

Langleys Bio-Energetic™ technology

- The Next Generation Seed Coating Inoculum
- for both Conventional and Regenerative Farming Systems

This Trial -

1. uses Langleys Bio-Energetic™ technology to:
 - inoculate seeds with a multi-strain suite of energized beneficial microbes;
2. Results show increased germination rates and plant performance:
 - increasing Yield and Water Use Efficiency;
 - increase food nutrient density, quality and shelf-life.



Langleys Bio-Energetic Microbes **P.1**

Case Study - Bok Choy Program **P.1**

Results and Conclusion **P.2**

Comparing Regenerative vs Conventional Systems in Horticulture – using new Bio-Energetic Technology.

Report by PJ. Storer (FL Tech) and S. Brain (Field Capacity)

Aim :

An initial shade house trial was conducted at Redlands Research Station to compare the use of Langleys Bio-Energetic™ Microbe blend (BMB) technology with Troforte Biomineral fertiliser and pre-existing microbe system; and also *versus* a Conventional program (+/- BMB microbes).

Case Study: Bok Choy Shade house Trial

Bok choy seeds (3 per pot) were grown for 45 days in washed river sand and then harvested. The seeds were either treated with –

1. Troforté blend microbes (Ag microbes);
2. Langleys Bio-Energetic Microbes (BMB); or
3. No Microbes.

Fertilizer regime 25g per pot –

1. Troforté NPK Biomineral Fertiliser @25g per pot;
2. Conventional NPK (CK 88) @25g per pot;
3. Control (No fertilizer).

Both Biomineral and Conventional programs showed improved germination rates and significantly increased development patterns and growth – particularly in terms of increased Root/Shoot ratios (meaning more root biomass and potentially soil carbon).

Summary of Trial Results (sample of data presented on Pg 2):

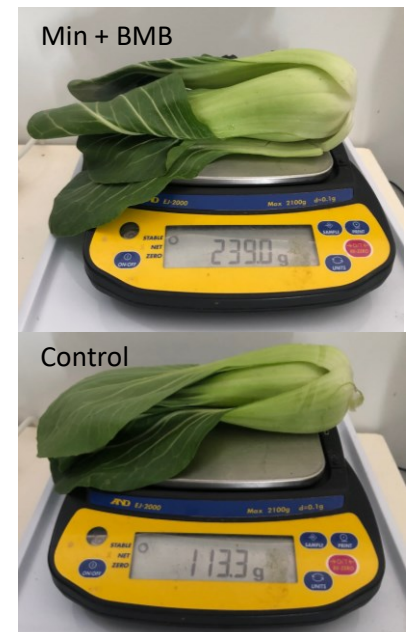
The application of **Langleys Bio-Energetic™ Microbe blend** as a seed dressing:

1. Showed increases in *YIELD and QUALITY*.
2. Shelf life increased (av between 4.3d to 11.7d).
3. Improved on the performance of the pre-existing Biomineral/microbe program.
4. In addition, the Conventional program was also significantly improved by application of the BMB microbes.

Interestingly, it was noted that the BMB treated plants (both Biomineral and Conventional) had less *insect issues* (particularly from fungus gnats).

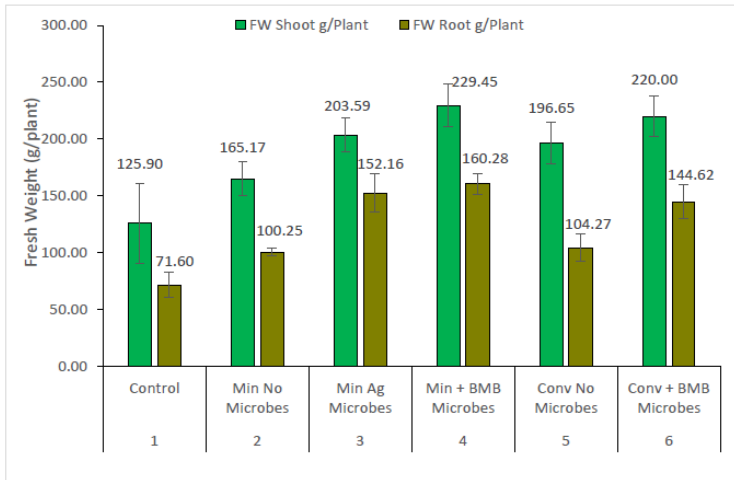
Dry weight (ie fibre with less water in the leaf tissue) and root biomass increased with the BMB - indicating that there are potential cost savings achieved by using less water and decreased requirement for Ag chemicals.

Bok Choy comparison trial

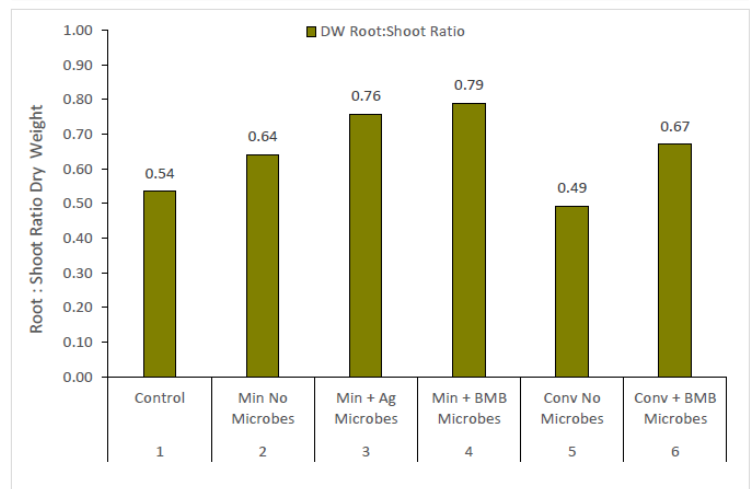
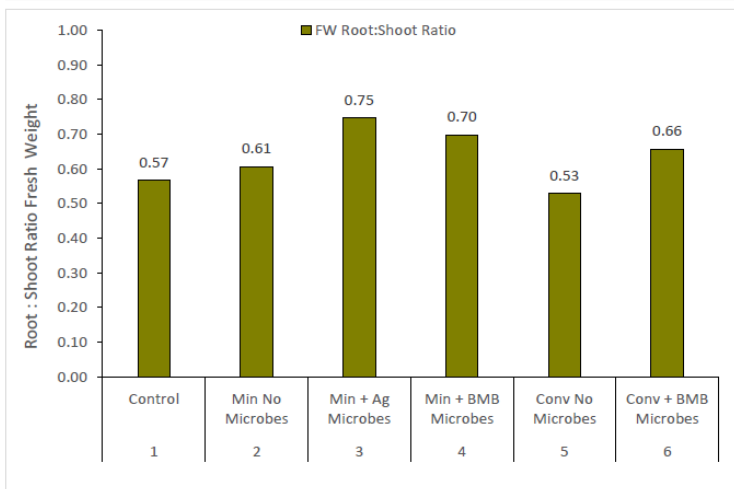
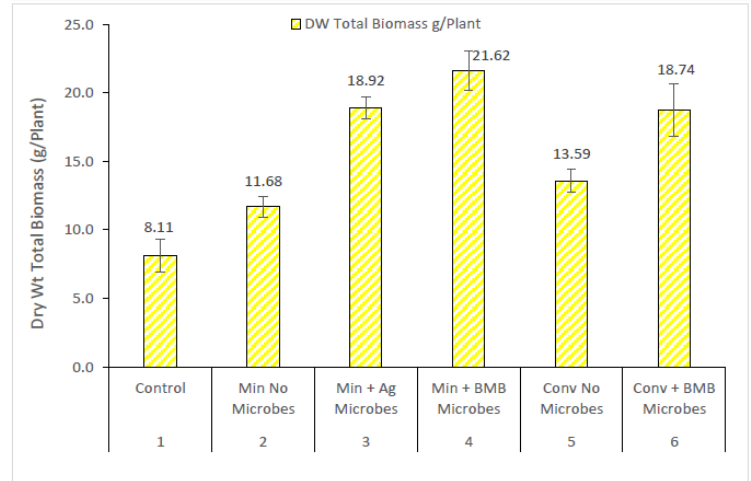
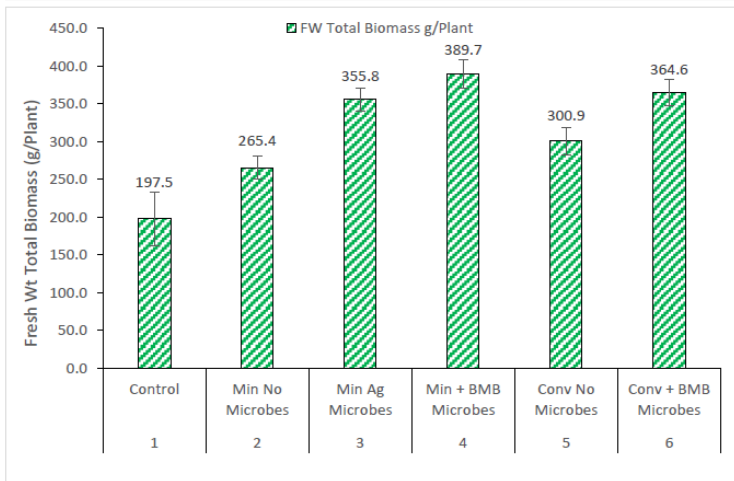
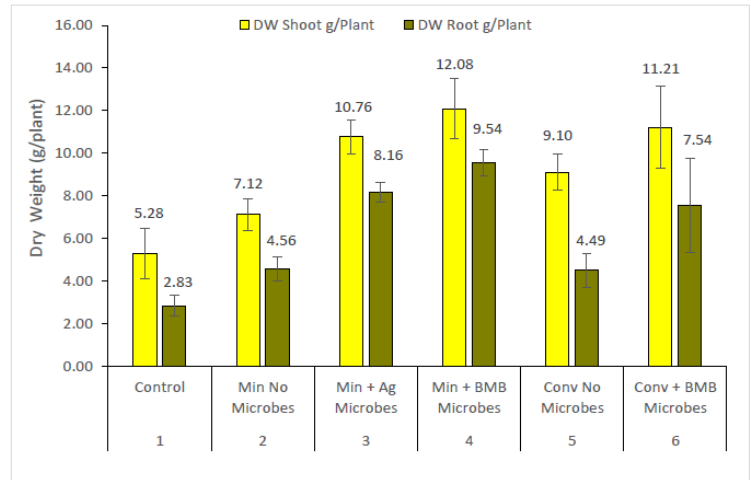


Typical Examples of Trial Bok Choy shoots (Top) Biomineral fert + BMB (Bottom) Control

Fresh Weight



Dry Weight



Take Home Message:

- The application of **Langleys Bio-Energetic™ Microbe blend** as a seed dressing has great potential:
 - It has been successfully used on both Conventional and Regenerative Farming systems. Both -
 - Showed improved plant performance, yield and ultimately profitability;
 - Showed more efficient nutrient uptake;
 - Required less water;
 - Significantly increased mineral nutrition in the leaves (more nutrient dense food).