

The Process

The development of the Quantum Growth™ Series involved a complex process of laboratory and applied science.

Laboratory Science – Process steps conducted by ELI

Culture Screening • Environmental cultures are screened and evaluated to determine formulation benefits. Once the desired strains are selected, they undergo laboratory safety testing, application testing and field trial.

Culture Selection • The selected strain is further enhanced via selective adaptation, then blended with other strains to form an effective consortium for various aspects of plant enhancement. The result is a culture consortium that exhibits the desired benefits.

Natural-Based Stimulant Selection • The evaluation and selection of natural organic constituents as biological carbon required to promote optimal plant growth. These natural constituents are evaluated in combination with the selected cultures to achieve targeted enhancement goals.

Formulation Development • Once microbial strains and organic support constituents are selected, bio-active formulations are developed to meet the needs of various crops and environmental conditions providing the enhancement desired through extensive laboratory and field development.

Quality Control • Rigorous product quality control is conducted at Ecological Laboratories’ modern EPA- and FDA- registered production facility. Quality control begins with the receipt of every raw material and continues through the manufacturing process, with thorough quality control procedures monitored by a staff of quality assurance specialists.

Applied Science – Process steps conducted by AEM

Analyze Product Benefits • AEM conducts small trials to evaluate the benefits of new products on a number of plant issues, such as water use, control of fertilizer runoff, plant health, seed germination, root development, transplant survival and yield.

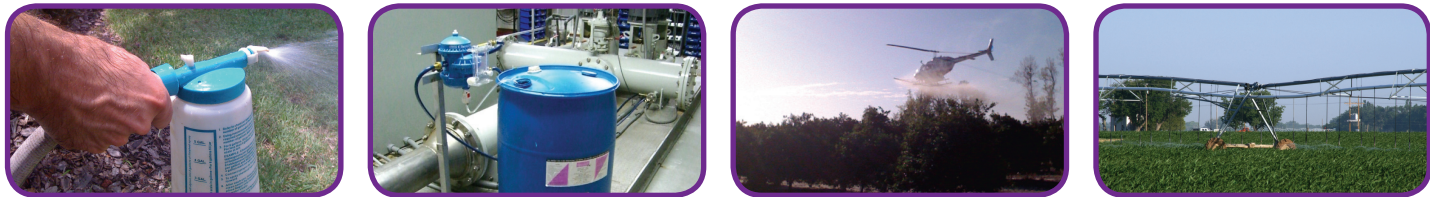
Determine Application Rates and Methods • AEM, in cooperation with several progressive commercial growers and golf course superintendents, conducts large-scale field trials on a wide range of crops and turf to establish baseline application rates. These baseline application rates provide the grower with a starting point from which product benefits are realized.

Product Fielding and Technical Support • The product is mass-produced and sold into the market. AEM provides technical support that ranges from answering basic product questions to tailoring applications to fit growers’ specific cultural practices and specific crop requirements. Such factors include crop type, application method, climate and soil type.



Quantum Growth™ Results

If you’re still unsure about the results of Quantum Growth, look at the examples of real results from commercial applications provided to us by our customers.



A Partnership Between



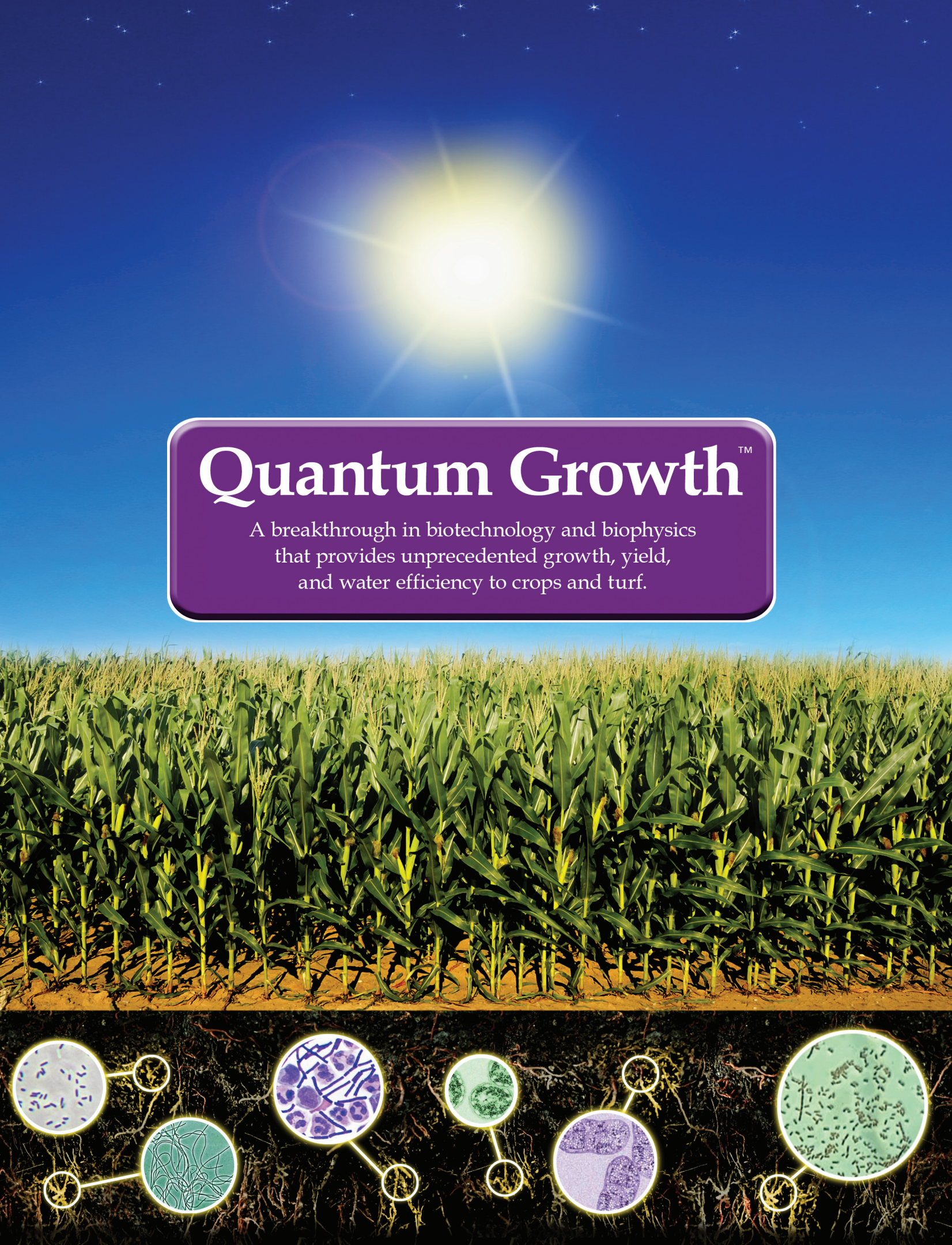
13 Hendrickson Ave.
Lynbrook, NY 11563

(800) 645-2976
www.microbelift.com

Applied and Experimental Microbiology™

11651 Central Parkway, Suite 114
Jacksonville, FL 32224

(800) 818-6213
www.growquantum.com



Quantum Growth™

A breakthrough in biotechnology and biophysics
that provides unprecedented growth, yield,
and water efficiency to crops and turf.

The Benefits of Partnership

The Quantum Growth™ Series is the result of a unique partnership in agriculture technology development that required years of collaboration between Ecological Laboratories, Inc., and Applied and Experimental Microbiology™.

The Quantum Growth Series is a breakthrough in biotechnology that provides revolutionary plant enhancements through the combination of cutting edge developments in microbiology and biophysics. Select microorganisms, including robust photosynthetic strains, comprise the core of the Quantum Growth Series. This consortium of organisms combines with natural soil constituents to provide the following benefits:

- Improved Plant Health
 - Faster Seed Germination
 - Drought Resistance
- Enhanced Root and Plant Development
 - Increased Yield
 - Water Retention and Production
- Nutrient Storage
 - Control of Fertilizer Runoff
 - Increased Brix Levels

Ecological Laboratories, Inc. (ELI)

ELI’s international reputation as a producer of superior microbial products for environmental applications is the result of over 30 years of research and unique bio-formulation expertise. The development of the microorganism base that drives the Quantum Growth Series remains one of ELI’s greatest technological achievements. The long-term shelf stability of the photosynthetic cultures, combined with their significantly elevated activity levels shortly after application, is a substantial advancement in microbiology. Additionally, ELI’s products are toxicity-tested, when required, and are among the safest microbial-based products available anywhere in the world.

Applied and Experimental Microbiology (AEM)

AEM provides technical support for the products, sharing knowledge acquired through 30 years of developing and evaluating microbial-based additives for the commercial agriculture, horticulture, and turf markets. AEM’s mission is to effectively and efficiently incorporate the Quantum Growth product line into growers’ existing cultural practices. The focus of AEM’s technical support is to provide assistance in applying the Quantum Growth technology with the purpose of improving germination, outplanting survival and yield, while reducing fertilizer runoff and water use.

Quantum Growth is essential for crop enhancement and increasing crop yield.



The Technology

The ELI and AEM partnership was formed to combine cutting edge biotechnology with the practical knowledge of microbial interaction with plants.

A Return to Nature

While many in the agricultural industry, with the exception of organic farmers, readily accept the use of chemicals as a component of their cultural practices, the use of microbial products is less widely accepted and understood. Although the use of microorganisms as a way of enhancing plant development and productivity may be considered unusual or unnatural, it is actually one of the most natural approaches to realizing these benefits. Our naturally occurring microbes work symbiotically with plants to enhance nutrient uptake, a key to plant health which provides plants additional energy for growth, defense and reproduction. Another advantage of microbial products is that applying too much has no adverse effects on the plant, soil, crop or environment as can happen with many chemicals.

Maximizing the Energy of Nature

The Quantum Growth™ products are different combinations of *naturally* occurring microorganisms that share key traits for plant enhancement. The organisms inhabit the root and vascular systems of a plant, helping to modify, retain and transport nutrients and water. Some of the organisms have an extraordinary ability to unlock chemical bonds, facilitating nutrient uptake that would not be available in the organism’s absence. Photosynthetic strains in the products are capable of converting the sun’s radiant energy into chemical energy in the form of sugar that is available to for plant growth.

The Quantum Growth Facts

The Quantum Growth Series contains a unique, proprietary blend of naturally occurring vegetative and spore-forming microorganisms that is shelf-stable for three years and does not use growth inhibitors. When you use Quantum Growth products, you are restoring or dramatically increasing the populations of naturally occurring beneficial microorganisms in the soil.



The Quantum Growth Series is made of microorganisms or microorganisms combined with high quality peat humus extract. These products do not contain genetically modified organisms (GMOs) or traditional chemical fertilizers (NPK). The Quantum Growth Series is not compost tea, soil soup or manure tea. The series is the product of a complex, multi-stage fermentation process that takes place in the same container that reaches the grower. No dilution takes place during the production of the products.

The Products

In order to address the numerous challenges inherent in crop and turf management, the ELI/AEM team developed a series of products.



The Quantum Growth™ Series was designed to save water, reduce fertilizer runoff, grow healthier plants and increase yield. Each unique product may be used independently or in combination, as determined by the needs of a grower. The Quantum Growth series was designed to be incorporated into growers’ existing cultural practices and in combination with commonly used products.

Quantum–Light™

A unique proprietary consortium that features select photosynthetic microorganisms and natural growth factors that drive plant energy function. This microbial consortium maximizes plant photosynthesis and increases additional reserve energy from nutrients, carbon, and light. Quantum-Light contains no humic component. This breakthrough discovery is the core discovery in the Quantum Growth series.

Quantum–HSC™

A specific consortium of spore-forming cultures in combination with high quality peat humus extract for soil and crop enhancement. This product features a high spore-forming microbe count, high nutrient value and extended shelf life.

Quantum–1™

An organic soil amendment that utilizes the core technology of Quantum-Light and the high quality peat humus extract found in the Quantum-HSC. This is a first generation product that provides plant enhancement benefits that address many general concerns for a grower or golf course superintendent such as reduced water use and control of fertilizer runoff.

Quantum–VSC™

A wide-ranging microbial consortium, which includes the core technology of both Quantum-Light and Quantum-HSC, along with additional spore-forming microbes selected for their ability to breakdown accumulated organics, such as thatch, black layer, and detritus. Through this breakdown process, the nutrients within the material are released and available for plant growth.

Quantum–REVIVE!™

A revision of the core technology to address specific plant health concerns. Those concerns include assisting plants to recover from drought, disease, and insect damage. Quantum-Revive does not contain a humic component.

