

# Cikananga's Sustainability Farming Program (PPBC)

Promoting animal welfare and aiding farmers transition from synthetics at our demonstration regenerative farm.



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## News from the farm

By Scott Hartle

Thanks to the research and support of Immy, Kirsten, and Oleg the PPBC program has a better understanding of the impact of soil amendments when starting seeds, soil microbiology and animal food preferences, respectively. In addition to their research, the hard work and dedication of both Immy and Oleg on the farm has been instrumental to our current progress.

After six months of ongoing construction, Farm Three is in full production mode, and Farm One has been reopened after a fallow period. Additionally, our goal of breeding freshwater eels has begun at Farm One with the construction of our holding pen.

We said a heart felt goodbye to Immy, Kirsten and Oleg this month and wished them luck on their future adventures and the completion of their studies. Their research has laid the foundation for future studies, which we are very excited about.



## A Soil Health Assessment.

### Optimizing Germination.

The study by Immy Wesselius from Aeres University investigates the effects of soil amendments on the germination and growth of mustard greens, lettuce greens, and eggplants. Six mixtures, including a traditional mix and five experimental mixes with worm castings, crab meal, and kelp meal, were tested. Key parameters measured were germination rates, plant height, true leaves, root length, leaf area, and dark green color index (DGCI).

Results indicated that worm castings significantly improved germination rates and plant height, particularly for lettuce greens. Crab meal positively affected leaf development, while kelp meal enhanced root length and strength.

Recommendations include adding worm castings (2000 grams) for improved germination, experimenting with smaller quantities of crab meal, and incorporating kelp meal for better root development. The study highlights the importance of tailored soil amendments for different plant species and suggests further research to optimize ratios and ensure cost-effectiveness for sustainable agriculture.



The study by Oleg van Wijlandt from Aeres University compares soil health indicators between PPBC's organic farm (Farm 3) and a conventional farm (Farm 4) in Sukabumi, West Java and establishes a monitoring system. The research involves visual inspections and sample tests, measuring infiltration rate, bulk density, rooting depth, microbial activity, and nutrient levels.

Key findings show Farm 4 has superior soil structure with higher infiltration rates and deeper rooting depths, whereas Farm 3 demonstrates higher microbial activity and earthworm counts. Both farms face nutrient deficiencies, specifically in potassium and ammonium nitrogen.

Recommendations for Farm 3 include implementing standardized monitoring practices, further research into soil structure, runoff, erosion, leaching dynamics, and nutrient management. Additionally, improving earthworm strategies and rainwater infiltration methods are advised. Establishing a comprehensive soil health monitoring system will enable continuous assessment and improvement, contributing to the sustainable management of agricultural practices for the Cikananga Sustainability Farming Program (PPBC).