



Cultivation Efficiency Report: The Impact of PhytoVigor X Powered by PureCV™ on Cannabis

Introduction

This report presents detailed findings from a **Cannabis consulting firm and a Cannabis grower (Canna-Tech)** in Phoenix, Arizona, regarding the implementation of PhytoVigor X (Powered by PureCV™) microalgae Bio stimulant into their hydroponic system.

The data in this report underscores the **measurable impact of PhytoVigor X Bio stimulant** on crop cycles, plant health, and overall business efficiency.

Initial Concerns and Pre-Trial Observations

Background

Prior to implementation, Canna-Tech had concerns about introducing algae into their hydroponic fertigation system. The primary risks identified were:

- **Potential algae build up** in the rockwool, which could lead to hydrophobicity and disrupt moisture penetration.
- **Biofilm accumulation in irrigation lines**, possibly restricting flow and leading to pathogen development.
- **Uncertain impact on nutrient availability**, particularly in maintaining a stable chelated nutrient profile.

Challenges Before Implementation

Canna-Tech faced several significant inefficiencies in their cultivation cycles:

- **25% of plants exhibited browning and stress**, negatively affecting growth and yield
- **Root development required 14-21 days**, delaying transplant cycles.
- **The vegetative stage required 4 weeks**, extending the overall plant cycle and reducing annual harvest turnover.
- **Risk of chelation issues due to salt buildup in rockwool**, further complicating nutrient uptake and plant health.
- **Weaker stems in clones**, leading to structural instability and increased risk of transplant shock.

These inefficiencies resulted in longer plant dwell times, increased resource consumption, and reduced overall profitability.

Implementation of the Microalgae Bio stimulant

Canna-Tech integrated PhytoVigor X **Bio stimulant** into his cloning/propagation and early vegetative processes using a **weekly hand-drench application**. This allowed for **controlled exposure** while monitoring plant responses at each stage.

Critical evaluation parameters included:

- **Rooting time** reduction
 - **Veg cycle duration** improvements
 - **Algae accumulation and biofilm formation** risk assessment
 - **Overall plant resilience and yield performance**
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Post-Trial Results and Comparative Data

The introduction of **Pure-CV Bio stimulant** resulted in **substantial improvements across all key performance indicators**:

Metric	Before/Control	With PhytoVigor X	Net Improvement
Plant Browning & Stress	25% of plants affected	3% < of plants affected	Elimination of browning
Root Development Time	14-21 days	10-15 days	4-6 days faster rooting
Taproot Formation	Variable, delayed in some strains	5-7 days consistently	Early root establishment 7-10 days reduction
Vegetative Stage Duration	4 weeks	3-3.5 weeks (some strains 2.5)	
Chelation & Nutrient Retention	Risk of salt buildup in rockwool	Nutrients remain chelated, no buildup	Improved nutrient uptake
Biofilm & Irrigation Concerns	Potential clogging in fertigation	No biofilm or clogging observed	Risk eliminated

Key Takeaways

- **Faster root establishment** allowed for a **shorter propagation phase**, accelerating the overall plant cycle.
 - **Stronger, healthier plants** exhibited **enhanced resilience** and **improved nutrient retention**, reducing the need for corrective fertilization.
 - **No impact on fertigation systems** eliminated concerns regarding biofilm buildup or irrigation inefficiencies.
 - **Significant reduction in plant stress**, allowing for **higher-quality clones and stronger genetic maintenance**.
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Operational & Financial Impact

Improved Grow Cycle Efficiency

The combined improvements in rooting time and vegetative phase led to a **net reduction of 10-14 days per plant cycle**. This acceleration in plant turnover creates the potential for an **additional half, or full, harvest per year**.

Given that a standard commercial cultivation facility operates on a **six-cycle-per-year model**, reducing each cycle by 10-14 days enables an increase to **6.5 or even 7 cycles per year**, depending on strain variability.

Profitability Increase

Annualized efficiency improvements translated directly into revenue gains. The ability to add just an extra **half-harvest per year** provides a clear **economic advantage** :

- **Standard operation:** 6 harvests per year
- **Optimized operation with PhytoVigor X bio stimulant:** 6.5 - 7 harvests per year
- **Estimated profit increase: 8% annual revenue growth**

Fixed costs are now broken out over more harvests in the same footprint.

Conclusion: Increased Efficiency = Increased Profitability

The Verdict

"I was initially cautious about introducing algae into our system, but the results have been nothing short of incredible. Our plants are healthier, our cycles are faster, and we're seeing tangible gains in profitability. PhytoVigor X Powered by PureCV Bio stimulant has exceeded all expectations."

-Canna-Tech

Final Assessment

Pure Future Ventures' **PhytoVigor X microalgae Bio stimulant** has proven to be a **highly effective tool** for:

- ✓ **Shortening propagation and veg cycles**
- ✓ **Improving plant health and nutrient uptake**
- ✓ **Reducing crop stress and increasing plant resilience**
- ✓ **Maximizing cultivation efficiency and profitability**

PhytoVigor X is approved by The Organic Materials Review Institute (OMRI), an international nonprofit organization that determines which input products are allowed for use in organic production and processing. Learn more at www.omri.org

