Case Study: Enhancing Rice Crop Yield and Health with Kyminasi Plants – Crop Booster (KPCB)

Executive Summary

In 2024, a comprehensive scientific trial was conducted by Dr. Aalok Kumar of the Apna Khet Bagan Foundation, in association with Agboost Tech Consultancy, to evaluate the efficacy of the **Kyminasi Plants – Crop Booster (KPCB)** on rice (paddy) cultivation in Bihar, India.

The trial demonstrated that the integration of KPCB technology yielded a **21.4% increase in overall crop production** compared to the control group. Beyond yield enhancement, the KPCB-treated plot exhibited superior agronomic traits, including accelerated root and stem development, enhanced disease resistance, natural weed suppression, and significantly improved chlorophyll levels.

Trial Overview & Methodology

Location: Apna Khet Training Center, Bihar, India | **Crop:** Rice (Paddy) | **Duration:** July 28, 2024 – November 9, 2024 (104 Days)

Irrigation Method: Flood irrigation, scheduled every alternate day

- **Demonstration Plot (KPCB Treated):** 0.85 Acres (Coordinates: 26.622084, 85.582645)
- **Control Plot (Untreated):** 1.00 Acre (Coordinates: 26.621559, 85.586243)

Note: Both plots received the exact same dosage of standard urea fertilizer to ensure that any variations in growth and yield were strictly attributable to the KPCB technology.

Key Agronomic Observations

Throughout the 104-day growth cycle, the KPCB demonstration plot consistently outperformed the control plot across multiple developmental milestones:

Early Vegetative Stage (23 to 43 DAP)

The KPCB-treated crop displayed greater canopy width and a significantly deeper, more lush green appearance compared to the control.
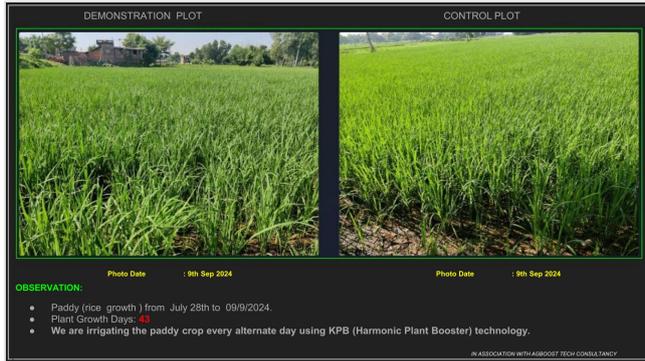
Crop Comparison at 43 DAP

Disease & Weed Suppression (53 DAP)

The control plot exhibited disease symptoms (yellowing leaf margins). The KPCB plot remained disease-free and showed drastically reduced weed growth without herbicides.
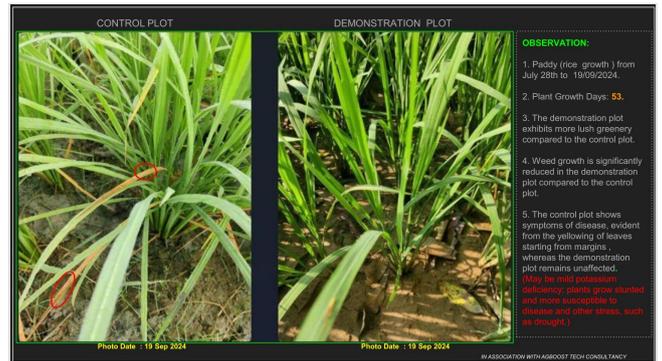
Disease and Weed Comparison
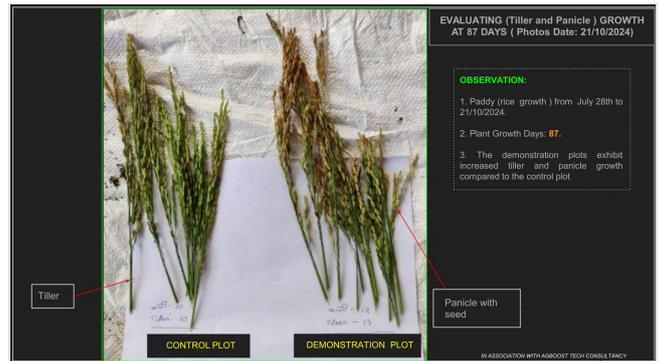
Structural Development (87 DAP)

Root zone and stem analysis revealed substantially denser root architecture and thicker stems in the KPCB plot.

Root Growth Comparison

Reproductive Growth (87 DAP)

The KPCB plot exhibited a higher count of tillers (13 vs. 10) and panicles with seeds (12 vs. 10) per plant compared to the control.


Tiller and Panicle Growth

Advanced Analytics & Satellite Data

The visual observations were corroborated by high-resolution satellite imagery and AI-based sensor data comparing the 2023 (pre-KPCB) and 2024 (post-KPCB) seasons:
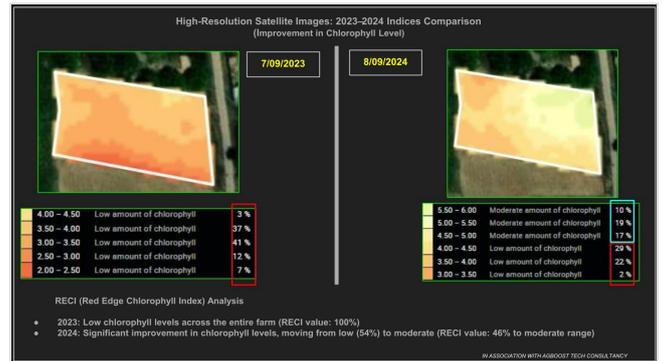
1. NDVI (Vegetation Health)

NDVI analysis revealed a statistically significant increase in crop health. The 2024 KPCB season maintained highly stable NDVI values, unlike the previous year.
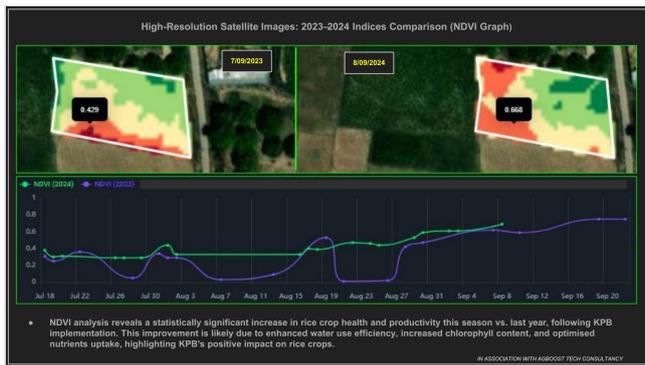
2. RECI (Chlorophyll Index)

Chlorophyll levels saw a dramatic improvement, moving from a state of low chlorophyll in 2023 to a healthy, moderate range in 2024.

Final Yield & Economic Impact

At the time of harvest (104 DAP), the quantitative data strongly favored the KPCB technology:

Metric	Control Plot	Demonstration Plot (KPCB)	Variance
Overall Yield per Acre	20.6 Quintals (2.06 Tons)	**25.0 Quintals (2.50 Tons)**	**+ 21.4%**
Yield per Square Meter	640 grams	660 grams	+ 3.1%
Grain Weight (Sample)	17.70 grams	21.33 grams	+ 20.5%
Tillers per Plant	10	13	+ 30.0%
Panicles per Plant	10	12	+ 20.0%

Conclusion

The 2024 Apna Khet Bagan Foundation trial provides conclusive evidence that the **Kyminasi Plants – Crop Booster (KPCB)** is a highly effective agricultural technology for rice cultivation. By enhancing water use efficiency, optimizing nutrient uptake, and naturally bolstering the plant's immune system against diseases and weeds, KPCB delivered a **21.4% increase in yield** without

the need for additional fertilizers or chemical herbicides. This technology represents a highly viable, sustainable solution for modern farmers looking to maximize profitability while maintaining soil and environmental health.