

Multikraft - Feedlot Case Study, S.E. Queensland

Executive Summary

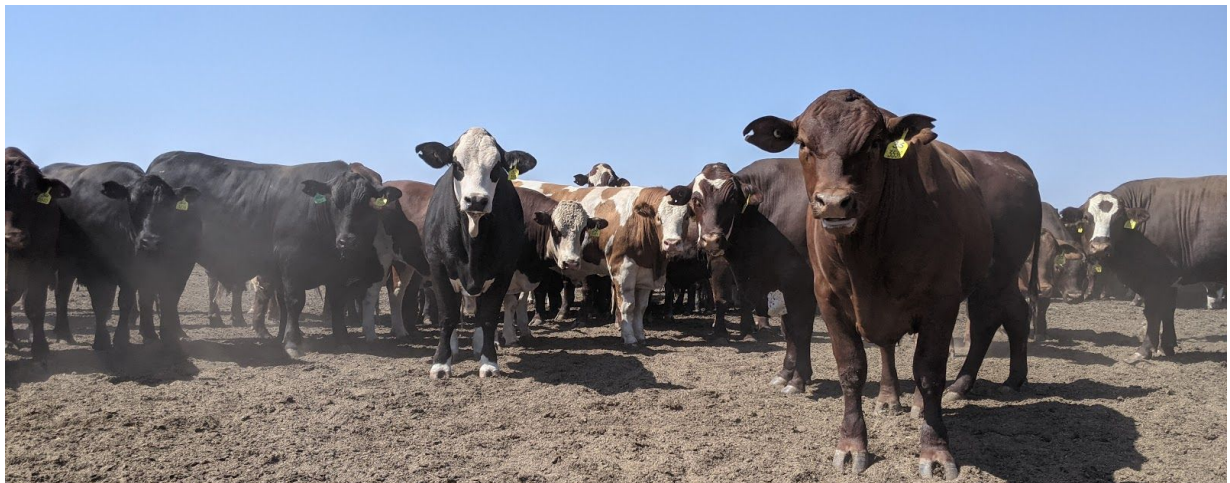
Cattle Creek Feedlot located in Dalby are using Multikraft's Fermented Herbal Extract (FHE) as a standard inclusion within their rations. Extreme weather conditions including heat cause detrimental effects on cattle, especially when temperatures reach over 40°C. Those effects can include reduced feed intake, panting (panting score) & lethargy.

FHE was included from the 23rd October 2020 to aid with the stressful conditions caused from high temperatures and rainfall.

Cattle Creek Feedlot - Alyx Densley

Testimonial taken 1st December 2020

- Feed intake has increased across all pens with cattle hitting the bunk hard and being licked clean
- November high temperature did not impact cattle feed intake for multiple days of extreme temperatures. Only with the consistent heat have the cattle needed a minor reduction in feed
- British Breeds are normally heavily impacted, however they are currently very cool and calm. Angus x Hereford's are barely puffing.
- On a 39 degree day, bunks were empty by 12PM.
- Loading has been easier, less stress on the cattle have meant the cattle are loading like a dream.
- Brahman Cattle are eating higher than expected, currently at 15.3kg per head/day which is higher than they should be.



Cattle Creek Feedlot - Dalby, Queensland

During November 2020 in Dalby, Queensland, maximum temperatures included 25 days over 30°C with 3mm of rain recorded at Dalby Airport Station. These temperatures are alarming and the environmental factors play a significant role in feedlot production. Minimising stressors that impact productivity are now being managed daily.

Cattle Creek Feedlot have been looking for ways to reduce the effects environmental stresses have on productivity whilst maintaining and increasing appetite.

“Maintaining daily feed intake is critical for our operation”

“Multikraft FHE appears to be offering consistent results since adding to our ration.”

Beef Central - Dr John Gaughan

In Beef Central on the 5th November 2020, Dr John Gaughan stated the following with a question to finish:

“As summer goes on, minor increases in temperature lead to some reductions in feed intake over time. But it is nothing too bad – cattle drop down and come back up again. But when there is an acute event, the key is that after the animals drop their feed intake significantly, it takes a month to get back up to original intake levels again,” Dr Gaughan said.

Not only was the growth rate lost for 20-25 days, but the ability to convert feed was compromised. Similar patterns are seen with average daily gain, which can drop to near zero.

“What this means is that the feedlot operator is losing money,” Dr Gaughan said. “The challenge is how do we maintain cattle on feed during these heat periods, and also how (or can) we get them back up onto feed again more quickly afterwards.”

<https://www.beefcentral.com/lotfeeding/more-refined-approaches-emerging-in-managing-summer-heat-stress-in-cattle/>

Information collected from Cattle Creek Feedlot’s feed diary is presented below.

The following graphs shows that cattle were able to handle high temperatures with minimal reduction in feed intake. Recovery to previous intake levels was also achieved within a few days.

Feed intake was managed well, but an interesting discovery was very low panting scores particularly from the british breed cattle (80+ days on feed).

Cattle Creek Feedlot owners have the confidence in continuing to add FHE to their ration.

Site Details

Site	Cattle Creek Feedlot
Location	30km's North of Dalby, QLD
Capacity	1500 head
Program	100 day
Breed	Mixed breed multi vendor
Feed System	Open bunk
Conditions	No shade cover for pens, bunks are swept daily

Finishing Pen's

A1, A2 ,A3, B1, B2, B3

Cattle are brought into the finishing pens within the first 10 days of starting on feed.
Feeding starts at 2PM every day.

FHE Application

Fermented Herbal Extract (FHE) added to both rations 23rd October 2020.

100ml per head per day inclusion rate for the Paddock Ration (**Day 1 to Day 6**)

45ml per head per day inclusion rate for Feedlot Ration (**Day 7 to Day 100**)

Lot 40/41

Breed: Majority British Cross with high content of Angus

Starting week: 28th September 2020

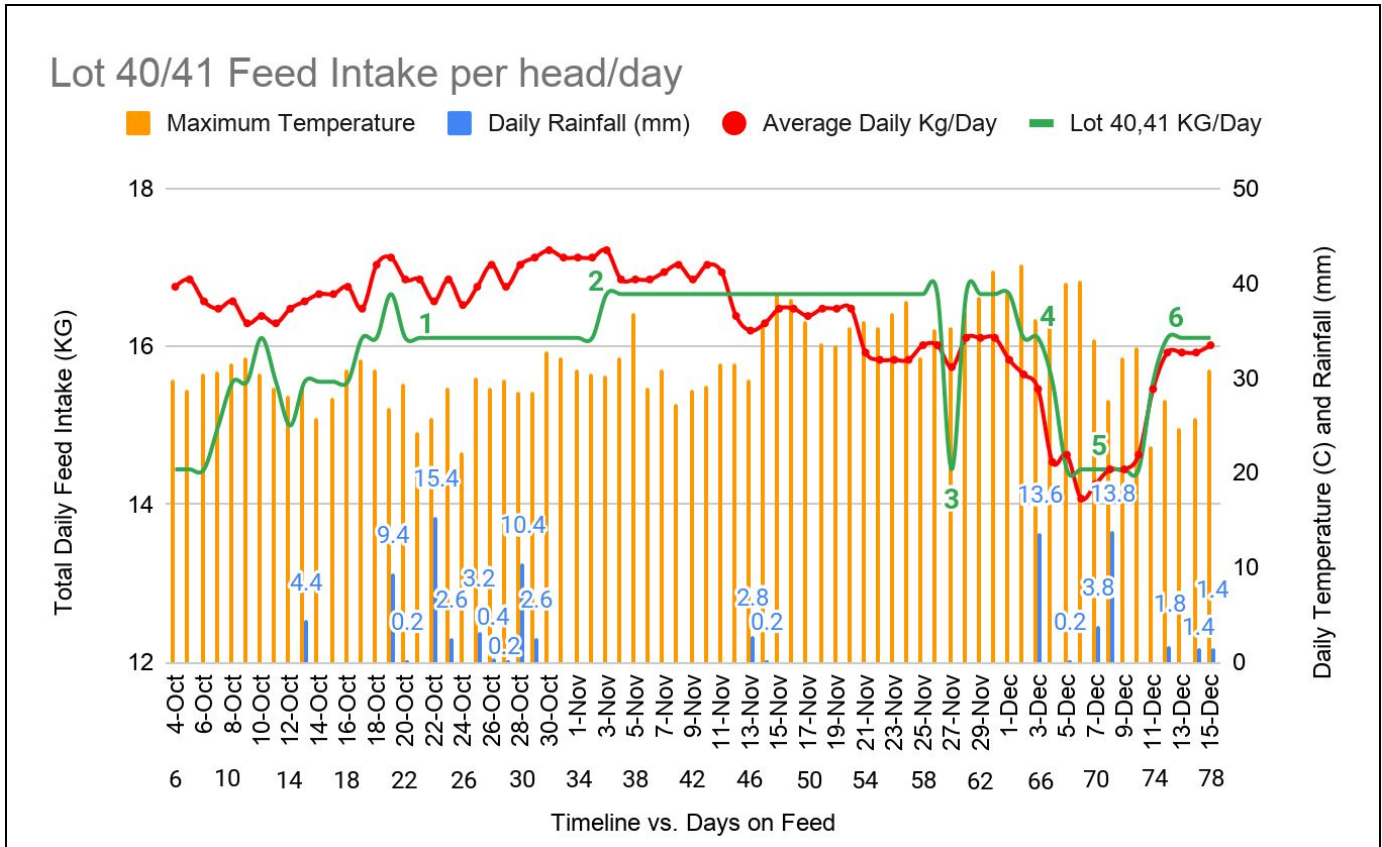
Finishing week: 4th January 2021

General Observations:

- Early feed fluctuations observed, however feed intake stayed constant once FHE was included into the ration even through rain events.
- Feed intake increased through the first high temperatures and maintained consumption levels.
- Through the heat periods there has been a noticeable lack of panting and heat loading across the pen with the majority of cattle still going to the bunk at feeding time which is normally 2-3pm in the hottest part of the day
- Intake dropped off after an underfeed, high temperatures & a rain event but recovered quickly

Key numbers on graph

1. FHE Inclusion & feed intake settled at 16.1kg/head/day
2. Feed intake increase to 16.7kg/head/day and maintained
3. Underfeed 1.5kg/head/day and cattle responded positively
4. Intake reduced to 16.1kg/head/day with feed left in bunk
5. Intake reduced to 14.4kg/head/day with feed left in bunk
6. Intake recovered back to 16.1kg/head/day



Lot 34/35

Breed: Majority British Breed Cross

Starting Week: 17th August 2020

Finishing Week: 3rd December 2020

General Observations

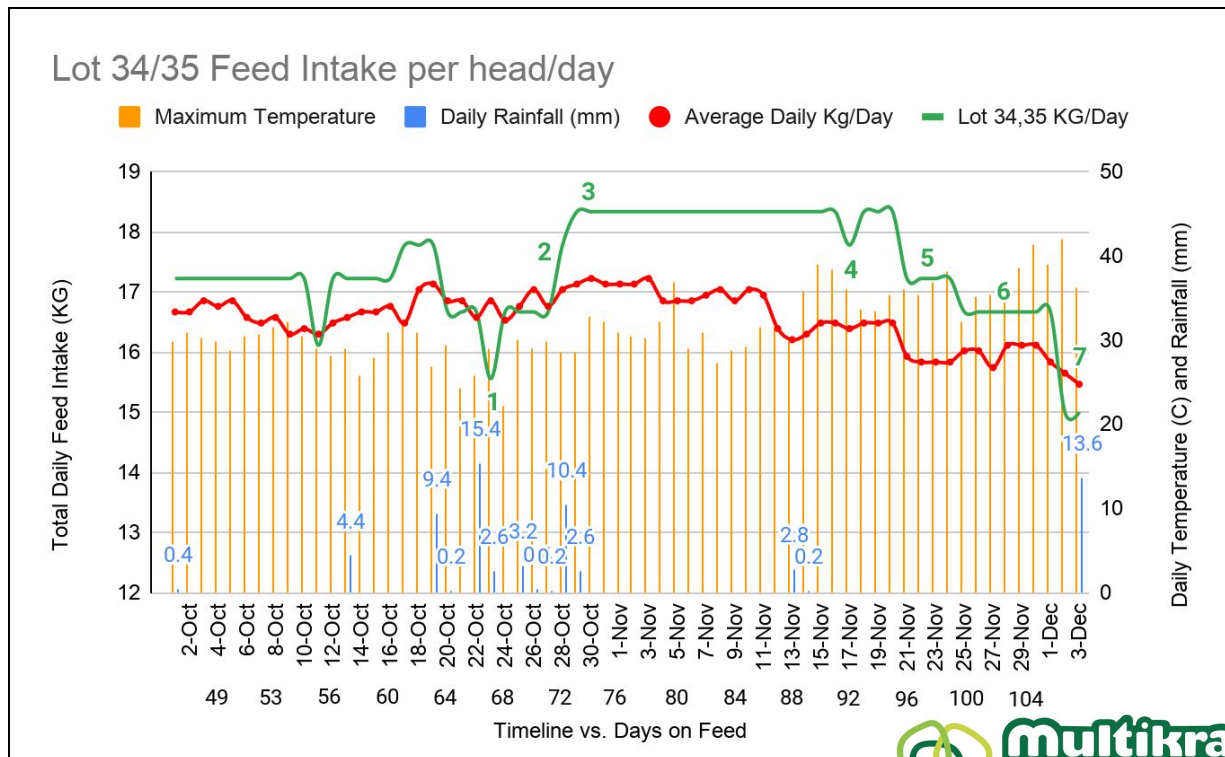
- Pen eating well in early stages with the exception of an underfeed on the 11th October upsetting their eating pattern
- Increased appetite on the 23 October with FHE program beginning
- 2.6kg/head/day increase over 6 days
- Consistent heat causing a reduction in feed intake by 1.5kg/head, pen in final days of program

Multikraft Observations

The Multikraft Livestock specialist was at the feedlot on the 1st December at 2:30PM with the temperature at 39.5°C. His observation was, approx 5 British Breed cattle with a panting score of “2”, with a quarter of the pen at “1”, remaining cattle seemed “comfortable” and majority went to the bunk at feeding.

Key Numbers on Graph

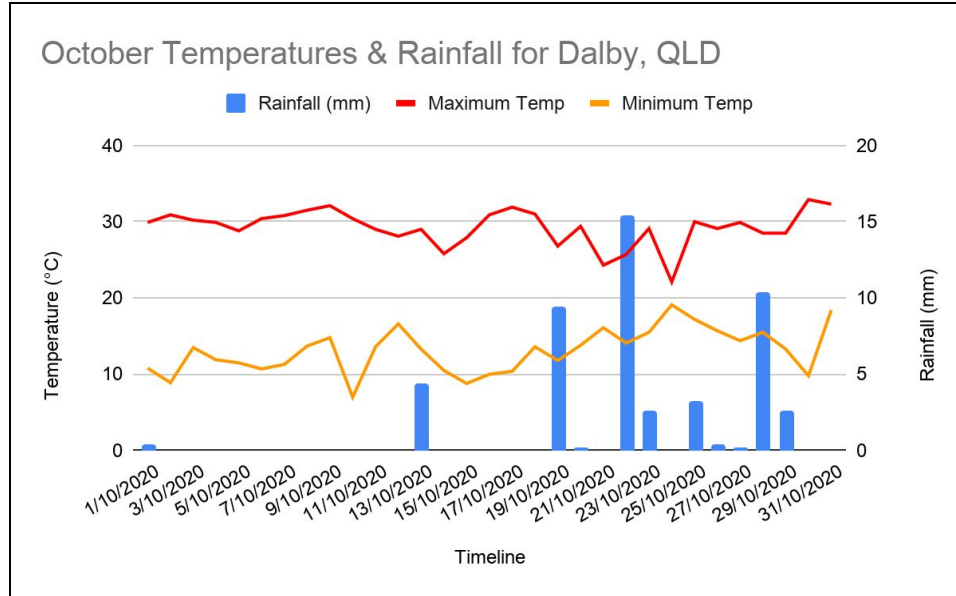
1. Underfeed of 1kg/head/day & FHE inclusion start
2. Increase consumption from 16.7kg/head/day to 17.8kg/head/day
3. Increase consumption from 17.8kg/head/day to 18.3kg/head/day
4. Reduce feed from rain but recovered the next day
5. Intake reduced to 17.2kg/head/day, feed left in bunk
6. Intake reduced to 16.7kg/head/day, feed left in bunk
7. First load of cattle trucked out



Temp & Rain (Observations by BOM at Dalby Airport)

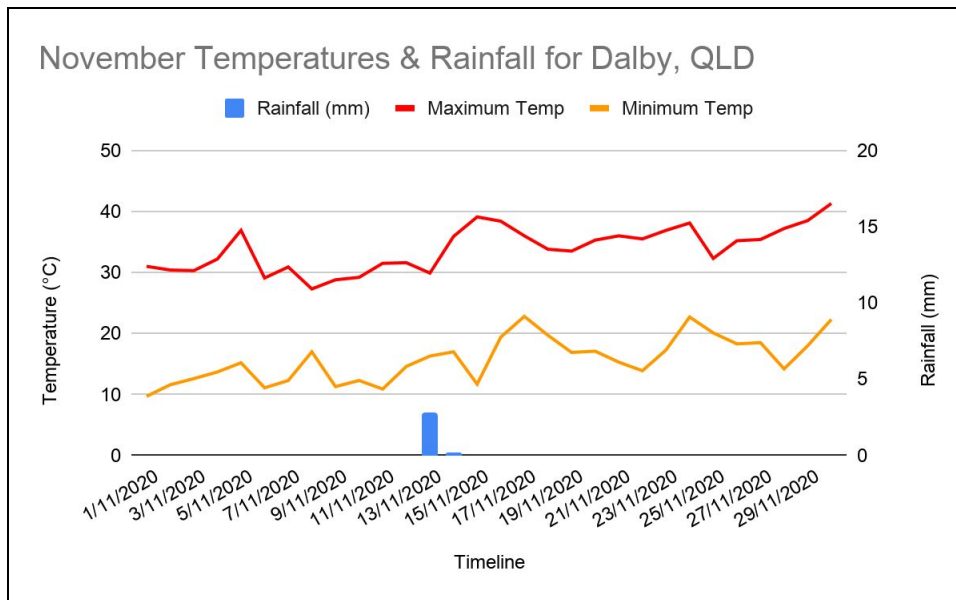
October Stats

Mean Max Temp 29.3°C | Highest Temperature 32.9°C | Monthly Rainfall 49.2mm



November Stats

Mean Max Temp 33.9°C | Highest Temperature 41.3°C | Monthly Rainfall 3mm



Observations

Multikraft Livestock Specialist - Scott Reed

1st December 2020

Since Cattle Creek Feedlot started on the FHE program, I have visited the feedlot on a weekly basis with extra visits during the heat period and also on a direct request from Cattle Creek owner, Alyx Densley.

I have continuously observed the cattle increasing their consumption within 7-10 days of FHE being included in the ration but also the handling of the extreme consistent high temperatures we have been experiencing since mid-late October.

I made a conscious effort to be on-site during the heat of the day while feeding so I could see the animals behaviour and the impact of the high temperatures on their intake and general well-being. I was expecting that after the initial increase in feed that the cattle intake may drop back in line with the majority of feedlots experiencing this heat but the cattle have not only continued eating but have not been majorly affected by the heat.

I was always aware of not disturbing cattle during the heat periods but always found them seemingly comfortable with their surroundings and in the heat. Even a few Murray Greys that are at 80-90 days on feed "chewing their cud".

Alyx Densley called me one Sunday while loading cattle in high temps and was astounded by how well the cattle loaded with no panting and no stress. When putting cattle back into the pen for the next load, they just walked slowly back to their pen with no stress, panting or running.

15th December 2020

Since the previous post there was an extreme heat event where the cattle feed intake reduced by less than 1kg/head/day, on average. The feed intake of the cattle which were heavier and had longer days on feed, was reduced by 1.5kg/head/day but had quickly increased back to 16.1kg/head/day. While there was an increase of cattle panting during this last heat period, it was less than 10% of the pens. The bunks were still empty 2-3 hours prior to the next feeding.

Intake has responded quite quickly after the heat, with a majority of the cattle back to normal eating patterns.

Whilst on site, I took a number of photos and videos that could be made available with permission from the owners.