

Biochar Dairy Feeding Trial



Climate & Agricultural
Support PTY LTD



AUSTRALIA NEW ZEALAND
BIOCHAR INITIATIVE Inc. ANZBI



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Regeneration

Biochar Dairy feeding trial



- 4 x dairy's of 250 cattle
 - 1 fed Biochar type 1 90ml/head/day but issues with other additives
 - 1 fed Soft Agriculture - Pty Ltd – Mara Seeds Pty Ltd 200gms/head/day
 - 2 dairy's without biochar



- Measured 6 weekly milk yield, protein, fat, ICCC compared with long term data across 4 dairies
- Manure pH, and other properties
- Soil health (burying biochar)

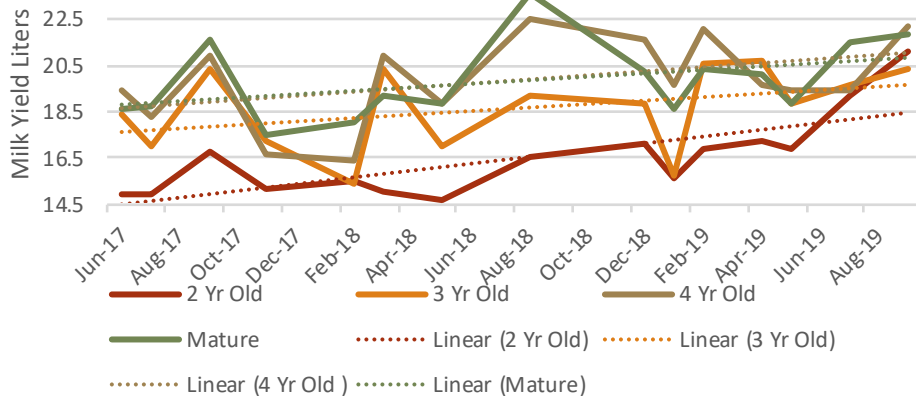


Fleurieu Milk & Yoghurt Company

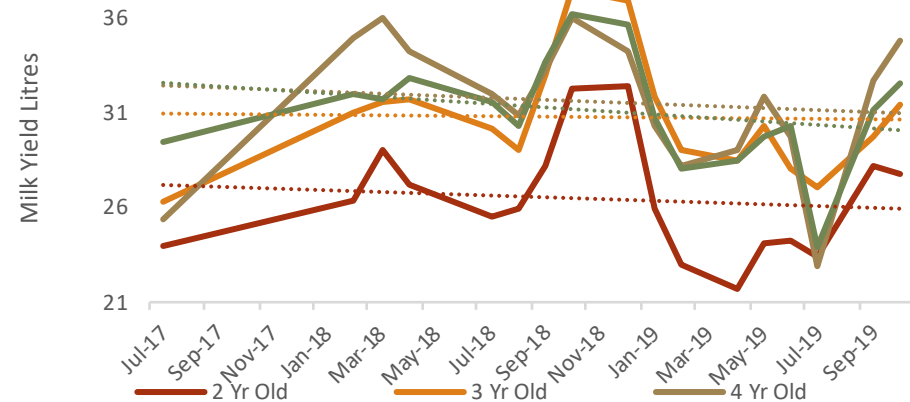
www.fleurieumilkco.com.au

Fleurieu Milk Co – Milk Data Trends

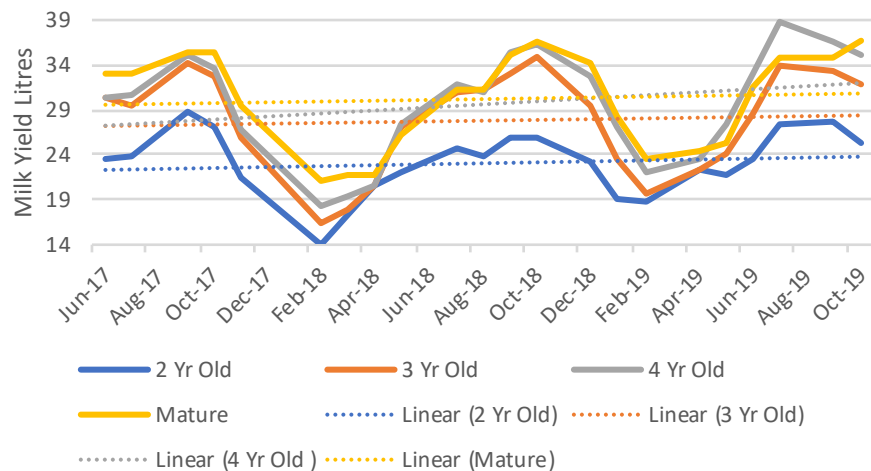
Dairy 1 – Mara Seeds Biochar-



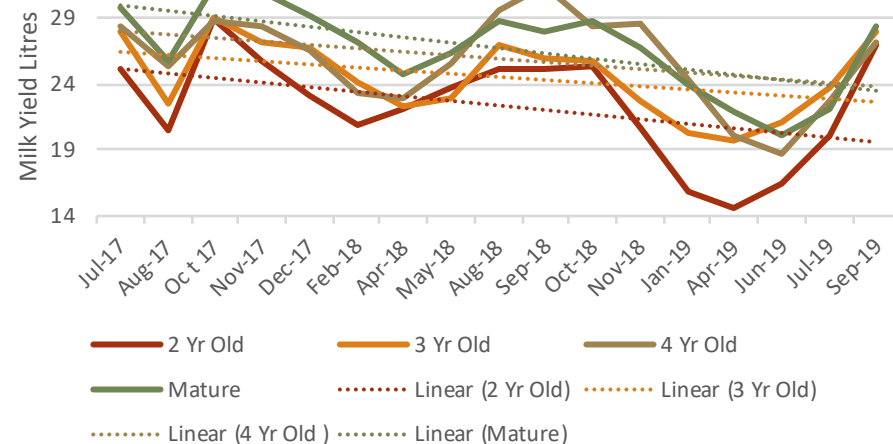
Dairy 2 - Biochar



Dairy 3 No Biochar

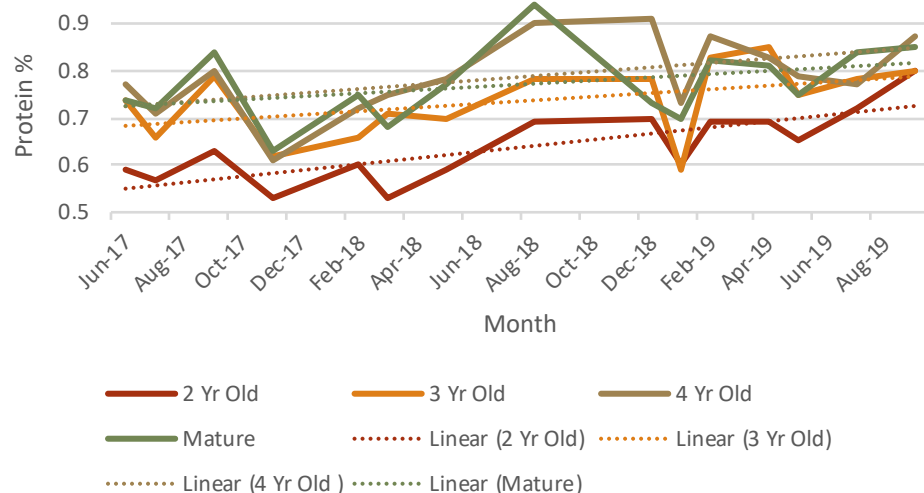


Dairy 4 No Biochar

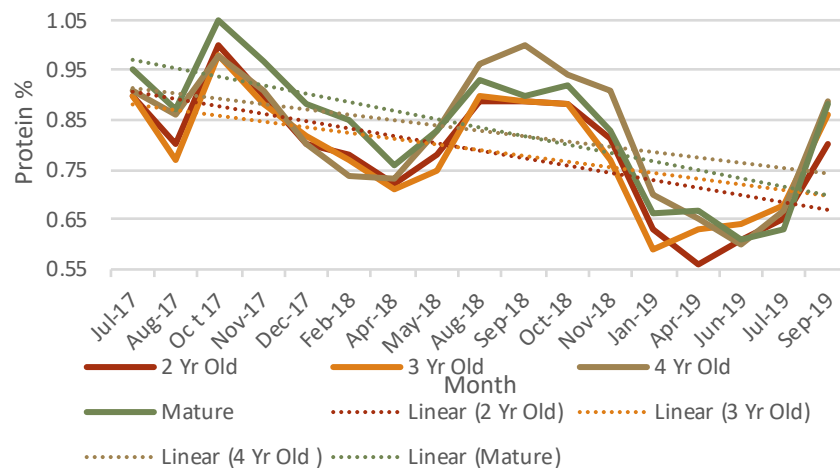


Fleurieu Milk Co – Protein Trends

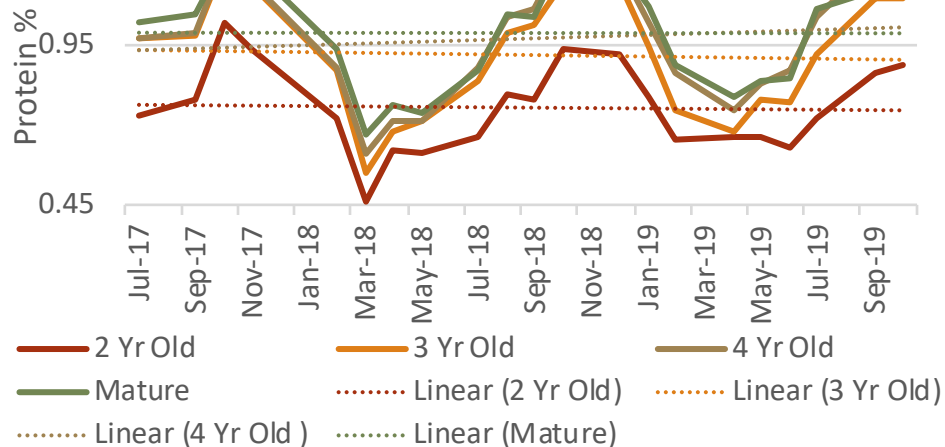
Dairy 1 With Biochar - Protein % over time



Dairy 4 No Biochar

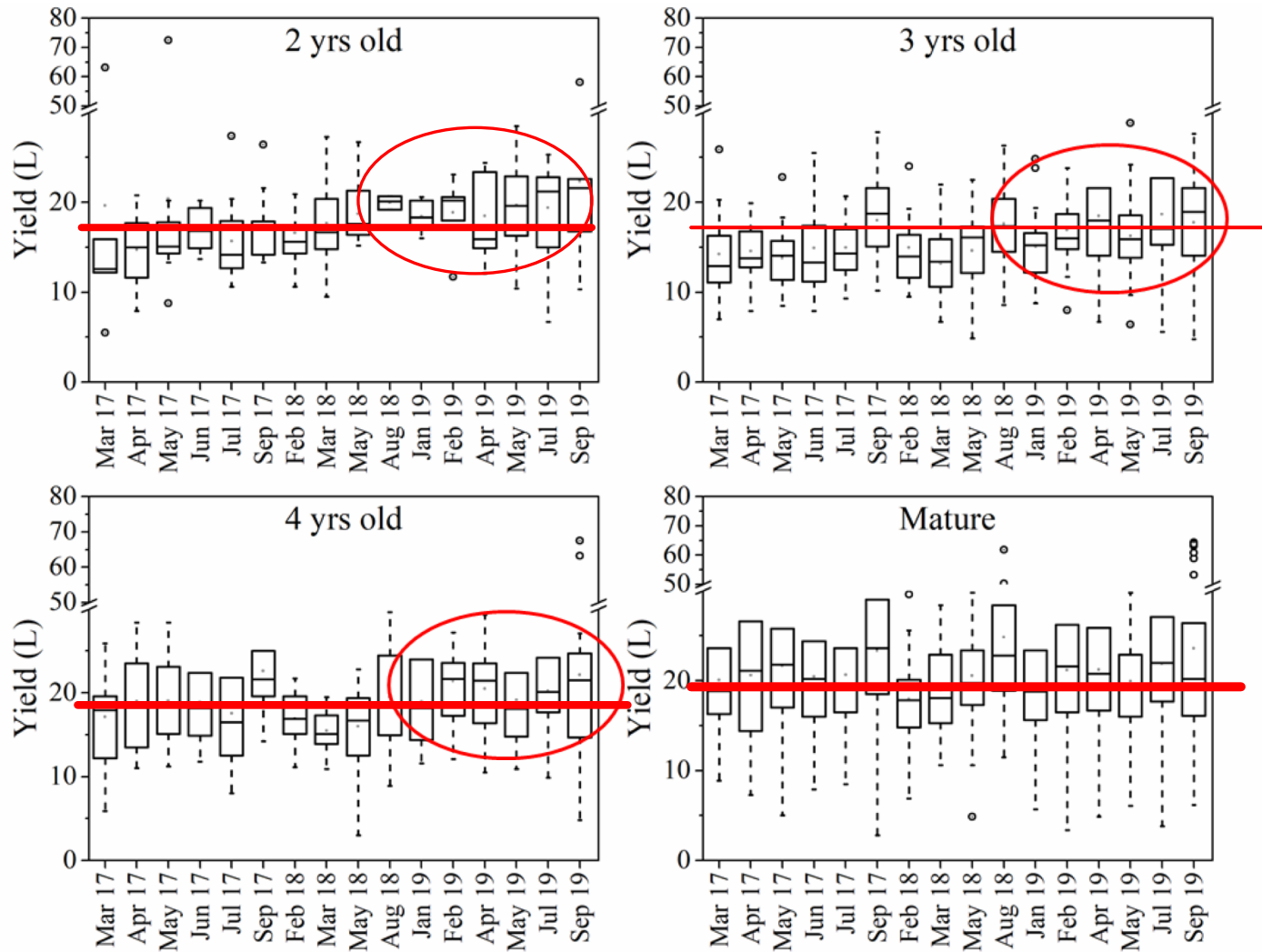


Dairy 3 No Biochar

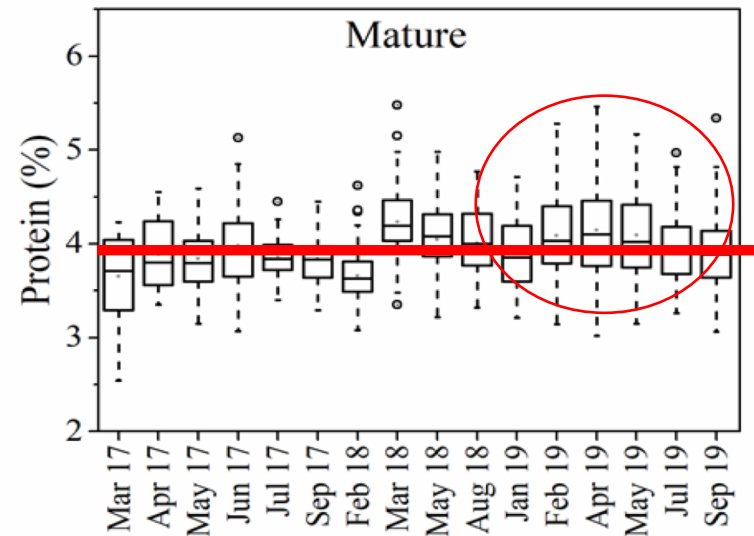
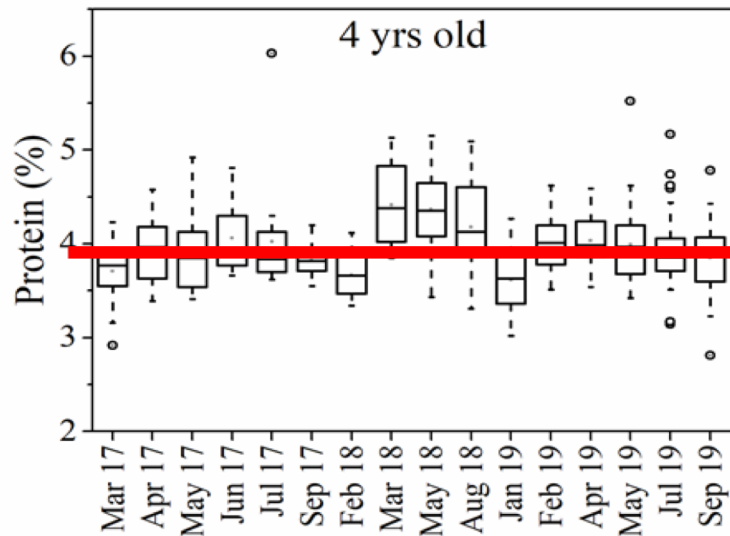
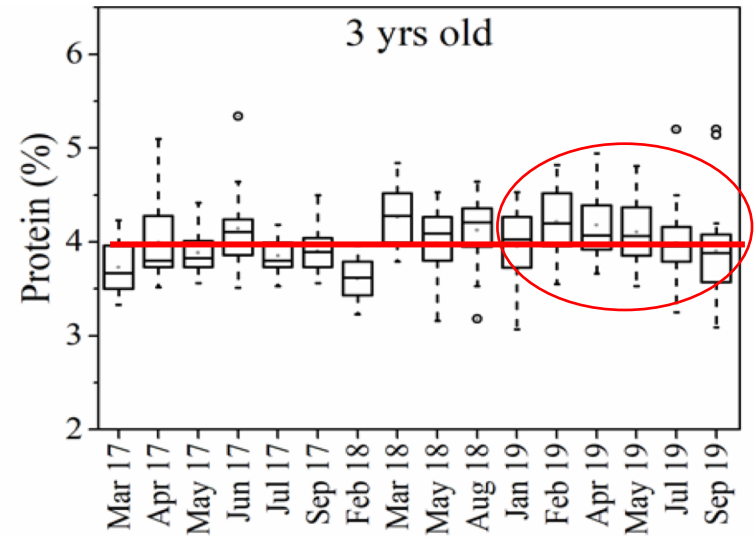
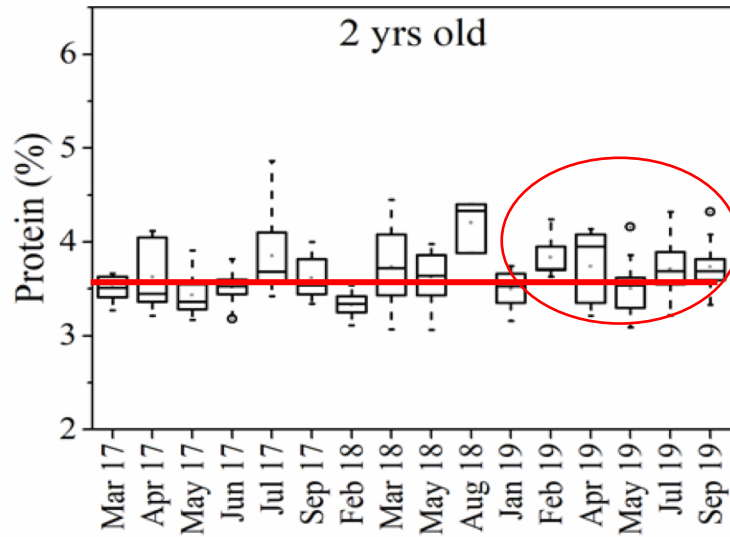


Mara Seeds Biochar – Dairy 1

affect on yield



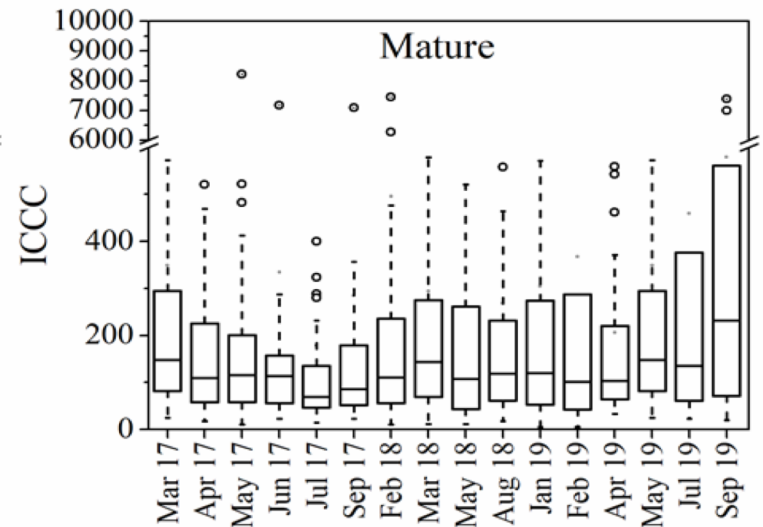
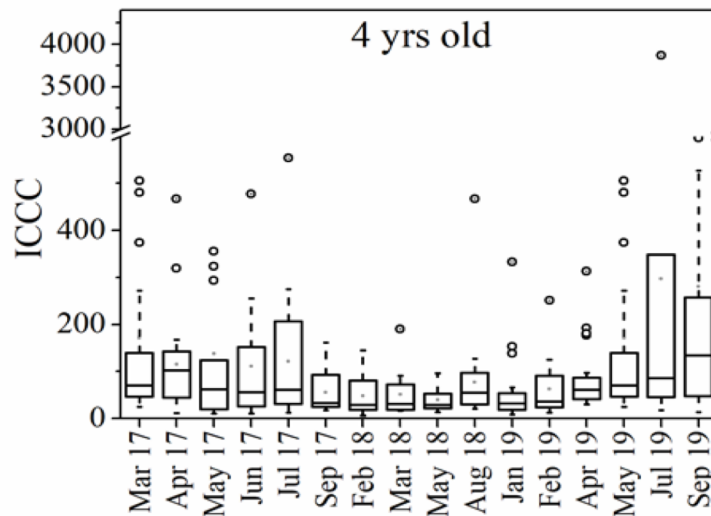
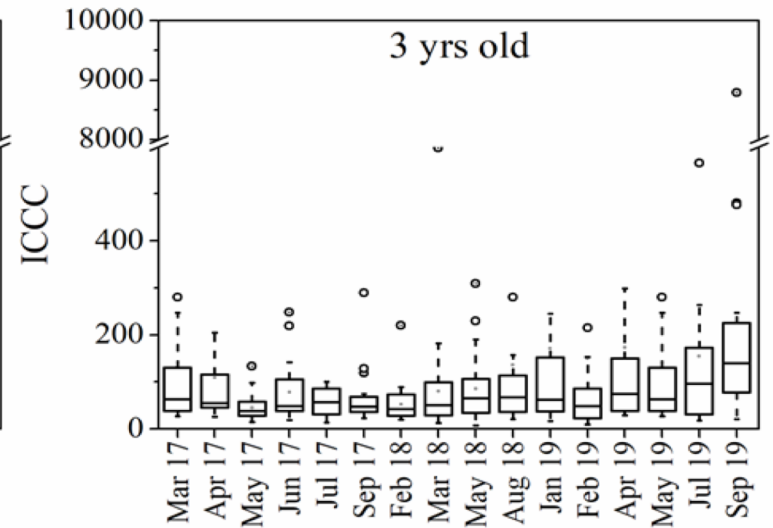
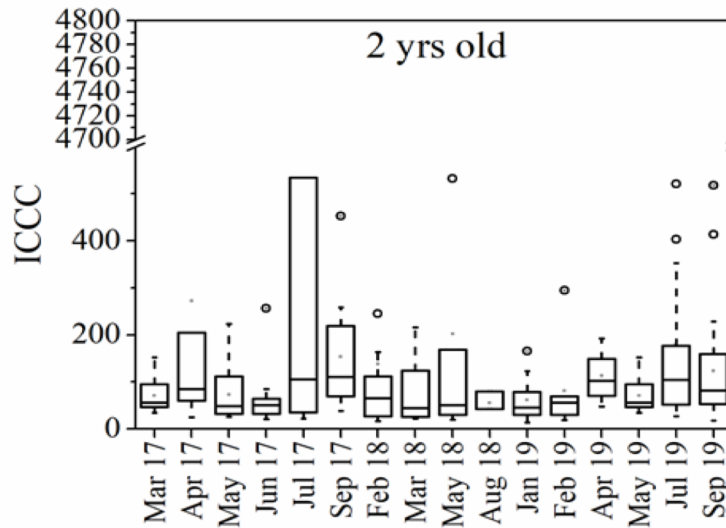
Mara Seeds Biochar – Dairy 1 affect on protein



Mara Seeds Biochar – Dairy 1

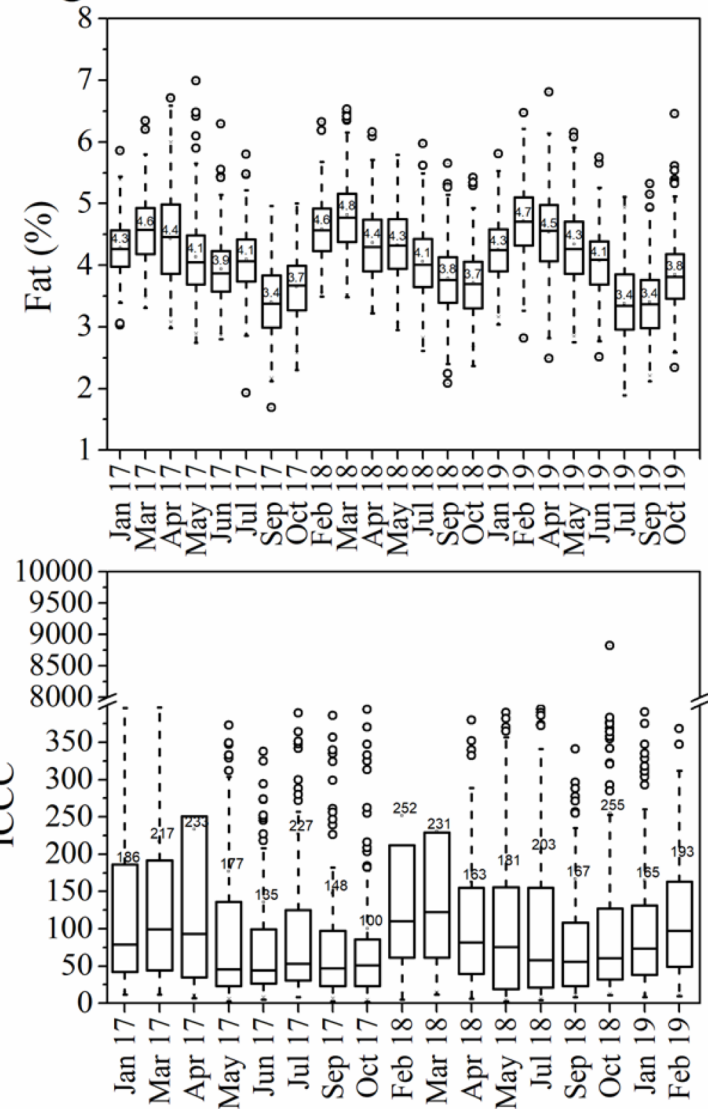
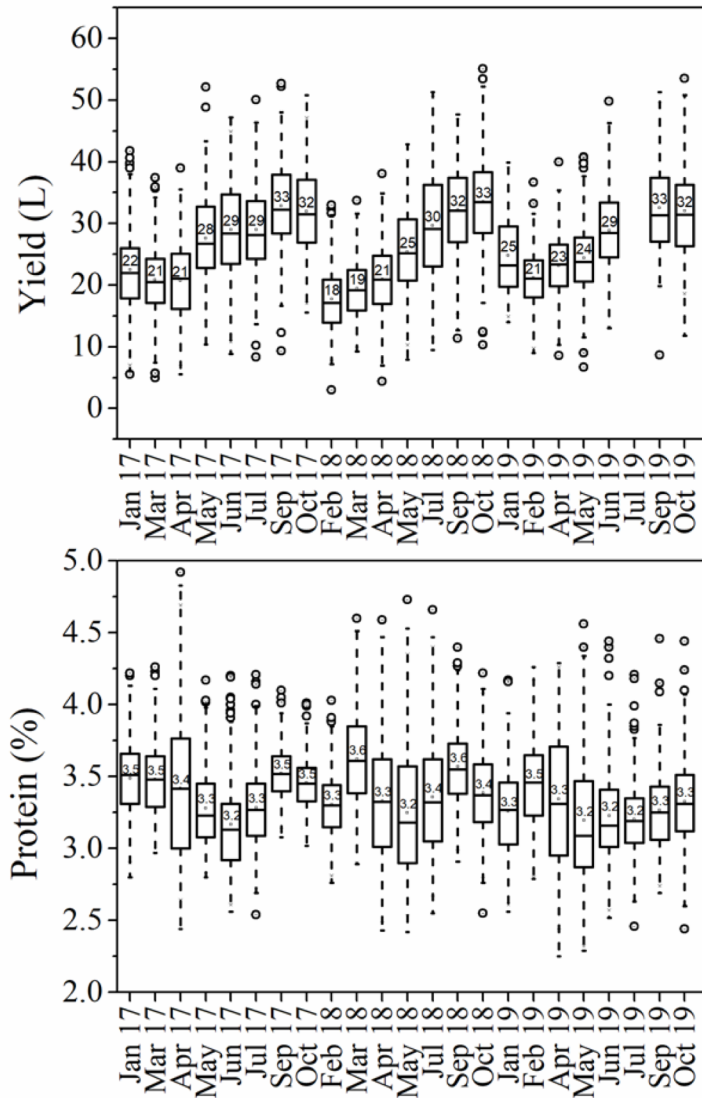
Biochar affect on ICCC

Clarke-ICCC



No Biochar – Dairy 3

Martin-all ages



Economic benefit of feeding biochar

Biochar type	Inclusion rate/COW	Number of Cows	Daily rate	Daily rate	Monthly rate	6 months	Cost	Total Cost 6 months
Biochar cost	200gms	250	50000 gm	50 kg	1.5tonne	9 tonne	\$600/tonne	\$5,400



SA Milk and Solids	inc/head/day	inc/day x 250 cows	\$/day x 250 cows	\$ inc/month	6months
49c/litre milk	2 litres/day	500l/day	\$245/day	\$7,350	\$44,100
\$6.00/kg	0.1 kg/day	25kg/day	\$150/day	\$4,500	\$27,000.00
				Total inc earnings	\$71,100
				Profit 6 months	\$65,700



Conclusions dairy feeding trail

Mara Seeds Biochar may have had a greater effect because;

- Less additives (not minerals added to feed)
- Milk yield starting from a lower base
- Better feed conversion
- Improved milk yield by around 2l/head per day
- Improved solids by around 0.1kg
- Improved profit by \$130,000/yr
- All data being updated and statistically analysed



The regenerative technique of feeding biochar to an animal in the presence of dung beetles also reduces run off of manure and hence enteric fermentation.

See my next presentation to see what it does to the soil and pasture in the presence of dung beetles!



A dung beetle walks into a bar...
"Is this stool taken?"



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