

Case Study 7: Lou Raiteri

Action on the Ground - Carbon Farming Futures



Assessment of banded surface applied mill mud as a component of a seasonal nutrient program in sugarcane

BACKGROUND

Lou and Betty Raiteri are second generation sugarcane farmers and have passed on their passion and knowledge to their son Gary. The family farm in the Proserpine area, south of Airlie Beach.

They have embraced new farming systems; changing their row spacing to match their machinery wheel centres (18m) and purchased an RTK GPS system so that all operations are performed with GPS guidance.

The Raiteri's home farm is made up of mostly heavy soil types.

Table 1: Raiteri site. Treatments and descriptions
Soil biology samples were collected and analysed 100 days and 200 days after treatment applications.

Treatment	Description
1	100% nutrition (160N, 114K, 18S) - Control
2	100% nutrition + mill mud banded at 100 t/ha
3	100% nutrition + biology applied at 180 l/ha
4	100% nutrition + mill mud + biology

TRIAL OBJECTIVE

This trial intends to determine the effects on organic carbon levels and soil biology are influenced by applying external microbes to a sugarcane production system.

TRIAL OUTCOMES TO DATE

- Initial assessment indicates that applying biology alone (T3) may have a negative impact on cane and sugar yields compared to the other treatments. However, when biology is applied with another feed source: mill mud (T4), there appears to be a more positive impact on cane and sugar yields. (See Figures 1 and 2)
- Figure 3 highlights the total bacteria count in soil for all treatments. As shown, all treatments had an increase in bacteria counts irrespective of application however only the biology treatment and the mill mud treatment have maintained increased populations. Interestingly, the treatment which had both mill mud and biology applied trended downwards in line with the control.
- Sampling and analysis will continue to identify trends in soil health benefit.

Right:

Lou Raiteri setting up and applicator and block pre-application (early morning)



Figure 1: Raiteri site Cane yields (tonnes per hectare)

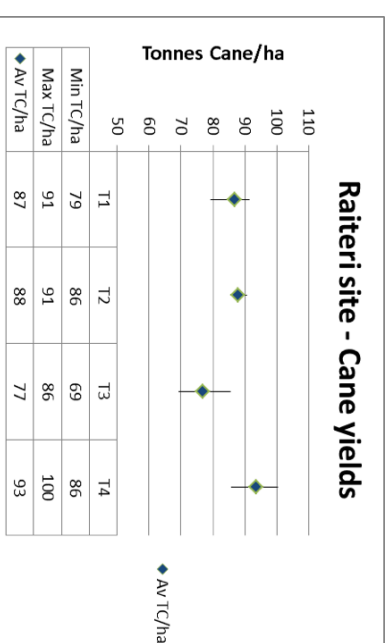


Figure 2: Raiteri site sugar yields (tonnes per hectare))

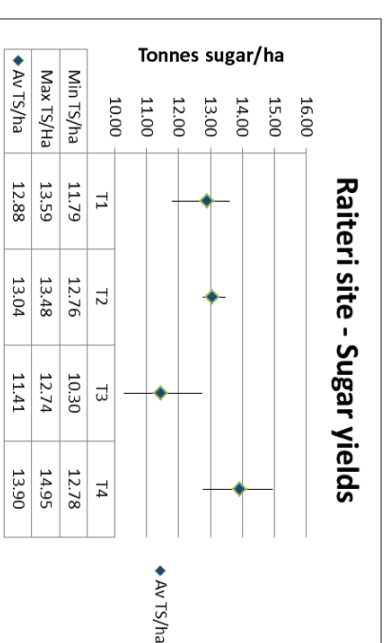
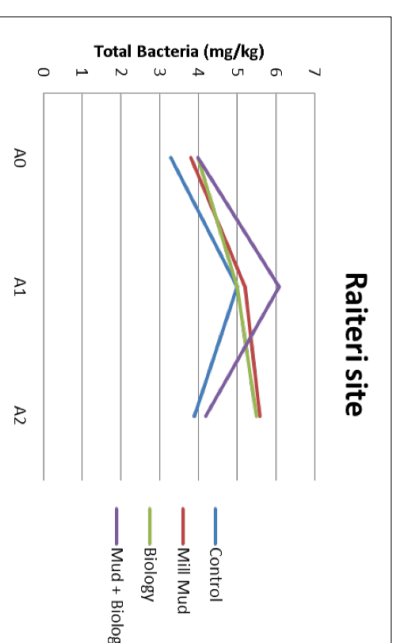


Figure 1: Raiteri site - change in total bacteria numbers (mg/kg) over time. A0 = at application, A1 = 100 days after application and A2 = 200 days after application.



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Below:

Biology being loaded.

