



# TRIAL REPORT SUMMARY

Wilmar Liquid Stockfeeds for supplementation of organic grazing cows in Central Queensland



## INTRODUCTION

Australian organic grazing has experienced increased popularity in recent years, as higher premiums for organic beef have become possible. Certifying beef as organic is a disciplined practice. It's a three-year transition to organic approved land and strict restrictions exist on feed inputs, including prohibition of non-organic hay, grains, molasses and urea-based feeds.

While managing pasture, stocking rates and genetics can improve sustainable productivity, additional supplementation may be required to sustain stock and improve weight gains. This trial set out to investigate the performance of a beef grazing system when using **OrganicFlo® 10NP** as a finishing supplement.



## KEY FINDINGS

- Significant nutritional improvements were observed, which led to live weight gains and better dress weight for cattle fed OrganicFlo.
- Cattle averaged a daily OrganicFlo consumption rate of 2.2L/head/day.
- OrganicFlo demonstrated benefits for organic finishing beef graziers in the dry season in the Central Queensland region.

## TRIAL SITE AND METHOD

The trial was held on a Central Queensland property with an extensive buffel grass organic grazing system over a 100-day period. Two-year old grass finishing Brahman cross steers with an average live weight of 400kg were split into two groups. Each group of 88 cattle was placed in a different paddock with similar area, soil and pasture class, condition, water source and stocking capacity.

- In one paddock, the cattle were provided no supplement
- In the second paddock, cattle were fed OrganicFlo

## RESULTS AND DISCUSSION

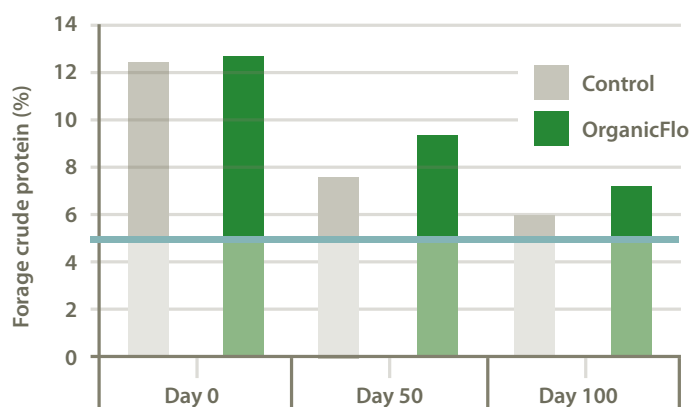
### Intake

While there was no significant rainfall, buffel grass was high ground cover at day 0 and fell rapidly over the 100-day period during the dry season. Over the 100-day trial, cattle averaged a daily OrganicFlo consumption rate of 2.2L/head/day.

### Nutrition

Faecal Near-Infrared (FNIR) analysis from both herds was used to indicate diet quality on days 0, 50 and 100.

### FNIR - Crude protein



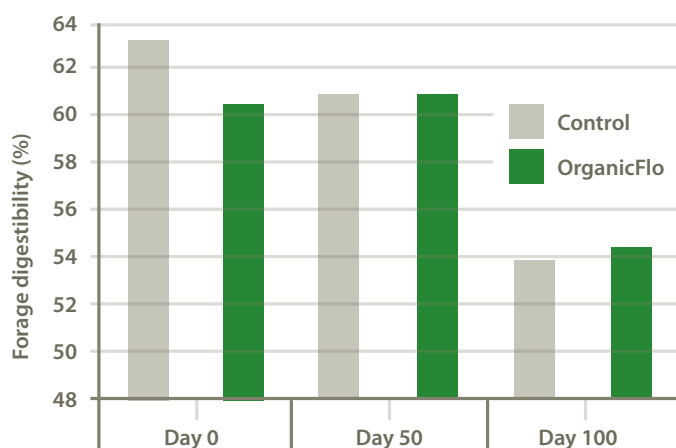
The cattle fed OrganicFlo showed greater amounts of protein supplied in their diet.

*Crude protein requirements for cattle weight maintenance are limited when below 5% for Brahman breeds (Symbio Alliance, 2016).*

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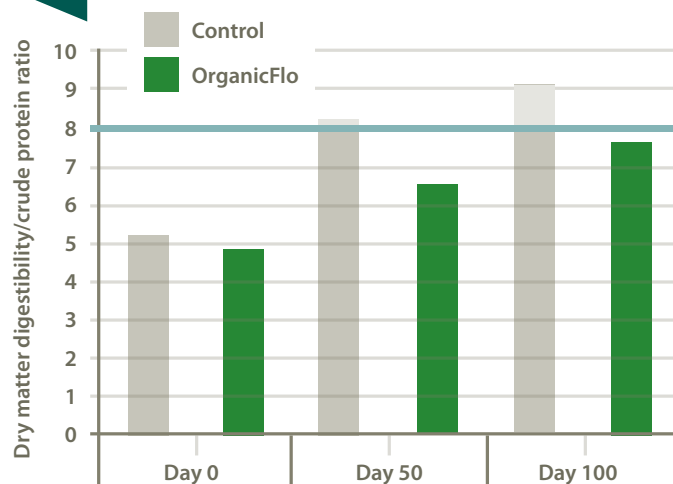


## FNIR - Forage digestibility



Forage digestibility represents the portion of consumed feed that is digested and absorbed, as an indicator of energy and protein available in the diet. The above results support observations of declining ground cover and pasture condition over the trial period.

## FNIR - DMD/CP ratio

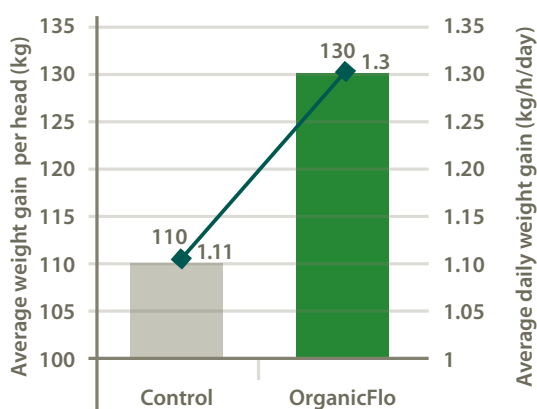


The dry matter digestibility to crude protein ratio indicates whether cattle are likely to respond to protein supplementation. A value above eight suggests a likely response in weight gain from the addition of a protein supplement (Symbio Alliance, 2016). Cattle fed OrganicFlo remained below this value, indicating sufficient nutrition without the need for further protein addition.

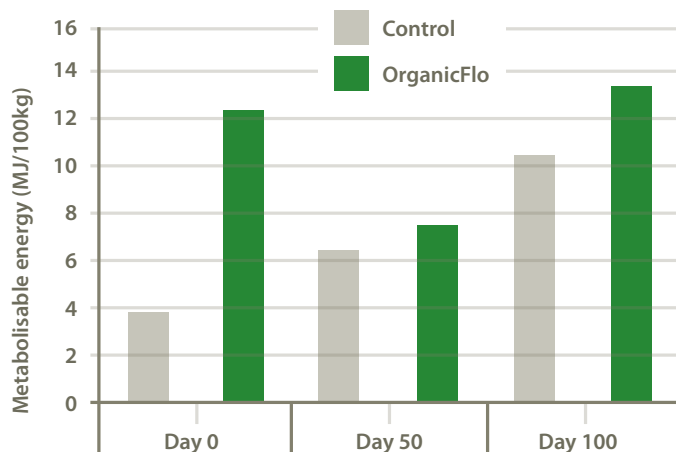
## LIVE WEIGHT

Live weight was measured for each beast upon arrival at the site and 100 days after. Change in weight was averaged for each group after 100 days. The control herd gained 110kg, averaging 1.10kg/head/day. The herd fed OrganicFlo gained 130kg, resulting in a higher live body weight gain of 1.30kg/h/day. The treated group increased the average daily weight gain and total live body weight gain per beast by 18.2%.

## Average live weight gain and daily weight gain



## FNIR - ME (ruminants)



Cattle fed OrganicFlo showed a consistently higher level of available energy.



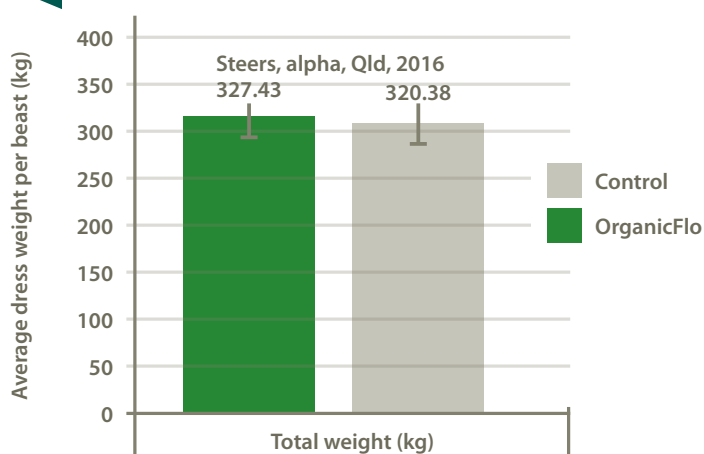


## DRESS WEIGHT

Dress weight refers to carcass weight after removal of head, feet, hide, and internal organs during processing, and is the weight by which meat processors pay graziers in the Australian beef industry (MLA, 2016). The average total dress weight for cattle fed OrganicFlo increased by 7kg more than control.



**Average dress weight of individual carcass**



## ECONOMIC RESULTS

Based on the results above, data was compiled to provide economic outcomes assuming an organic beef market price of \$7.00/kg dress weight (Wright, 2016). The assumption is that, unlike Meat Standards Australia pricing, USDA NOP certified organic beef pricing is solely based on price per kg. The table below demonstrates that, accounting for feed costs, supplementing with OrganicFlo leads to a 30% return on investment.

	Control	OrganicFlo
Average dress weight (kg)	320.40	327.40
Average gain (kg/head)	-	7.00
Organic beef price (\$/kg)	7.00	7.00
Revenue for gain per head (\$)	2,242.80	2,291.80
Product price, ex gate (\$/m3)	-	80.00
Delivery cost (\$/m3)	-	90.91
Product price, delivered (\$/m3)	-	170.91
Feed rate per head per day (l)	-	2.20
Days	100	100
Cost per head (\$)		37.60
Cost per head per day (\$)	-	0.38
Revenue for gain per head (\$)	2,242.8	2,291.8
Cost per head (\$)	-	37.6
Net profit per head (\$)	2,242.8	2,254.2
Incremental profit per head (\$)	-	11.40
Incremental cost per head (\$)	-	37.60
<b>Return on investment (%)</b>	<b>n/a</b>	<b>30%</b>

## CONCLUSION

The results show that OrganicFlo is a viable and economic option as a registered Allowable Organic Input as a protein source for organic beef. Significant nutritional improvements were achieved, which led to live weight gains and superior dress weight for supplemented cattle.