

Cultivating Your Success:
**How Growthful Fueled a
13% Yield Increase at TKM
Lettuce Farms**

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GROWTHFUL™





INTRODUCTION

Facing the dual challenge of enhancing yields and keeping costs down, farmers are constantly seeking effective solutions. The struggle is real, but so is the solution.

Introducing Growthful™ by Aqueus, a safer-to-use acid product range designed to work in harmony with your existing inputs with no additional effort or labor costs. The result? Enhanced crop yields, increased profits, and improved soil health.

But we don't just make claims; we prove them. Our recent collaboration with TKM Lettuce Farms showed impressive results, underlining the effectiveness of Growthful with a remarkable 13% increase in overall yields at their Florida location.

We understand that trust is earned, not given. Hence, why our trial was independently conducted by Glades Crop Care Consulting, a reputable agricultural consulting firm. Their impartiality and expertise add weight to the success at TKM Lettuce Farms.

Ready for a deep dive? Join us as we unfold this case study, presenting how Growthful can be your game-changer in farming.

Increased Profits with Growthful

GROWTHFUL™

TKM farm tests yielded a 5610-pound increase per acre, **boosting ROI by \$1,065 /acre.**

CROPS	TREATMENT(s) COST	YIELDS	NET ROI PER ACRE
Lettuce Pre & Post	\$38 per acre at bedding (6 treatments)	5,610 LBS at \$0.19 Wholesale	\$1,027



OBJECTIVE

Our objective was to evaluate the effectiveness of Growthful's Pre-Emerge and Post-Emerge applications compared to commercial standard practices on romaine lettuce.

METHODOLOGY

Cultural Practices

On January 16th, 2023, romaine lettuce seeds, Sawgrass variety, were planted on 6 ft wide raised beds with five rows per bed. Each treatment involved 24 beds, spanning an area of 144 ft width x 2640 ft length. The trial was planted and maintained commercially by TKM Lettuce Farm personnel.

Application Methods

The first Growthful application was conducted at planting on January 16th, 2023. The products were applied, incorporated, and planted using commercial equipment. Further applications followed on February 2nd, February 24th, and March 10th. All applications were conducted with commercial equipment and supervised by Glades Crop Care personnel.

Evaluations

In the quest for verifiable results and data-driven insights, a comprehensive evaluation process was put in place.

Stand counts were collected on three distinct dates from six random representative subplots per treatment. This method allowed us to calculate the number of plants per acre accurately. On March 24th, 2023, a tangible measure of our efforts came to fruition. Four boxes were harvested from each treatment, each box brimming with 24 healthy lettuce heads.

These boxes were then taken to TKM's packing house, where crucial data was gathered.

The data collected included box weight (lb), head weight (oz), head weight without core (oz), head height (in), and core length (in). This information was vital in giving us a complete picture of the yield and quality of the harvest. Subsequently, the yield (lb/a) was calculated based on the average stand count and head weight using the ARM 2023.0 software.

To ensure the utmost accuracy, all data were compared using an ANOVA and LSD. Means with the same letters were not different ($P = 0.1$), indicating that no data transformation was necessary. Weather data, which can significantly impact agricultural outcomes, were obtained from Iteris / Weather Ag Service.

This meticulous approach to data collection and analysis formed the backbone of our evaluation process, ensuring that our results were impressive and backed by hard, verifiable data.



The crew at TKM Lettuce Farms during one of the Growthful applications.



FINDINGS

Our collaboration with TKM lettuce farms in Florida resulted in a **significant 13% increase** in overall yields, a testament to the effectiveness of Growthful.

The data collected and analyzed by Glades Crop Care Consulting showed that not only was the box weight of Growthful-treated lettuce superior at 26.67lbs per box compared to the untreated lettuce at 23.01 lbs, but the head weight was also notably higher, with Growthful-treated lettuce weighing 17.58oz versus untreated lettuce at 15.31oz.

These results are more than just a shared victory for Growthful and TKM Lettuce Farms; they represent hope and a proven strategy for the broader farming community. They demonstrate that it's entirely feasible to enhance yields and ROI without excessive investment, all thanks to the Growthful Pre-Emerge and post-emerge products.

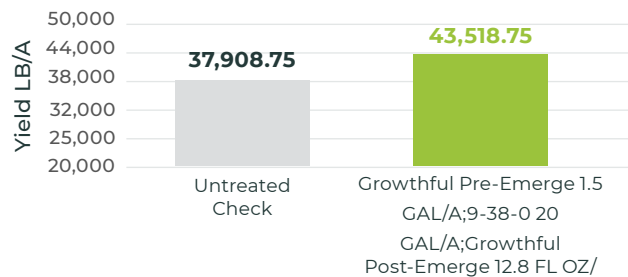
- Growthful Pre-Emerge products condition the soil to be more hospitable to plant growth. This allows for healthier plants, faster growth, and better crop yields.
- Growthful Post-Emerge Spray helps to enhance plant growth by providing hydrogen to improve nutrient uptake and transport, and helps liberate nutrients for better crop growth.

Following the successful initial trial, TKM embarked on a second Growthful trial in Byron Center, Michigan. They purchased and implemented Growthful Pre & Post-Emerge

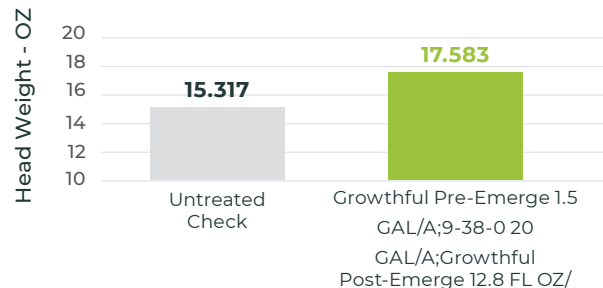
products per established protocols. The results were highly successful. Based on these results, their Farm Manager, Francisco, recommended that the TKM farm owners extend the use of these products to their extensive 6500-acre farm in Belle Glade, Florida. They have plans to apply Growthful to all their lettuce crops next year.

The evidence so far is clear: Growthful is changing how farmers approach their crops. But don't just take our word for it—experience how Growthful can transform your farming outcomes.

Yield Comparison



Head Weight Comparison



GROWING SUCCESS BEYOND LETTUCE

While the TKM Lettuce Farms case study provides compelling evidence of Growthful's effectiveness, it's just one example among many growing success stories:

20 Bushel per Acre Increase in Soybean Yield

Trials at Walton Farms from 2020-2021 revealed Growthful's impressive impact on soybean yields. With just 2 gallons of Growthful per acre over a growing season, yields surged from an average of 60 to 80 bushels — a thrilling 33% increase! At a market price of around \$15 per bushel, this equates to an additional \$300 profit per acre. Walton Farms now uses Growthful on all their soybean acreage.

2x Increased Root Weight of Greenhouse Peppers

Beem Agro Sciences spearheaded a case study for all of us at Aqueus to determine the effects of Growthful on the growth, development, and yield of greenhouse peppers. Different concentrations of Growthful were tested against each other as well as a control in order to find a solution that truly optimizes pepper growth and profits! Growthful successfully increased total root weight, total top weight, and leaf size in the greenhouse peppers!

7.9% Increase in Broccoli Yields

The Aqueus team conducted a trial on Broccoli. Within this study, Aqueus set out to determine Growthful's effect on Broccoli yields and profits. The optimized dose of Growthful produced a 7.9% increase in broccoli yields. At the current price of \$0.85/lb, this yield increase directly equates to 6.7¢ additional profit per pound.

1.2 US Tons per Acre More Tomatoes

This trial was conducted with the goal of determining the effects of Growthful Pre-Emerge on tomato development and yields. This trial was carried out on Cherokee Heirloom Tomatoes in Lodi, CA. Growthful resulted in larger, higher quality tomato yields in this trial: Just 3 applications of Growthful Pre-Emerge resulted in nearly a \$1,000 increase in yield value compared to the control!



The team at Walton Farms inspects the growth of soybeans on the Growthful treated crops.

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