

Enhancing Aeroponic Tomato Growth with Nanokriti Nanobubble Technology

Client Case Study: Eeki Foods, Kota, Rajsthan.



Location:	Trial Dates:	Results:
Kota, Rajsthan, India	2023-24	• Increase in Tomato Yield • Stronger Root Development • Water & Nutrient Efficiency Increase • Enhanced Fruit Quality • Reduction in Pathogen Growth
Application:		
Aeroponic Tomato Cultivation		
Unit installed:		
NanoAqua N-10		



Eeki Foods, a pioneer in sustainable farming solutions, specializes in aeroponic cultivation to grow high-quality vegetables with minimal resource consumption. In their quest to enhance tomato crop yield and quality, they collaborated with Nanokriti Technologies to integrate nanobubbles into their aeroponic farming system.

The primary goal of this project was to optimize plant growth, increase yield, and enhance nutrient uptake in aeroponic tomato cultivation by deploying the Nanokriti NanoAqua Nanobubble Generator. The focus was on achieving higher oxygenation levels, improving root zone health, and reducing water and nutrient consumption.

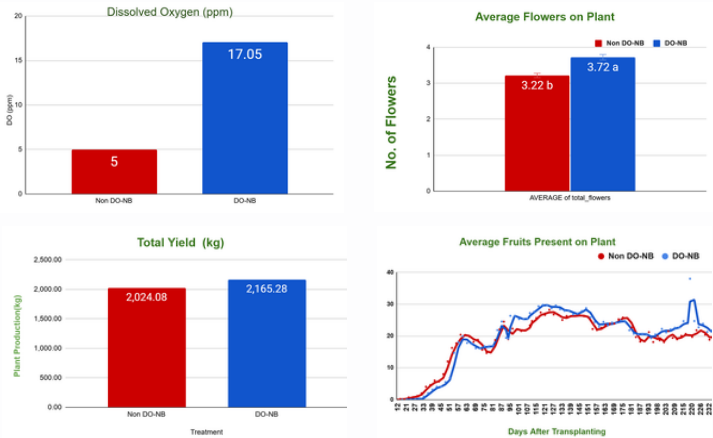
Methodology:

- **The Nanokriti NanoAqua Nanobubble Generator** was integrated into the aeroponic system to infuse nanobubbles into the nutrient solution.
- Nanobubbles provided a high level of dissolved oxygen (DO), enhancing root respiration and nutrient absorption.
- The system was monitored over a period of three months, tracking plant growth rate, yield, and overall crop health in comparison to conventional aeroponic setups.



Results & Key Findings:

1. Nanobubble integration increased fruit yield per plant by 6.7% and overall tomato yield by 8.3%, demonstrating improved crop productivity.
2. Plants produced 15.5% more flowers per plant and developed stronger, denser root systems, resulting in better nutrient uptake and healthier plant growth.
3. The yield of Grade A tomatoes increased by 12.8%, with fruits also exhibiting better firmness, colour, and longer shelf life, enhancing their market value.
4. Nanobubble technology improved water and nutrient use efficiency by 15%, enabling more sustainable aeroponic cultivation with reduced resource consumption.
5. The oxygen-rich root environment suppressed bacterial and fungal pathogens, reducing disease incidence, minimizing crop losses, and improving overall crop performance.



Conclusion: The successful deployment of the Nanokriti NanoAqua Nanobubble Generator in Eeki Foods’ aeroponic tomato farming demonstrated remarkable improvements in crop yield, quality, and sustainability. This case study highlights the potential of nanobubble technology in transforming aeroponic agriculture, ensuring higher productivity with lower resource consumption.

Acknowledgment: We express our sincere gratitude to Eeki Foods, Kota, for their collaboration in this trial and for providing the infrastructure for testing nanobubble technology in aeroponics. This case study establishes a strong precedent for nanobubble integration in aeroponics, showcasing its effectiveness in sustainable and high-yield agriculture.



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