

FLINDERS ISLAND BEEF TRUST PROJECT FINAL REPORT

Producer information:	Flinders Island Productivity Group
Location:	Flinders Island, Tasmania
Enterprises:	Mixed farming- beef cattle and sheep
Project coordinator:	Vic Epstein- contact <i>vicepstein500@gmail.com</i>
Project duration:	2013-2014
Objectives:	The aim of this project was to lift farmer's awareness of how to assess the benefits of treatments and supplements being offered to increase productivity and farm profits by undertaking an "on farm" trial.

PEOPLE, LEARNING AND CHANGE

When presented with a multitude of choices and keen salespersons, Darren Grace, one of the productivity group members and the manager of Markana Park- a 12,500 ha property producing approximately 3,100 yearling cattle (amongst other stock) each year - had to decide

- a) What products, if any, worked in his situation; and
- b) Are they cost effective?

This was his dilemma when told to give trace element supplement to his stock! How could he decide what to give and if it was worthwhile? His farm has paddocks with base pastures of ryegrass and clover or ryegrass, fescue and clover and have had applications of superphosphate.

The answer was to conduct an "on farm" trial of some of the products on offer.

TRIAL OBJECTIVES

The aim was to assess which, if any, trace element supplement improved the growth rate of weaner steers; and, secondly are they cost effective?

TRIAL DESIGN

A trial was designed to answer these questions but, in designing it, lots of questions had to be answered.

1. What animals would be used in the trial?
 - a. Same age group weaner steers were chosen as this was the target group.
2. What needed to be measured?
 - a. Weights – to be consistent they were measured straight off pasture each time. Weights can be measured objectively with a good set of scales that are calibrated and this is the sole trait on which these animals are sold.
3. What trace elements would be tested?
 - a. Copper, cobalt and selenium in different combinations and formulations- 5 groups were established. These are the ones that were recommended by sales representatives or considered most popular.
4. How many animals need to be tested?
 - a. Statisticians can tell us the minimum numbers to get meaningful results. As there were a lot of weaners available it was decided on 50 in each group as they would all be run as one mob after treatment.

5. A “no treatment” group was included.

So to summarise the trial, there were 5 groups of 50 steers. One of the groups had no treatment, and the remainder had varied supplements as shown in Table 1.

RESULTS

The results are summarised in the Table 1 below. Professional help was used to design and analyse the figures to ensure any effects reflected truly significant changes and not just a chance happening.

Supplement Treatment	Weaning wt (kg)	Wt at 120 days (kg)	Wt gain compare with “no treatment” group	Wt at 257 days (kg)	Wt gain compare with “no treatment” group
No treatment	216	261		433	
Copperplan 2 ml Permatrace Co Permatrace Cu Permatrace Se	214	279	Plus 18 kg	442	Plus 12 kg
Permatrace Co Permatrace Cu Permatrace Se	218	281	Plus 20 kg	447	Plus 14 kg
Multimin 5 ml*2 Cobalife 3.5 ml	215	278	Plus 17 kg	444	Plus 11 kg
Cobalife with Se 3.5 ml Copperplan 2ml	216	270	Plus 9 kg	436	Not statistically different to “no treatment”

Table 1: Response to trace element administration.

Three treatment groups showed statistically higher weight gains than the “no treatment” group. However there was no statistical difference between these groups ie. all of these 3 treatments performed the same. At what cost (drugs only) is summarised in Table 2 below.

Supplement Treatment	Unit cost (\$)	Total cost (\$)
No treatment	0	0
Copperplan 2 ml Permatrace Co Permatrace Cu Permatrace Se	0.49 7.74 9.48 5.36	23.07
Permatrace Co Permatrace Cu Permatrace Se	7.74 9.48 5.36	22.58
Multimin 5 ml*2 Cobalife 3.5 ml	3.09*2 0.31	6.49
Cobalife with Se 3.5 ml Copperplan 2ml	0.33 0.49	0.82

Table 2: Cost of trace elements (purchase price only)

Discussion: Where to go from here depends on the farmer. Are any of these regimes cost effective? Each farm will vary as the history of each farm is different and similarly the soil types and pastures. Maybe another trial is needed to see if a single component of any treatment is responsible for the result.

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Key points:

- Farmers are being bombarded by salespersons with information and new products.
- With a bit of careful planning and professional help, “on farm” trials can be very cost beneficial before expensive mass treatments are undertaken.
- Seek professional help to design and analyse a trial to ensure results are truly meaningful