



Kerwee Lot Feeders Pty Ltd

REPORT

2007

BIOAKTIV ANIMAL DRINKING WATER SUPPLEMENT

BIOAKTIV COMMERCIAL CATTLE TRIAL IN FEEDLOT OPERATION

KERWEE LOT FEEDERS PTY LTD - REPORT 5/05/07

Introduction:

Kerwee Lot Feeders Pty Ltd is located on the Darling Downs in South-East Queensland.

- Established since 1973 with a capacity of 9,100 head. The facility has National Feedlot Accreditation Scheme (NFAS No.247) accreditation, and is also accredited for European Union, Saudi Eligible, Natural Beef, Certified Australian Angus Beef, Meat Standards Australia (MSA) and Livestock Production Assurance (LPA) beef producing systems.
- Recognized by the Australian Beef Industry as a leading business in its field winning a number of awards for its design, management and overall operation.

Owner, Mr. Robin Hart's standing is recognised Australian wide, not only for his Kerwee feedlot operation, but also for his pioneering leadership in the Australian feedlot industry. His contribution to the beef industry includes the development of the Meat Standard Australia beef grading system through the Australian Lot Feeders Association where he was a founder and past president. He was one of the early pioneers to develop an exporting market for quality beef to Japan. This market has seen enormous growth.



TRIAL REFERENCE:

Dr. John Gaughan is the Senior lecturer, School of Animal Studies at the University of Queensland, Gatton, Australia. He is also the Treasurer of the International Society of Biometeorology and Animal Biometeorology Group.

He first conducted controlled trials on the effect of BioAktiv on health and growth performance of pigs in May 2001. University of Queensland, project number 2000100565.

Dr. Gaughan recommended a trial with cattle to be conducted with a credible and well managed feedlot, under commercial condition. He has conducted other research work on intensive farm management with several feed lots including the Kerwee feed lot operation.

Dr. Gaughan is a source of reference only, suggesting that a cattle trial be conducted with a commercial operation such as Kerwee Feed lot.

Mr. Jim Cudmore, General Manager of Kerwee Lot Feeders P/L, oversees the operation and personally conducted and monitored the trial.

His background includes a Bachelor of Science majoring in Microbiology and Biochemistry, and included working for the Commonwealth Scientific and Industrial Research Organization, (CSIRO), and practical farm management in cattle.

On the recommendation of Dr. John Gaughan, BioAktiv Australia approached the owner, Mr. Robin Hart, and general manager, Mr. Jim Cudmore for their interest and involvement for this commercial trial of BioAktiv.



TRIAL PARAMETERS

Trials conducted in university research can be difficult to compare with commercial operations. Different management and quality control systems can influence the data being analysed.

This includes factors such as -

- variables in weather
- cattle breeds
- source and background of cattle
- how the cattle are prepared and managed prior to feedlot entry
- length of time in feedlot
- transport duration and weather conditions

A trial in a commercial operation is conducted within their management system. The trial is implemented and conducted over a longer period of time to minimise the variables associated with cattle background, ration formulation, weather and seasonal conditions.

SELECTION CRITERIA

Kerwee Lot Feeders Pty Ltd has a:-

- High standard of management
- Long term knowledge of feeding of cattle for the Japanese and Korean export market
- Strict grading and supervision
- Selected British bred cattle fed in excess of 150 days
- Production system that excludes hormone growth promotants, antibiotics in the feed, tallows and genetically modified (GMO) feedstuffs (except for short fed cattle).
- Monitored long term data

AIM OF COMMERCIAL TRIAL

Kerwee Lot Feeders Pty Ltd would conduct a trial to ascertain various performance criteria with grain fed cattle, therefore determining the commercial viability of using BioAktiv water supplementation in the production system. A number of factors were to be monitored with the main focus being:-

- Feed conversion
- Weight gain
- Mortality
- Dressing percentage

METHOD

Given the operational system already implemented at Kerwee, and the nature of the commercial operation, control groups of cattle were not used to compare cattle supplemented with BioAktiv. Past data of lot fed cattle would be used to compare with the BioAktiv trialed results.

Kerwee would introduce BioAktiv to the feedlot water supply where monitoring would be focused on the Midfed (min. 150 days) to long fed cattle (240 days). This is due to consistency of breed, sourced areas, preparation and long term performance data over the past 2 to 5 years.

BioAktiv Drinking Water, was injected into the feedlot's drinking water system, managed and monitored personally by manager, Mr. Jim Cudmore.



REPORT – Jim Cudmore 5/05/07

Bioaktiv water supplement was added to the cattle drinking water in October 2004. However due to application rate difficulties with the dosing system at the time, product was applied at less than the desired rate.

From January 2005 the recommended application rates were achieved, and therefore data prior to this may be ignored.

The dates specified in each of the summary graphs refer to the starting dates of each lot of cattle on entry to the feedlot.

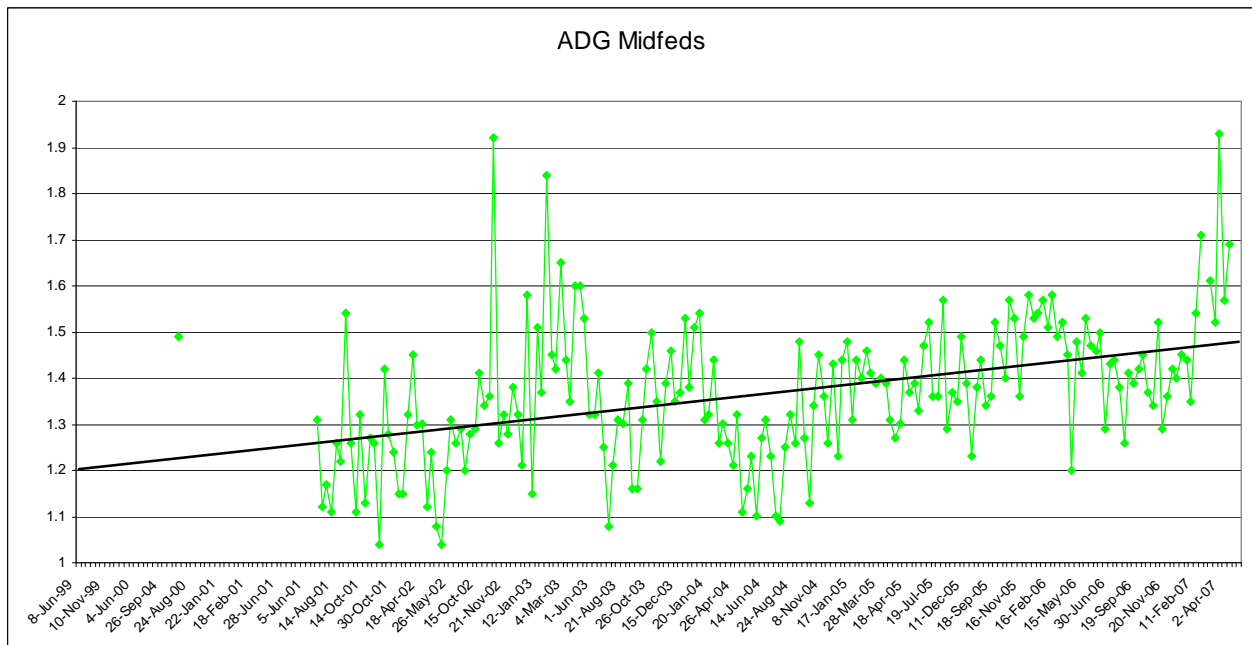
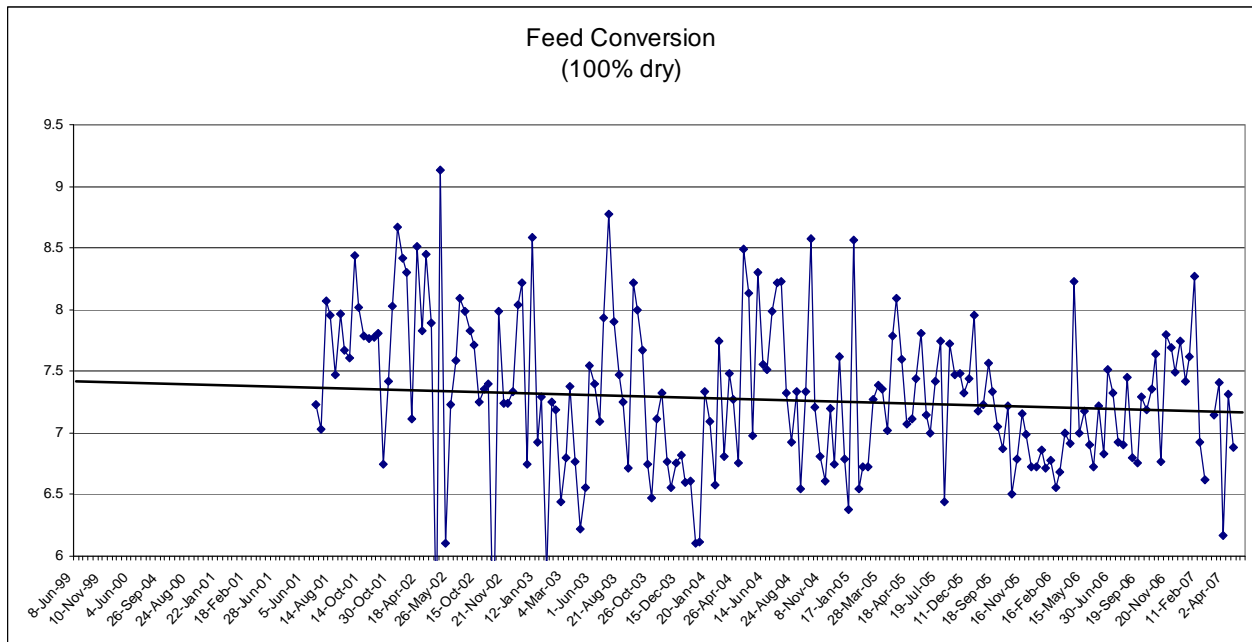
Note - Some lots of cattle, more particularly the midfed category, have cattle exiting the feed program earlier than the desired days of production, and because all close out data is based on complete lots of cattle entering the feedlot, data can be skewed by the numbers exiting at different times until conclusion of the lot.

Trials with lot fed cattle can be difficult because of the production variables that can exist. As already mentioned, the considerations are variations of weather, breeds, diet, property origin, background, transport distance, animal health and immune status.

The focus was on two categories of feeder cattle trialed on BioAktiv Water Supplement

Midfed bullocks

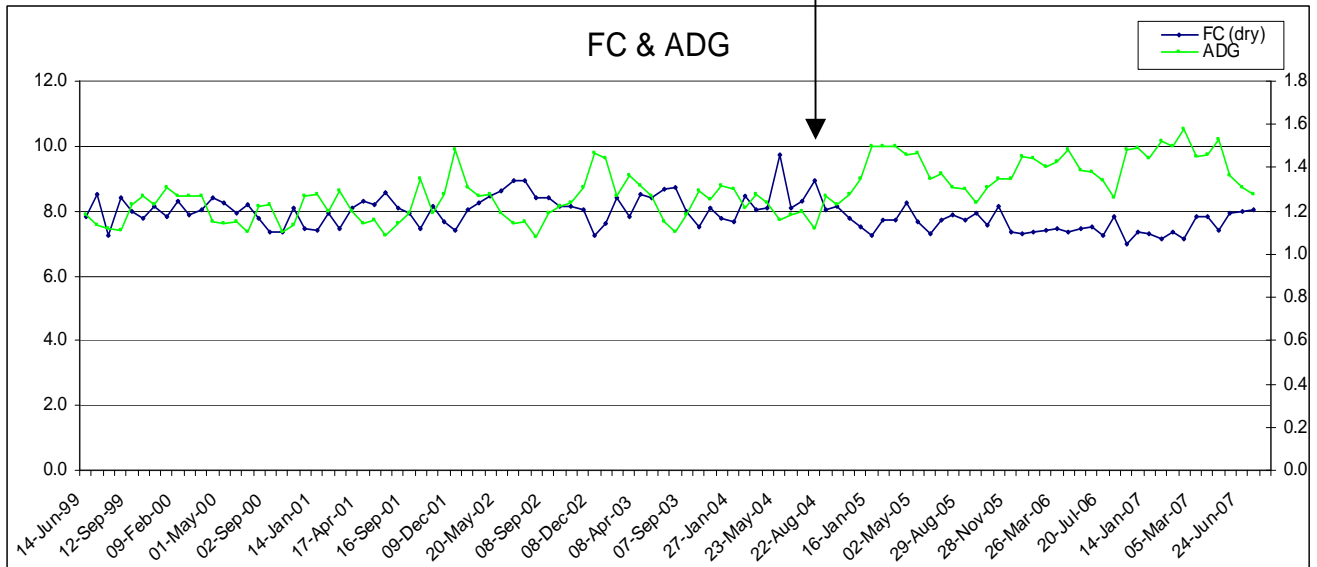
- British and British cross 15-18 month old steers at entry, fed for a minimum of 150 days
- No growth promotants were administered to cattle
- Majority of cattle entering the feedlot (70%) in 2005 were back grounded incl. Vaccination for min. 30 days.
- Cattle were purchased either direct from auction system or private treaty ex paddock



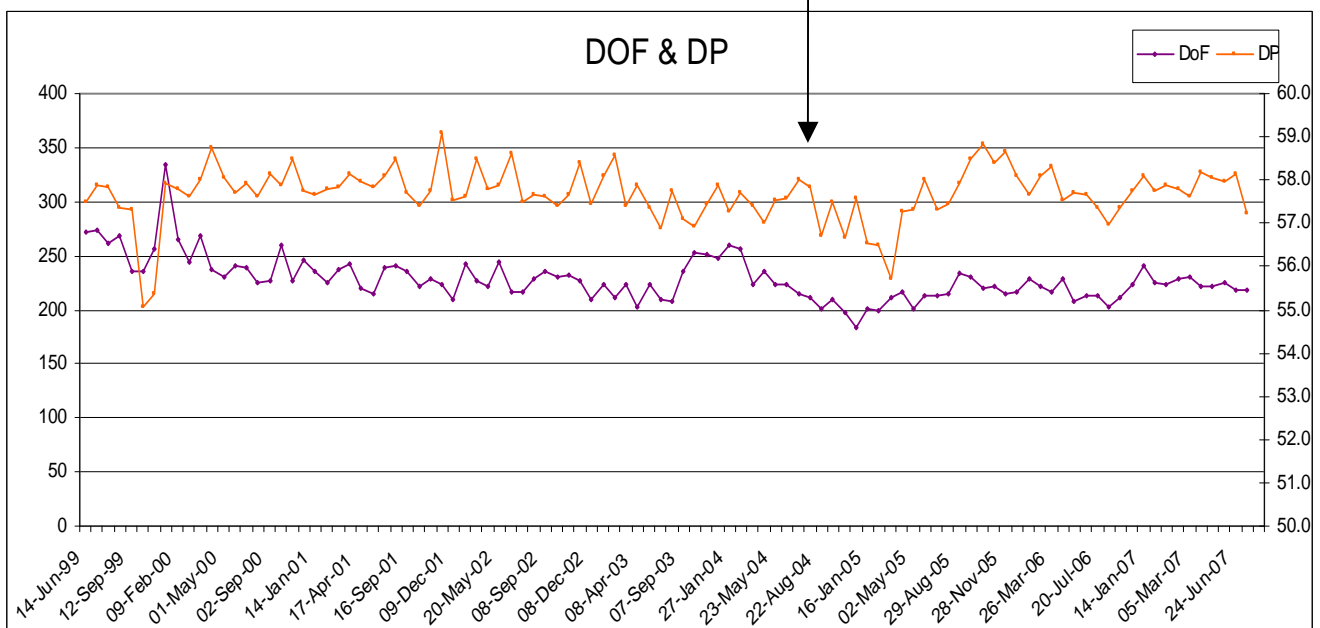
Longfed bullocks

- Angus steers 15-18 month old steers at entry, fed for a minimum of 200 days
- No growth promotants were administered to cattle
- All cattle entering the feedlot were sourced from southern NSW and Victoria and of similar background
- Cattle were purchased direct from producers and trucked 20-24 hours (inc. overnight) to Kerwee

Introduction of BioAktiv



Introduction of BioAktiv



SUMMARY

**Our interest is the consistent line of cattle that we feed.
Angus steers are fed for 200 days on high energy grain diets.**

- All cattle are sourced from the same area and hence have a similar background, health status, and acclimatised in a similar region.
- Our long fed cattle are not implanted with growth promotants

It is these cattle that I can be most confident of in relation to any influence that Bioaktiv water supplement may have had in the seven month feeding program

From the information that we have collated there have been positive influences on

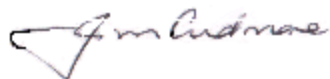
- average daily gains
- feed conversion
- carcass yields

There also appears to be a positive impact on herd health by way of a reduction in recorded sickness, with the inclusion of Bioaktiv water supplement.

In conjunction with other management changes during the trial phase, there appears to have been an improvement in

- general health of the herd
- lowering morbidity
- lowering mortality

We now have commercially significant data over a period of 2 years or more relating to the inclusion of Bioaktiv drinking water supplement. We are well pleased with the results.



*General Manager
Kerwee Lot Feeders Pty Ltd*