Nitrogen, phosphorus, potassium, and minor nutrient fertilizers do not, generally, have carbon in them. Plants derive their carbon requirements from the soil in which they are grown. Each season more of this carbon is depleted and is not being added back by modern fertilizer inputs. This continual treadmill, although initially productive, is not sustainable and the basis of declining soil fertility over time. Successful growers and those that are concerned over the value and quality of their land are augmenting their inorganic fertility program with inexpensive organic inputs, not necessarily certified Organic products. Crop residues, animal manures, green manures, compost, and processor waste are all sources of organic matter. These sources continue the organic cycle of soil that strongly influence sustained soil fertility. How much organic matter is enough? Well the answer is involved and deals primarily with Carbon to Nitrogen ratios. The most important initial step for a home gardener is to remember to add, at least, some organic matter, like EZ-Compost, to initiate fertility optimization. EZ-Compost contains a balanced content of many types of organic matter that is easier, safer and cheaper to apply than competitive alternatives. The fine preparation of this product allows it to go straight to the root zone for an immediate affect.
  - o Pesticide remediation – Pesticides are a necessary economic decision for the care of plants. If pests, at an economic threshold, are left unchecked, damage will cause plant loss or a significant loss of productivity. Accurate doses of chemical pesticides are efficacious, however they persist in the



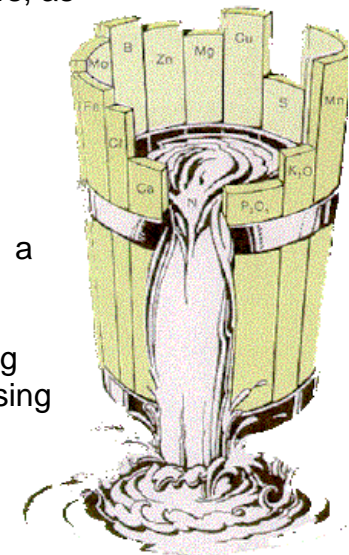
effective outside an organic system and a waste of additional dollars. Off-the-shelf inorganic fertilizers are inexpensive and designed for mass utilization, they are not efficient and degrade environmental quality when not used in a healthy soil ecology. EZ Enrich stimulates the soil's natural ability to efficiently cycle nitrogen to the plants while preventing environmental losses through processes known as assimilatory and dissimilatory nitrate reduction.

### III. EZ Thrive

- a. Farmers know about the law of the minimum - Justus von Liebig's (1803-1873) Law of the Minimum states; "growth is proportional to the amount of the most limiting nutrient, whichever nutrient it may be. Likewise a plant's growth is restricted by the lack of a single element, even though there may be sufficient quantities of all other essential nutrients."

Years ago, nitrogen, phosphorus and potassium fertilizers, as primary fertilizer inputs, had trace amounts of impurities that added balance to fertilizer applications. Today, modern inorganic fertilizers are very pure and highly concentrated, and lack this balance. Every harvest that leaves field takes some of these nutrients "out-of the bank." Progressive farmers are concerned about the health, longevity and value of their soil, therefore they are adding back balanced contents of minor elements while addressing specific minor nutrient deficiencies with augmentation.

*Fig: This principle compares the yield of a crop with a barrel, where the boards form the essential nutrients. The barrel can be filled only to the shortest board.*



Without a comprehensive (expensive) laboratory analysis the home gardener may not know what his limiting nutrient is. Therefore, inexpensive balanced nutrient solutions give the best versatility.

All natural EZ Enrich plant food was discovered in the earth, not manufactured. Thrive contains 9 major nutrients, 7 micronutrient and 10 trace elements and 42 rare earths, combining for healthy growth for all plants. This balance will ensure that you get the most from your fertilizer applications by addressing Liebig's Law of the Minimum.