

# ihammer TECHNOLOGIES

*"Leaders in innovative technology for all photosynthetic life"©*

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## **MegAleX<sup>®</sup> Upplause<sup>®</sup> & Upplause<sup>®</sup> Plus** **UPDATE DECEMBER 2009**

Our technology team of Andrew A. Benson, Arthur M. Nonomura, and Valrie A. Gerard were published in the July 2009 "Journal of Plant Nutrition". This publication continues to validate the uniqueness of our technology and its important roll for maintaining a higher level of plant health in all different types of environments. Whether its full sun or full shade, this technology will help you better manage your turf.

This publication is under copyright and cannot be sent to you electronically. We have purchased copies and they will be available to release this fall. You can go online and purchase an electronic copy now by going to:

<http://www.informaworld.com/smpp/title~content=t713597277> Benson, Andrew A., Nonomura, Arthur M. and Gerard, Valrie A.(2009)'The Path of Carbon in Photosynthesis, XXV. Plant and Algal Growth Responses to Glycopyranosides', Journal of Plant Nutrition, 32:7, 1185 — 1200

Whether you are a veteran using **MegAleX<sup>®</sup> & Upplause<sup>®</sup>** or you have just started, or just have curiosity and are not familiar with these technology products, I have put together a few pages for you to review. **Upplause<sup>®</sup> Plus** is our new hybrid product taking the benefits of both **MegAleX<sup>®</sup> & Upplause<sup>®</sup>**

## **What are MegAleX<sup>®</sup>, Upplause<sup>®</sup> & Upplause<sup>®</sup> Plus?**

These three products have evolved from our technology based on the photosynthesis work of Melvin Calvin, Andrew Benson, and Arthur Nonomura. Specifically, "The Path of Carbon in Photosynthesis, PNAS, 89:9794-9798, XXIVth (and now XXVth) in the Nobel Prize Series", Arthur Nonomura and Andrew Benson are members of our company. As a result of the unique qualities of this technology, we were awarded U.S. and PCT World Patents.

Our products optimize carbon fixation in all plants, they act as anti-transpirants, slowing the photorespiration process, thereby increasing day long photosynthesis while providing turf and all plants with added nutritional balance. This publication discusses the plant health qualities of our technology like root enhancement, growing with a minimalist approach, and the daily stresses on plants (including all turf) in growth-limiting irradiance and growth-saturating irradiance.

## **MegAleX<sup>®</sup> 3-0-0 for Golf Course Use**

- Designed as a golf course **GREENS MAINTENANCE FOUNDATIONAL** product.
- Enhances photosynthesis and carbon fixation (the Methyl Glucosides are the key). Plants naturally recognize this carbohydrate source, because this is the carbon that plants produce in the photosynthesis cycle. We are just adding slightly more of this carbohydrate, contained in MegAleX<sup>®</sup>, to allow it to be converted to energy so the plant will develop better roots and tillering.

Plants do not recognize and absorb all carbohydrate molecules the same way. This is discussed in this publication.

- NO flush of top growth, energy goes to root development (density and length), tillering, stolon, and rhizome development.
- Slows transpiration, less mid-day wilt, better plant turgidity, leaf tissue has better hydration throughout the day. Our product also contains proprietary emulsifier and surfactant.
- **USE LESS WATER.** In almost all situations, you may be able to reduce irrigation cycles at least 25%, some even more.
- This technology is environmentally safe and has no plant phytotoxicity, very clean and has great water solubility. We have successfully tank mixed our technology with just about every common fungicide, PGR's, herbicides, and all other foliar specialty fertilizers. After 3 or 4 applications, you should be able to start to quantify root mass and turf density, color, turgidity, and improved texture.
- There is the highest level of available nutrient absorption into every plant cell. Again this is unique technology that optimizes ultra rapid cell absorption of this patented composition.

### **Upplause<sup>®</sup> 10-0-0 for Golf Courses, Sports Turf, and Lawn Care**

- **Designed as a golf course MAINTENANCE FOUNDATIONAL product for some GREENS situations, all TEES, FAIRWAYS, FINE LAWNS, and all other turf areas.** Upplause<sup>®</sup> is also widely used in the lawn care business.
- With the use of Upplause<sup>®</sup> you apply twice the amount of nitrogen as MegAleX<sup>®</sup>. Although it's a "10" vs. "3" as a percentage of nitrogen, the rate or application is lower, so you are applying about twice the actual amount of nitrogen.
- Upplause<sup>®</sup> utilizes a different carbohydrate source - MegAleX<sup>®</sup> uses Methyl Glucosides, the C7 carb source, Upplause<sup>®</sup> uses a C5 carb source (our proprietary, patented trade secret carb which parallels the C7 molecule). The C5 carb for Upplause<sup>®</sup> is less expensive, thus for these broad acreage situations, it makes it affordable to apply.
- **SLIGHTLY MORE TOP GROWTH**, just enough for recovery in some greens situations and not noticeable enough on tees or fairways that you would be bailing grass. It helps recovery of divots, and thin turf in these areas.
- Has the same emulsifier and surfactant as MegAleX<sup>®</sup>, so the reduced transpiration, and again optimizes cell hydration.
- **USE LESS WATER**, again the properties of this **PATENTED** Technology, you may use less irrigation water, if applied at the recommended rates, at the recommended intervals.
- Like MegAleX<sup>®</sup>, Upplause<sup>®</sup> is environmentally safe and has no plant phytotoxicity, very clean and has great water solubility. We have successfully tank mixed our technology with just about every common fungicide, PGR's, herbicides, and all other foliar specialty fertilizers After 3 or 4 applications, you should be able to start to quantify root mass and turf density, color, and improved turgidity and texture.

- YOU CAN USE Upplause<sup>®</sup> or Upplause<sup>®</sup> Plus on greens if you are trying to stimulate more top growth in certain situations.

Simply put, MegAleX<sup>®</sup> for roots and Upplause for shoots! The Methyl Glucosides in MegAleX<sup>®</sup> will not increase top growth, while in the Upplause<sup>®</sup>, its carb source (the C5) and addition nitrogen promotes slightly more top growth. Now in one product, Upplause<sup>®</sup> Plus.

## **Upplause<sup>®</sup> Plus 10-0-0 for Golf Courses, Sports Turf, and Lawn Care**

**-Upplause<sup>®</sup> Plus is an improved version of Upplause<sup>®</sup>. It is a hybrid of our two earlier products MegAleX<sup>®</sup> and Upplause<sup>®</sup> combining the advantages of both.**

For those of you who use Plant Growth Regulators, **MegAleX<sup>®</sup>, Upplause<sup>®</sup>, and Upplause<sup>®</sup> Plus are very synergistic with PGR's like Primo<sup>®</sup>, Trimmit<sup>®</sup>, and Cutless<sup>®</sup>.**

This patented technology is unique for plant health and growth. Again, this technology enhances the photosynthesis process and carbon fixation in all plants. To download a product brochure for **MegAleX<sup>®</sup> and Upplause<sup>®</sup>** go to [www.ihammerllc.com](http://www.ihammerllc.com). The Upplause<sup>®</sup> Plus information is coming soon.

**ihammer** TECHNOLOGIES has grown from 3 golf courses in Ohio in 2005, to over 300 golf courses, sports turf, sod farms, and lawn care facilities worldwide in 2009. We currently have 8 U.S. distributors, and we also have distribution in Europe and Australia.

Our technology is widely known among plant scientists and the agricultural industry to dramatically amplify the absorption of nutrients by plants. This contributes to healthy, robust leaves and roots in a way that meaningfully adds to the effectiveness of traditional fertilizers (e.g., nitrogen, phosphorus and potassium or "NPK"), consequently lowering the amounts that you have traditionally been recommended to use. This patented technology will **save you money** and more importantly increase your ability have a **higher quality turf** all season long.

We continue to work on advancements of our technology to provide you with high quality products. If you have any questions or you are looking for a distributor near you, please contact me with the information provided below.

We look forward to continue to work with you in the future, or to ***begin*** a strong relationship with you! Remember to trust.....and turf strong<sup>®</sup>. Innovations ***do*** matter.

***"Doing our world some good"©***

Best regards,

Mike McBride

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