

Enhancing Aeroponic Tomato Growth with Nanokriti Nanobubble Technology



Client Case Study: Eeki Foods, Kota, Rajsthan.

Location:

Kota, Rajsthan, India

Trial Dates:

2023-24

Application:

Aeroponic Tomato Cultivation

Unit installed:

NanoAqua N-10

Results:

- Increase in Tomato Yield
- Stronger Root Development
- Water & Nutrient Efficiency Increase
- Enhanced Fruit Quality
- Reduction in Pathogen Growth

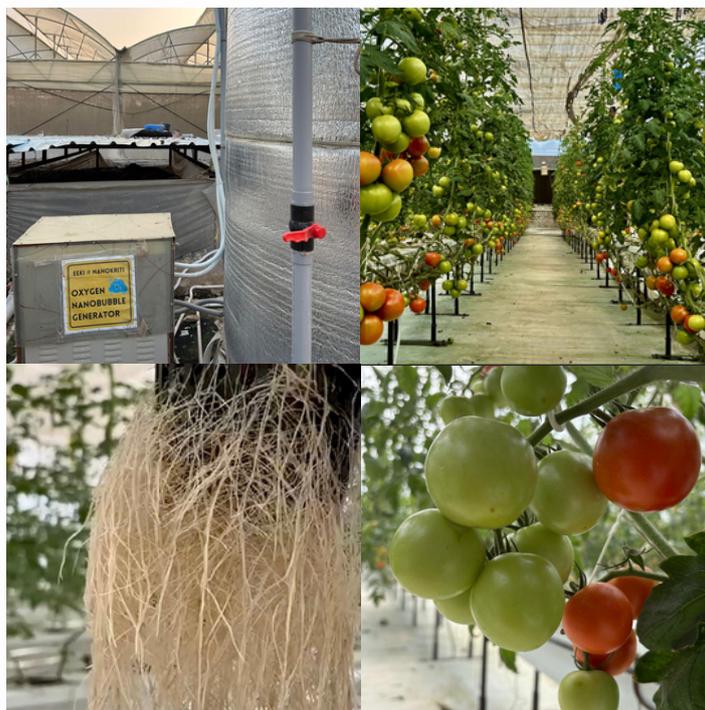


Eeki Foods, a pioneer in sustainable farming solutions, specializes in aeroponic cultivation to grow high-quality vegetables with minimal resource consumption. In their quest to enhance tomato crop yield and quality, they collaborated with Nanokriti Technologies to integrate nanobubbles into their aeroponic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

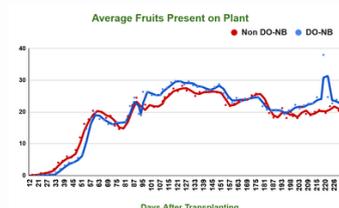
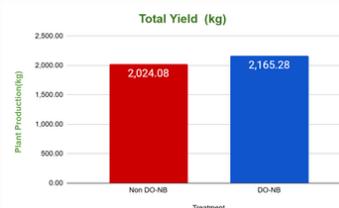
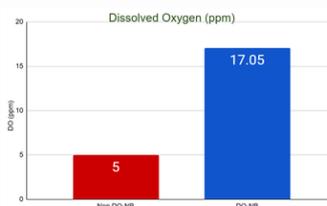
Methodology:

- 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:

- Increase in Tomato Yield:** The integration of nanobubbles led to a 25% increase in tomato production, attributed to improved oxygenation and nutrient uptake.
- Stronger Root Development:** The aeroponic tomato plants exhibited denser and healthier roots, reducing disease susceptibility and improving plant stability.
- Water & Nutrient Efficiency:** The use of nanobubbles resulted in a 15% increase in water and nutrient efficiency, making the system more sustainable.
- Enhanced Fruit Quality:** Tomatoes grown with nanobubble technology were observed to have better firmness, colour, and shelf life, leading to higher market value.
- Reduction in Pathogen Growth:** The high oxygen concentration in the root zone significantly reduced bacterial and fungal infections, leading to lower crop losses.



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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