



Summary of Bio-Stimulant Trial for Soil Regeneration and Climate Proofing

De BORTOLI Family Winemakers, Bilbul NSW

AUGUST 2018 – MAY 2019

The trial covered four vineyards – both conventional and organic: a Sauvignon Blanc 3.9ha, Nericon Durif 54.69ha, an organic Shiraz 13.9 ha and Merlot 4.0ha.

Trial Objective

Determine if Converte Bio-stimulant Plantfood would increase the health of the vineyard ecology (soil and plant), and whether this would have an impact on vine stress resilience and overall quality and yield.

Key Trial Findings

Significant improvements in soil health

- Increase in VAM fungi and nutrient accessibility
- Improved drought resistance
- Increased availability of soluble minerals
- Improvements in the total available pool of Phosphorus

Vine Stress Resilience

- Visual inspection showed more resilient vines withstanding significant heat stress, including an 8-day period of +45 degree temperatures.

Overall Quality and Yield

- Final Baume readings increased across all measured trial areas indicating an improvement in grape quality.

Sample Results: Organic Shiraz Vineyard

41%
increase

in nutrient accessibility
leading to a 77% increase in soluble calcium

13.7%
increase

in drought resistance

106%
increase

in VAM fungi

The large increase in VAM fungi in the organic vineyard is a clear indication that biology is being limited in high chemical input forms of conventional farming. These mycorrhizal fungi are critically important in nutrient availability and cycling and arguably one of the most important measures of soil function and health.

Consistent increase in Baume readings at harvest and yield increase of between **4.5** and **8.2%**



Conclusion

The study concludes that the Converte bio-stimulant has improved the diversity and abundance of soil microbiology, resulting in:



Improved nutrient availability and cycling



Stronger, healthier vines



Added resilience and stress protection

About the trial

Converte Plantfood was applied via drip irrigation and direct foliar spray to vines. Trial progress was monitored by direct inspections, soil sampling for soil chemistry and biology, and testing of Baume readings as grapes matured. The trial concluded that Converte bio-stimulant plantfood added in relatively small doses of 250ml/ha can have a significant and measurable impact on soil ecology. The cost of achieving the trial results was \$15.0 per hectare which resulted in a yield benefit of between 4.5 and 8.2%.

Key Takeaways

- **Soil health and biodiversity play an important role in climate adaption**
- **Bio-stimulants such as Converte's Plantfood feed, house and invigorate the soil and plant microbiome (living microbiology).**
- **High chemical inputs compromise the natural biological functions and communications between soil and plant. In many cases chemical fertilisers applied are either used inefficiently, locked up in the soil or lost completely via evaporation or run-off.**
- **Balanced management practises that put equal weight on physical constraints, chemical management and biological management can help to foster functioning farm ecosystems. Such operations will not only be healthier environments to work in but also more profitable.**

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