



The cost/benefit of feeding feeder bulls for 14 days at Leopold Downs and Roebuck Export Depot

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Background

A Producer Demonstration Site (PDS) on this topic was initiated by the Kimberley Beef Research Committee (KBRC) to examine:

1. Weight change while stock are waiting at station yards prior to being transported.
2. Weight change in the supply chain between yarding and loading onto the boat.

Prior to loading a boat destined for live export, stock are required to be held at a registered premise (export depot) for a minimum of 24 hours. This allows stock to start adjusting to a probably new feed ration prior to loading.

When an exporter (e.g. Wellards) organises a boat out of Broome, local agents (Elders or Landmark) are notified and given a quota to source. Agents generally meet with the producer on-station, look over the cattle, agree on a sale price, draft a suitable line and sign a contract. The producer is paid on delivery weight at the export depot (weighed straight off truck). Stock purchased out of the export depot incur either a 3% deduction on their final liveweight (to account for gut-fill) or 12 hours off feed (wet curfew) is imposed prior to that weighing.

On-station stock are generally retained in secure, well grassed and easily mustered holding paddocks, where available, for 2–4 days prior to transporting. Stock sold out of the export depot are usually held for 4–5 days prior to sale, allowing them to recover from the stress of transportation and replace lost gut fill.

In circumstances where range condition in the paddock is poor or stock are likely to escape, stock are generally held at the station yards. The amount of time stock spend in the yards prior to transporting varies significantly and depends on a number of factors, such as accrual of sufficient numbers to fill a truck and their required date of arrival at the export depot. While waiting to be transported, stock are generally fed hay and occasionally pellets, depending on management.

As part of this demonstration feeder bulls were fed for 14 days on-station and again for 14 days at Roebuck Export Depot (RED). It is not common practice for cattle to be held on feed for 14 days at RED, however, due to quarantine requirements, cattle have been held on feed at RED for as long as 60 days prior to export to a bluetongue sensitive market in the Middle East.

Methodology

The PDS measured weight change in 180 Brahman X feeder bulls, initial average liveweight 246 kg (range 200–350 kg), over 28 days in September 2012. Stock were weighed on day one, twice on day 14 (before and after transport from station to RED) and on day 28. A 12-hour wet curfew was applied to all treatments prior to weighing, to reduce the influence of gut fill on weights. Phase one was completed at Leopold Downs station (Leopold), north of Fitzroy Crossing. Stock were randomly drafted into three treatment groups of 60 head. Group 1 was fed shipper pellets *ad lib*, Group 2 fed oaten hay *ad lib*, and Group 3 were placed in a holding paddock containing native pasture.

After 14 days on these feeding regimes at Leopold the feeder bulls were trucked to RED, Broome, for phase two of the demonstration. During phase two at RED all stock were fed shipper pellets and oaten hay *ad lib* for 14 days. The same shipper pellets and oaten hay used in phase one were used in phase two.

Results

Costs associated with handling and feeding stock at Leopold Downs and RED have not been included in the calculations below. Costs (time, wages, machinery etc.) vary between stations and yard fees at RED vary with numbers on feed and length of time held. These costs have not been included in the analysis—to keep the results focussed on weight change and fodder costs. No cost accounting for pasture consumed in the holding paddock has been considered in the below results.

Checking/feeding stock daily at Leopold Downs required one person for approximately 2 hours per day. It took three stockpersons approximately 4 hours to muster stock out of the holding paddock on horseback. The holding paddock fence was checked on day five and day nine to ensure it remained stock-proof. No yard fees were charged by RED for stock held as part of the PDS.

Phase 1 – net value of feeder bulls after 14 days at Leopold Downs and delivered to RED (days 1–14)

Feeder bulls held in the holding paddock for 14 days at Leopold Downs and delivered to RED (point of sale) returned the greatest net value of \$431/head. The net value of feeder bulls fed pellets was \$390/head and feeder bulls fed oaten hay was \$385/head.

Table 1 Average cost benefit at point of sale (RED) to feeder bulls on completion of Phase 1 on Leopold Downs (days 1–14)

Ration	Induction weight (kg)	Feed costs per feeder bull (\$)	Sale weight at RED (kg)	*Value at sale (\$)	**Net value (\$)
Pellets	246	48.00	243.6	438.00	390.00
Oaten hay	246	47.00	240.1	432.00	385.00
Holding paddock	246	0	239.7	431.00	431.00

* Calculated at \$1.80/kg.

** Net value – sale weight x \$1.80/kg less feed costs incurred to attain sale weight.

Phase 2 – net value of feeder bulls after 14 days at RED (days 14–28)

The average net value of feeder bulls after 14 days on feed at RED was \$431/head for Group 1 (previously fed pellets), \$426/head for Group 2 (previously fed oaten hay) and \$419/head for Group 3 (previously fed native pasture).

Table 2 Cost benefit of holding feeder bulls at RED with point of sale at RED after 14 days

Ration	Induction weight (kg)	Feed costs per feeder bull (\$)	Sale weight (kg)	*Value at sale (\$)	**Net value (\$)
Pellets (previously fed pellets at Leopold)	243.6	61.00	273.5	492.00	431.00
Pellets (previously fed oaten hay at Leopold)	240.1	51.00	265.0	477.00	426.00
Pellets (previously in holding paddock at Leopold)	239.7	51.00	261.0	470.00	419.00

* Calculated at \$1.80/kg.

** Net value – sale weight x \$1.80/kg less feed costs incurred to attain sale weight.



Feeder bulls from Group 1 (pink tags) eating shipper pellets in poly trough at Leopold Downs station.

Discussion/summary

Phase 1 – at Leopold Downs station

It was more profitable to hold stock in a holding paddock than feed pellets or oaten hay while waiting to be transported. The difference in net value between the holding paddock and other treatments was approximately \$41. There was no measured weight gain ‘at the point of sale’ when providing a more nutritious ration, for example pellets vs. native pasture, for 14 days prior to trucking. Therefore, the lower net value received was solely due to the cost associated with purchasing fodder. Pellets cost \$570/tonne and oaten hay cost \$470/tonne, including GST, landed at Leopold Downs.

Where practical the most profitable method of holding stock on-station prior to sale is in a holding paddock. Where a secure, watered and well grassed holding paddock is not available, feeding shipper pellets provided a better net value per feeder bull than oaten hay. Shipper pellets were also easier to handle (quicker to feed out) and the bags could be re-filled and used again.

Phase 2 – at Roebuck Export Depot

Feeder bulls previously fed pellets at Leopold returned the best net value (\$431) after 14 days on feed at RED. This was probably because they were accustomed to the pellet ration, having been on them for 14 days at Leopold. Feeding logbooks at RED showed that,

over the 14-day period, stock previously accustomed to pellets ate ~\$10 more per animal than feeder bulls in the other treatments. Feeder bulls previously fed oaten hay at Leopold returned the next best net value of \$426. Stock from the holding paddock returned a net value of \$419.

These results indicated that feeder bulls previously fed shipper pellets on-station returned a greater net value after 14 days on feed at RED than feeder bulls previously fed oaten hay or from the holding paddock.

Managing stock prior to sale

There were financial benefits from holding stock in a holding paddock until required for transport. This assumes the paddock is stock-proof, has adequate water and feed and can be easily mustered.

Where holding stock in a holding paddock is not an option, the next best option was to deliver stock direct to RED and put them on feed until the point of sale, which negates cartage costs on fodder and also frees up yard space. It **SHOULD BE NOTED** these results were calculated after 14 and 28 days of feeding. Experience at RED indicates an improved return on investment can be achieved by holding stock for just 4–5 days rather than 14 days prior to sale out of RED.

The *Model Code of Practice for the Welfare of Animals (Cattle)* implies that in regards to food, cattle should not be deprived of access to food for periods longer than 48 hours, unless in transit; then the code of practice for transport will also apply. If stock are mustered into yards, drafted and trucked, the owner will need to consider 'time off feed' and make fodder available, if required.

Finally, where leaving stock in a holding paddock is not an option and there are insufficient numbers to fill a truck to get to the export depot, the most profitable method was to hold them in station yards and feed pellets.

Future producer demonstration sites:

- Look at weight change and feed consumption over 3, 5 and 7 days respectively on-station and at RED. It is hypothesised that sending stock to RED for 4–5 days (until the point of sale) could provide an improved cost/benefit.
- Look at how holding paddocks are managed across the Kimberley and how range condition can be improved.



Feeder bulls, from Group 2 (green tags) in pen number 5 at RED.

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