MEAT & LIVESTOCK AUSTRALIA

CASE STUDY

Lakefield's weaner success floats on targeted management

Since purchasing 'Lakefield Station' on the Sturt Plateau, NT, in 1999, the Riggs family have developed it into a thriving cattle operation with the help of award-winning land management and conservation strategies.

Along with their daughters Tahlia, Chelsea and Kirra and son Hayden, Garry and Michelle Riggs have transformed what was once a bare block with only boundary fences on three sides, into a productive station running 7,500 Brahman cattle (including a small composite herd).

Since developing property management plans in 2002, the Riggs have continued to evolve these, as impressively, their five-year goals were met within three years, while their 10-year goals were achieved within five years. The Riggs are now able to utilise almost all of their grazing suitable country, with 90% of Lakefield being within 3km of a water point, and the remaining 10% within 5km.

Lakefield is mostly gently undulating to almost level plains with smaller areas consisting of floodplains not associated with present streams.

Their infrastructure development has included:

- 26 paddocks
- three sets of yards
- 68km of laneway
- 42 fenced dams with 18 on solar water pumping infrastructure
- 14 bores (10 solar)
- 1,300 hectares of conservation area
- a 600-tree mango orchard.

"Moving forward, we will continue to enhance our livestock management program, property improvement with native and improved pastures, along with maintaining a high standard with our environmental values and maintaining a carbon neutral environment," Garry said.

Matching stock to capacity

Lakefield currently runs around 2,300 highly fertile breeders with an average weaning rate of 74–76%.

The Riggs family also currently stock:

- 2,000 mixed-sex weaners
- 1,700 yearling steers, heifers and bulls
- 400 Pregnancy Tested in Calf (PTIC) cull cows
- 300 PTIC cull heifers
- 200 empty cull heifers
- 120 young sale bulls
- 140 herd bulls
- 30 cull for age herd bulls
- 100 agistment cattle
- 200 feeder steers.

Lakefield recently reduced numbers by 600 head to better match carrying capacity – this resulted in significant improvements in pasture condition as well as production, with higher weaning weights and percentages. They drew on carrying capacity assessments conducted by NT Government and Charles Darwin University (CDU) scientists.

Markets

Since 2014, the Riggs have increased the polled rate in weaners from 60% to 92% in 2023. They have strong local demand for their polled breeders and bulls.

Bulls that don't meet their criteria – which includes conformation and temperament – are directed to the live export market, along with feeder steers.

Supplementation

The Riggs have trialled different supplementation regimens to develop a strategy with the best return.

Through the wet season, all cows and weaners have access to phosphorus (P) – they use Kynofos 21, which contains 21% P.

"Phosphorus has had one of the most positive impacts on production out of all of the management strategies I've tried," Garry said.

SNAPSHOT

GARRY AND MICHELLE RIGGS –
'Lakefield Station' – Sturt Plateau, Katherine, NT

AREA
56,600ha

ENTERPRISE
7,500 cattle, predominately polled grey Brahmans with a small composite herd

PASTURES
Native pastures with some improved pastures

SOILS
Loamy red earths with gravelly red and yellow earths and lithosols

RAINFALL
788mm (over past 100 years ranges from 287mm–1,579mm)

The correct amount of supplement (g/head) is calculated and distributed in lick tubs and diligently checked once a week to ensure consistent supplementation and to limit wastage. Image: Chelsea Riggs.

In the early dry season, cows get Beachport Liquid Minerals (BLM) White Cap until July/August, then they are switched onto a urea and phosphorus loose lick to provide them with protein in the late dry season when pasture protein levels decline.

The loose lick intake target is 50g/head/day – the correct amount of supplement is distributed in lick tub tyres and diligently checked once a week to ensure consistent supplementation and limit wastage.

The breakdown of the loose lick is as follows:

- 28% prilled urea
- 15% Kynofos (phosphorous)
- 10% Sulphate of Ammonia
- 10% Copra meal
- 10% Ag lime
- 4% trace elements and vitamins
- 23% salt
- garlic and sulphur were added in 2023 to assist with fly control.

"By investing more time out in the paddock on lick checks, we can monitor cattle and land condition more intensively," Garry said.

Feeder steers are given BLM green cap (added to their water) 10 days prior to trucking to reduce shrinkage during transport.

Breeder management

Cows are control mated for six months, with bulls put in on 7 January. This results in a first peak of calving in October/November and a second in January.

This controlled mating window means foetal aging is not required at pregnancy-testing, as calves are born within a known timeframe and breeders can be managed accordingly.

Pregnancy data is recorded into a Tru Test XR5000 which stores each cow's full reproductive history.

Using this data, the Riggs cull:

- heifers that are not pregnancy-tested in calf (PTIC)
- cows that are pregnancy-tested empty more than once
- cows that are frequently PTIC but do not rear a weaner.

Breeders receive annual vaccinations of Bivalent botulinum vaccine and 7-in-1 at the pregnancy-testing muster. Herd bulls receive annual Bivalent, 7-in-1 and Vibriovax vaccines.

The Riggs aim to keep cows in a minimum body condition score of 2.5–3, which results in around 65% of cows re-conceiving while still feeding a weaner.

Weaning

Careful breeder management results in an average annual weaning percentage of 76% on Lakefield.

"Around 12 years ago we were at about a 60% weaning percentage, but with careful selection for fertility we are now constantly achieving weaning percentages in the mid-70s," Garry said.

Table 1: Procedures carried out at weaning for each class of weaner, after vaccinations and tailing and immediately before being turned out of the yards

Practise	Horned heifer	Polled heifer	Horned male	Keeper herd bulls
Dehorned (using hot-iron dehorners)	✓		✓	
Pain relief: Metacam	✓		✓	
Pain relief: Tri-Solfen + Stockholm Tar	✓		✓	
Earmarked	✓	✓	✓	✓
Branded	✓	✓	✓	✓
Castrated (using rings)			✓	
Management tags	Nearside ear	Nearside ear	Offside ear	Offside ear

First round muster

First round mustering commences the week after Easter when the first peak calves are around six months old and an average of 160kg.

A helicopter is only used for this muster, to ensure all weaners follow their mothers into the trap yards.

Six breeder paddocks are mustered individually, and each mob is walked down the laneway to the yards by one person on a quad bike.

Calves that weigh more than 100kg are drafted for weaning.

Calves under 100kg are tagged, branded, males are castrated using rings, and horned calves are de-horned using hot iron dehorners. These calves are mothered up in the paddock they came from.

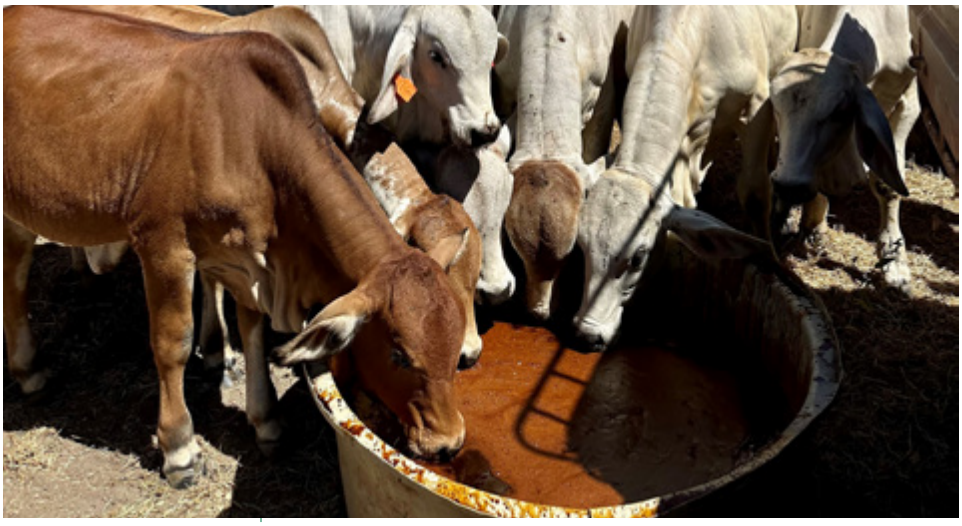
Feeding, vaccinating and tailing

The first cohort of weaners are kept in the yards for up to 10 days, with access to mixed grass, cavalcade, sorghum hay, beef weaner and shipper pellets, Copra meal and fresh, clean water.

The average weight of first round weaners is 155–160kg. Any animals in the lower weight range or that look like they need extra attention are drafted into a separate yard to reduce feed competition and bullying.

Weaners are given their initial vaccinations straight away: Long Range Botulism, 7-in-1 and an injectable parasite treatment. The yard period ensures these vaccines are effective before weaners are branded and turned out into the paddock.

Once educated, weaners are turned out into fresh weaner paddocks where they have ad-lib access to molasses. The molasses is bought as concentrate and mixed in large lick tubs. The Riggs have used molasses for five years and are impressed with the benefits. Image: Chelsea Riggs.



Weaners also go through an education and training process in the yards, conducted by Michelle.

They are:

- introduced to people, horses and working dogs
- tailed in smaller yards, progressing to bigger yards and water squares
- quietly worked on foot through the pound and race, with a few 'free' runs through the crush.

Processing

After they are vaccinated and tailed, the 100kg+ weaners receive management tags, non-polls are dehorned using hot iron dehorners, and males which won't be kept are castrated with rings.

All castrated males are given Metacam pain relief.

Weaner nutrition out of the yards

Next, weaners are boxed together and turned out into fresh weaner paddocks with ad-lib access to molasses, trace element blocks, Adelaide River shipper pellets, hay in feeders and BLM Green Cap in their water.

The Riggs have used molasses for five years – they buy it as concentrate and mix it in large lick tubs – and are impressed with the benefits they've seen.

Weaners are then allowed into larger paddocks and introduced to weaner stock lick starting at 10% urea and gradually increasing to 20%.

The average daily gain of first-round weaners is 0.26kg/hd/day over the dry season and 0.36kg/hd/day in the wet season.

The average cost to produce a weaner at Lakefield, inclusive of feed, supplements and vaccinations is $500/head.

Second and third round musters

Second-round mustering begins in late July. To take the pressure off cows, the Riggs wean down to 80kg in this muster, with the rest of the process being the same as the first-round.

"It's cheaper to feed weaners than to try and increase a cow's condition score while she is feeding a calf," Garry said.

The third round muster, in December, is to wean any calves that were too small in the second-round, but need to be taken off before the first round the following year.

Supplementation out of the yards is the same for second and third-round weaners as it is for first-round.

Overcoming challenges

The Riggs don't shy away from the challenges that come with breeding cattle in the NT and have used their learnings to improve management practises. Lakefield's average annual calf/weaner mortality from pregnancy-test to weaning is 10%, which Garry puts down to 2% wild dogs, 3% birth defects (natural cause), 3% from pregnancy testing and 2% from bottle teats. Garry started using a Reproscan when pregnancy-testing to reduce losses from

After branding, the weaners are turned out into small paddocks with access to trace element blocks, molasses, hay and pellets. Ten days of tailing before branding means weaners are easier to handle. Image: Chelsea Riggs.

manual pregnancy-testing, but found it only lowered calf loss by 1%. Another challenge is bottle teats. To reduce the impact of bottle teats, affected cows are taken to a smaller paddock and monitored, and if needed, their calves are bottle fed for as long as necessary.

Weaner Coccidiosis is also prevalent, so any affected weaners (as well as any other ill-looking cattle) are separated from the mob and cared for with medicated feed and grassy hay, as well as being treated with a round of Tribactral and Metacam. They are kept in smaller paddocks closer to the homestead where they can be easily monitored and accessed.

In the two-year-old feeder steers, Garry says the previous annual mortality rate of ~4.5% was due to three-day sickness. To address this, the Riggs adopted the use of Allicin fly blocks which have not only reduced mortality to 3%, but appear to have increased weight gains.

Outside of animal health, challenges include controlling weeds with a railway line running through the property and wild dogs. The Riggs don't bait dogs but instead shoot or trap and keep donkeys with their weaners to deter predators.

Twenty-five years ago, when the Riggs bought Lakefield, tough times and low beef prices followed. With a young family in tow, they persevered on a tight budget and moved forward by making their five- and ten-year plans. Now that they have completed their development plans, the station can be run withease with only minimal staff.

"All development was centred around our Landcare objectives, with sustainability and improved economic and environmental outcomes. Moving forward, we will continue to enhance our livestock management program, property improvement with native and improved pastures, along with maintaining a high standard with our environmental values and maintaining a carbon neutral environment," Garry said.

Read *Weaner management in northern beef herds* at **mla.com.au/weaner-management**
Tools and resources for northern cattle producers **mla.com.au/northern-cattle**
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This case study was developed as part of B.GBP.0064 *Weaner management in northern beef herds*.

Published in July 2024. MLA acknowledges the matching funds provided by the Australian Government to support the research and development detailed in this case study.

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