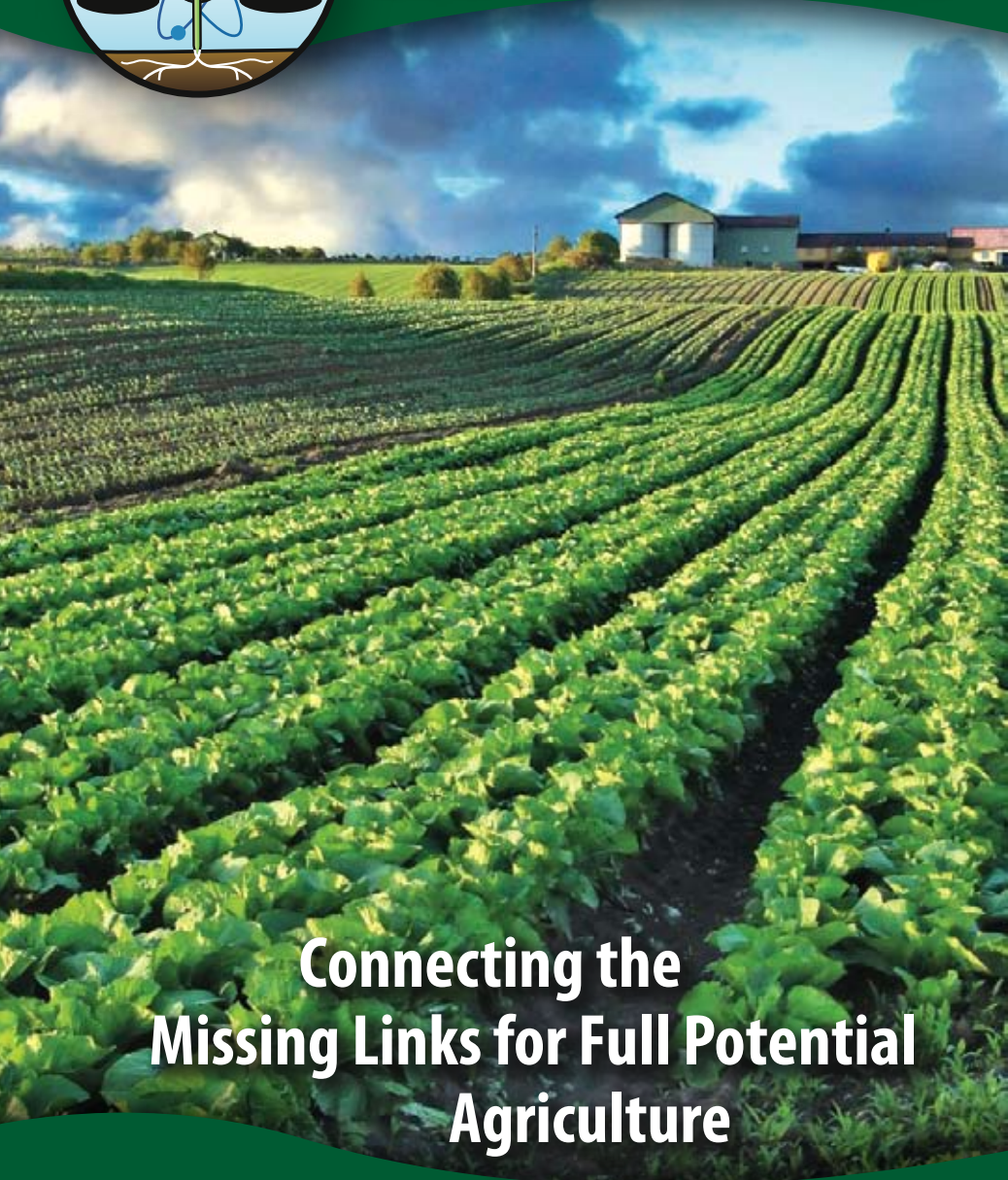


ADVANCING ECO-AGRICULTURE

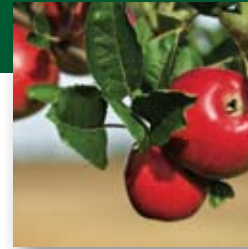


**Connecting the
Missing Links for Full Potential
Agriculture**

PRODUCTS & SERVICES CATALOG

Advancing Eco Agriculture

...an agricultural and horticultural consulting and manufacturing company providing information, consulting services and specialty nutritional materials for use in irrigation systems and foliar applications.



We provide education and information at winter seminars, summer field days and our free quarterly newsletter.

AEA initially started as a consulting company providing information and recommendations to fruit and vegetable producers and dairy farmers developing sound nutritional programs for maximum quality and performance.

We have recently began manufacturing our own line of specially designed liquid nutritional packages in an effort to meet our high expectations of product quality and performance in the field. We believe these products are unrivaled in quality and plant bioavailability and we anticipate maintaining this position with our ongoing research efforts.

We perceive the production of healthy crops as the functioning of a complex interacting systems of soil, plants and microbes. We need to take all the inherent variabilities on each farm into consideration such as soil type nutrient availability, water quality and local climatic conditions if we wish to be successful in our endeavors. One major requirement for a healthy crop is simply healthy soil. But what defines healthy soils? Healthy high producing soils seem to have several common attributes in general:

1. **High levels of organic matter and microbial activity**
2. **An optimum balance and quantity of minerals**
3. **Good soil structure, which is naturally created by 1 & 2 above coupled with good management.**



OUR MISSION

Our mission is to enable farmers to produce high quality, healthy plants with inherent resistance to disease and insect attack by providing them with knowledge to understand the natural soil-plant system, tools to monitor the systems performance and natural materials to enhance crop function and performance.

OUR GOAL

Our ultimate end goal is to help provide healthy food for the ultimate consumer, us. In other words, food as medicine.



Lets examine these in more detail

1. Healthy and vibrant populations of soil microbes are an absolute requirement unless we wish to produce crops hydroponically. Ideally all nutrients and minerals need to be absorbed by the plants as microbial metabolites which can then be utilized very efficiently in the production of plant compounds. Plants readily absorb vitamins, hormones, many other stimulants and complex compounds; all microbial products of the rhizosphere.
2. Both the microbiota in the soil and the plants they feed require an optimum balance and quantity of mineral nutrition to achieve acceptable levels of performance. Usually 12 or perhaps 16 elements are said to be required for crop production. In addition to these commonly accepted nutrients plants may require as high as 35 to 40 additional trace minerals such as silicon, chromium, nickel, the lanthanides and many others.

These trace minerals can have a significant impact on plant health and play a major role in plant physiology. Many of them act as enzyme co-factors or as direct catalysts, promoting rapid formation of complete plant compounds, especially the complex plant secondary metabolites (PMS)s many of which provide a tremendous immuno-boost. Several of these plant secondary metabolites can have unique insecticidal and fungicidal properties.

USING OUR PROGRAMS-SYSTEMS

Our programs are assembled with a long term perspective. Our goal needs to be to produce bioactive, quality soil which can supply the great majority of a crops nutritional requirements so we need not continually rely on spoon fed nutrition to produce high yielding crops.

With this in mind our programs are based on a complete soil analysis to determine mineral balance in the soil, as well as those which are immediately available.

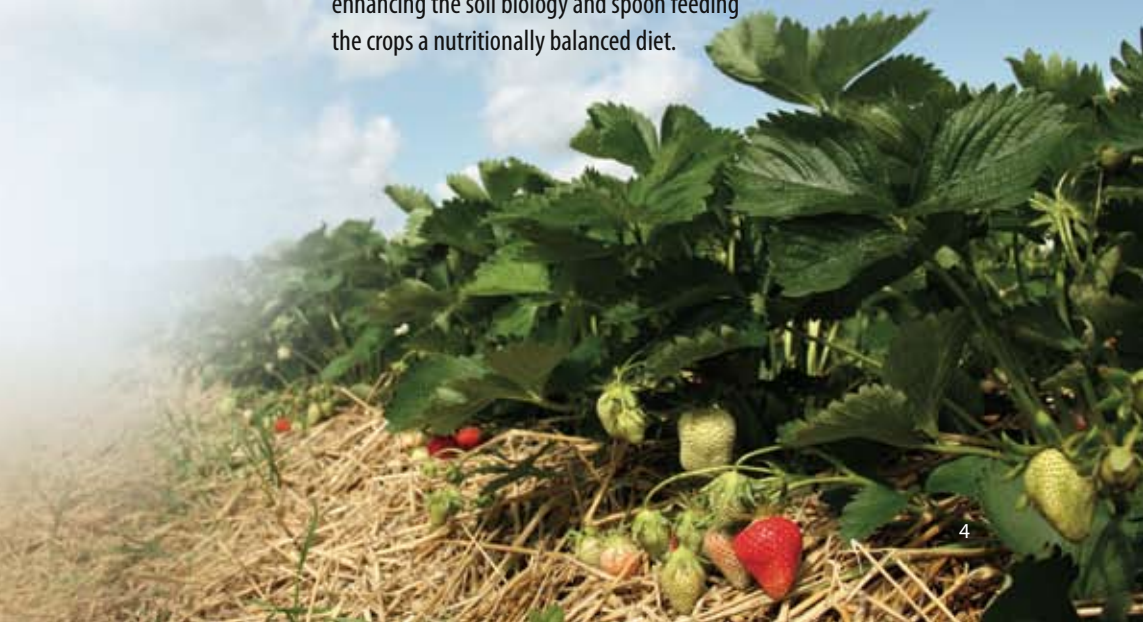
We then work to assemble a complete nutritional program based on farm history, current soil analysis and the crops nutritional requirements.

These programs are composed of a dual approach:

1. A long term view, stimulating soil microbial populations, adding mineral correctives and enhancing soil structure, with management practices such as cover cropping and the wise use of tillage.
2. Getting an immediate response, working to achieve a quality crop as rapidly as possible by enhancing the soil biology and spoon feeding the crops a nutritionally balanced diet.



440-632-1012





Monitoring Crop Health

We need to keep a record of the crops nutritional status during the growing season to check on the progress being made and to see if any changes are in order. This can be readily accomplished by several means:

1. Tissues analysis: tissue analysis can provide a revealing snapshot of what is occurring at the current time and is one of the more accurate methods of determining a crops immediate nutritional requirements and can be used when other methods signal a problem.
2. Plant sap pH: Monitoring plant sap pH can give us a general idea of plant vitality and level of susceptibility to disease or insect attack as well as providing a general direction for nutritional supplements.
3. Brix Levels: The sugar levels, measured as brix, can give us a picture of the progress being made in overall health over time. The brix reading can also be used to measure the crop response to a nutritional foliar application.

An addition to these monitoring tools is a system termed Bio-Electronics which was developed by Dr. Louis-Claude Vincent in France between 1948-1956. This system was brought to our attention by Jean Brunet and shows much promise.



Microbial Products

We find it a great benefit to inoculate and/or stimulate the microlife in the soil. Remarkable results can be achieved when these materials are used in a proper manner and at the right time. If we review all the remarkable functions of soil microbes we can see how the materials can have a significant impact on soil and crop health and quality.

BIOGENESIS - A broad spectrum microbial package which performs exceptionally well to repopulate and invigorate a soils beneficial microbe populations. Biogenesis enhances release of complexed mineral reserves, helping to provide higher levels of nutrient availability to the growing crop.

Biogenesis is generally used in spring at planting at 1 lb. per acre in transplant solution, or it can be used in irrigation systems or sprayed on. OMRI listed version available.

Available in 1lb., 5 lb., 10 lb., and 25 lb. containers

SPECTRUM - Contains a broad range of beneficial soil microbes held in a dry suspended animation form and provides an economical means of restoring a soil microbial population. Spectrum needs to be incorporated into the soil and is generally used in fall when planting or incorporating a cover crop. combine with Pepzyme for best results. Recommended application rates are 50 grams per acre. OMRI listed.

Available in 1-5-10-25-50 acre containers

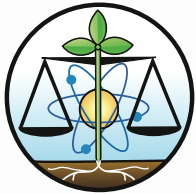
PEPZYME - A stable enzyme concentrate containing a broad spectrum of enzymes and is unaffected by sunlight and ultraviolet. These enzymes increase the rate of growth and reproduction of soil microbes and also enhance the rate of nitrogen fixation, mineral release and digestion of residues. Pepzyme can be applied both in spring and/or fall, or small amounts can be used during the growing season. Usual application rate is 12.5 oz. per acre OMRI listed. *Available in 1, 10, or 25 acre sizes.*

MYCOTONIC - Provides a range of endo and ectomycorrhizal fungi species held in a dry form. Mycorrhizal fungi can access mineral and water reserves and provide a plant available source.

Mycotonic can be used as a seed treatment at 1 oz. per 100 lbs. of seed, or soil applied at 1 oz. per acre. Complies with National Organic Program standards. *Available 1-5-10-25-50 oz. containers.*



**For More Information
or to place an order call:
440-632-1012**



440-632-1012

SYNERGY SOIL SOLUTIONS (Water Soluble Blends)

These blends have been designed around the varied needs of crops through the growing season based on crop, stage of growth, level of production etc. In addition to the NPK each of these blends also contains magnesium, sulfur, boron, and carbohydrates to provide a plant and microbe friendly material.

These formulations can be used both in an irrigation application and as a foliar spray to provide a quick energy boost to the crop. Peak performance is obtained when used with a calcium and micro nutrient source such as Foundation™ or Plant Healthy Therapy™ Calcium.

Formulations available:

Synergy Soil Solutions Grower 5-10-20

Synergy Soil Solutions Starter 5-25-5

Synergy Soil Solutions Finisher 5-5-20

Synergy Soil Solutions Enhancer 5-20-20



SYNERGY SOIL SUSPENSIONS

The Synergy Soil Suspension line of concentrated liquid fertilizers were developed in an effort to provide high quality, available nutrients which were economically competitive and did not contain unwanted materials such as high levels of nitrogen or toxic elements.

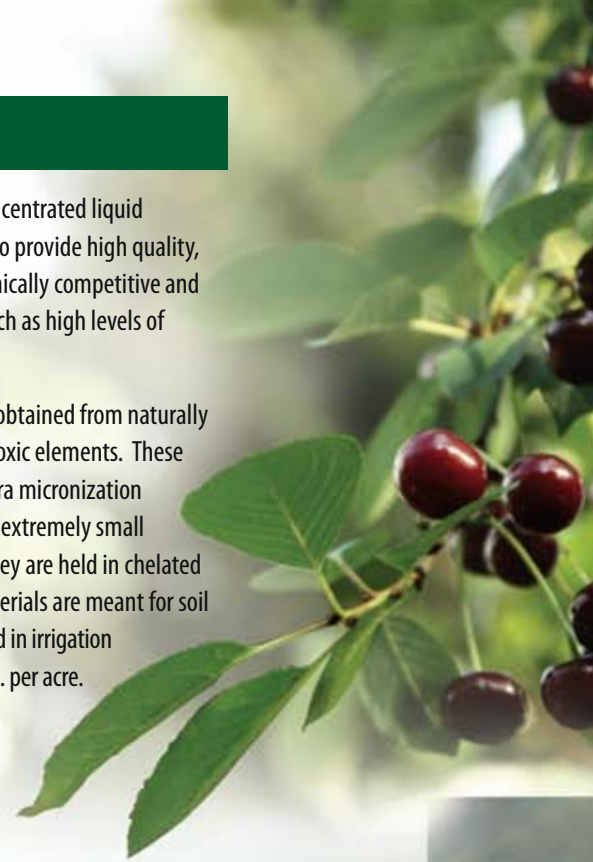
The majority of the materials used are obtained from naturally mined sources which are clean of any toxic elements. These mined minerals are treated with an ultra micronization process which brings them down to an extremely small particle size. After being micronized they are held in chelated form as a liquid suspension. These materials are meant for soil application and are most frequently used in irrigation systems. General applications are 1-2 qt. per acre.

Available in 1 gal., 5 gal., 55 gal., and 275 gal. containers. NOP compliant versions available.

Synergy Soil Suspensions™

FOUNDATION

A concentrated mineral premix which was put together to provide a balanced source of phosphorus, calcium, and micro nutrients. For best results Foundation should be partnered with a soluble fertilizer material such as our Grower 5-10-20. When these materials are used in combination they provide the readily available balanced mineral program which is needed for optimum health and production. Foundation is generally used in irrigation systems at 2 qts. per acre per week. Analysis: 22% Calcium, 6% Phosphorus.





Synergy Soil Suspensions™

PHOSPHORUS

Phosphorus is perhaps one of the more overused, misused and abused nutrients in agriculture today. Most soils contain large reserves of complexed phosphorus. Releasing this nutrient into plant available form is primarily a factor of microbial availability and activity, especially of the fungi groups such as mycorrhizae. The various roles phosphorus plays in root development, photosynthesis, energy transfer and reproduction are fairly well recognized. However the management techniques needed to mobilize the large soil reserve do not seem to be well understood. Conventionally high levels of soluble phosphorus fertilizers are applied at planting time to stimulate root growth and development. However these high levels of soluble phosphorus send a negative signal to the mycorrhizal fungi and other microbes that release phosphorus. After a period of several weeks the starter phosphate fertilizer is no longer available and the natural phosphorus solubilizing system has been effectively shut down for the season, making the crop dependent on supplied phosphorus inputs. We have attempted to overcome this short circuiting of the natural system by designing a source of phosphorus that is plant available without being water soluble. A rock phosphate ore which provides high levels of trace and ultra trace minerals and very low levels of toxic elements is mined from a volcanic source. This ore is ultra micronized and chelated with several unique microbe friendly compounds and suspended in a liquid solution. This technique provides us with a highly available form of phosphorus without detriment to the soils microbial system.

Synergy Soils Suspensions™ Phosphorus contains 32% phosphorus and 16% calcium and is used at 1-2 qts./acre.



Synergy Soils Suspensions™

CALCIUM

Calcium is widely recognized for its many important functions in plants which include increased nutrient uptake, strong cell walls, sturdier plants and increased vitality. The importance of maintaining high levels of bioavailable calcium is frequently stressed in order to achieve adequate levels of calcium uptake.

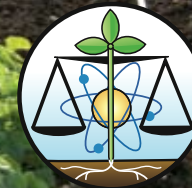
We developed Soil Synergy Suspensions™ Calcium with these challenges in mind. Results achieved during our first year of field trials exceeded our expectations. Analysis: 28% Calcium.

Synergy Soil Suspensions™

POTASSIUM

Potassium determines fruit size, leaf thickness and stem strength. Potassium also plays a major role as a catalyst in the plant sap, and transports carbohydrates from the leaves to other parts of the plant including the fruit. Crops which produce large amounts of sugars have an especially high requirement for potassium.

Synergy Soil Suspensions™ Potassium provides 35% potassium in a bioavailable chelated form for rapid absorption.



440-632-1012

PLANT HEALTH THERAPY™

The Plant Health Therapy™ products were developed based on the same concepts as our Synergy Soil Suspensions™ blends, providing complete bioavailable nutritional packages. These blends were created using technologies such as micronization and chelation using several organic and amino acids and the inclusion of several special technologies, such as a unique colloidal surfactant along with an amazing adjuvant that surrounds the leaf with a protective coating and stimulates rapid production of complete carbohydrates and plant secondary metabolites. These materials are primarily designed for foliar application and are generally used at 1 pt. to 1qt. per acre. NOP compliant versions available. *Available in 1 gal., 5 gal., 55 gal., or 275 gal. packages.*

Plant Health Therapy™

Plant Health Therapy Calcium analysis:

26% Calcium

Plant Health Therapy Magnesium analysis:

28% magnesium

Plant Health Therapy Potassium analysis:

30% potassium

Plant Health Therapy Phosphorus analysis:

32% Phosphorus / 15% Calcium



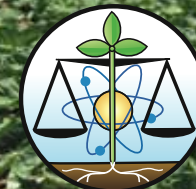
Plant Health Therapy™ Phytostim

Phytostim is a cold processed liquid seaweed concentrate which contains exceptionally high levels of metabolites and plant hormones such as cytokinins and auxins along with a complete spectrum of vitamins and minerals in a highly bioavailable form. Phytostim is generally used at 4 to 8 oz. per acre as a foliar spray or can be used as a root drench. Complies with NOP standards.

Plant Health Therapy™ Sea-Crop™

The Earth's mineral rich oceans are teaming with microbial life that in turn enhances the nutritive value of ocean waters by adding complex organic compounds. Sea-Crop™ is harvested from a pristine area of the Pacific Ocean in a very gentle manner that preserves the natural complex organic matter created by microbial activity in the ocean. Unlike the other ocean mineral products.

Many of the organic compounds found in sea water are capable of stimulating soil microbes and plants as well as supplying over 60 trace and ultra-trace elements that support soil microbiology. Sea-Crop™ is made by a special process that reduces sodium to about 0.7% while increasing the concentration of complexed magnesium, sulfur, calcium, silicon and numerous trace elements, including selenium, iodine and boron. Complies with National Organic Program standards. WSDA listed.



440-632-1012



Plant Health Therapy™ Photo Mag™

Photomag was designed to be used on forage crops such as grasslands, hayfields, etc. Primarily Photomag enhances plant performance by increasing the rate of photosynthesis and the formation of complete protein compounds. Photo Mag is generally applied on lush rapidly growing forages at 4 to 6 quarts per acre to increase quality and palatability. Adding a plant available source of calcium such as Plant Health Therapy calcium to the spray tank mix usually obtains a significant crop response. Complies with the National Organic Program Standards.

Plant Health Therapy™ Huma Carb™

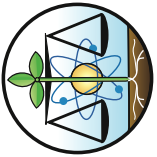
Stable complex carbons from natural organic matter are the missing link in many agricultural programs. Humic substances are a stable form of natural organic matter consisting of fine grained complex carbons created by microorganisms. Microscopic complex carbons can be the link between your fertility program investment dollars and full potential production. Huma Carb™ is an ultra-micronized humic carbon complex that fits into programs that are intended to maximize fertilizer efficiency and allow plants to express their full genetic potential.

Unlike synthetic “humic acid” products which are soluble chemical extracts, Huma Carb™ is the complete unadulterated humic material as found in nature. Natural humic substances are microscopic dark brown substances composed of both soluble and insoluble components as found in humus, compost and dark soils. Natural complex humic substances are the reason why dark soils are more productive and provide more protection from plant diseases than light colored soils. Complies with National Organic Program Standards.



For more information contact:

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Full Potential Agriculture**