

CASE STUDY

Lakefield's weaner success floats on targeted management

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

Along with their children Tahlia, Chelsea, Kirra and 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). The family developed clear management plans and ticked off their goals ahead of schedule, such as developing:

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

They can now utilise most of their grazing country, with 90% of Lakefield within 3km of a watering point, and the remaining 10% within 5km.

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

Matching stock to capacity

Lakefield currently runs about 2,300 breeders with an average weaning rate of 74–76%. The Riggs family 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 Northern Territory Government and Charles Darwin University (CDU) scientists.

Markets

From 2014–2023, the Riggs family increased the polled rate in weaners from 60% to 92%. 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 family have trialled different supplementation programs 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.

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 to limit wastage.

"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.

SNAPSHOT



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



AREA
56,600ha

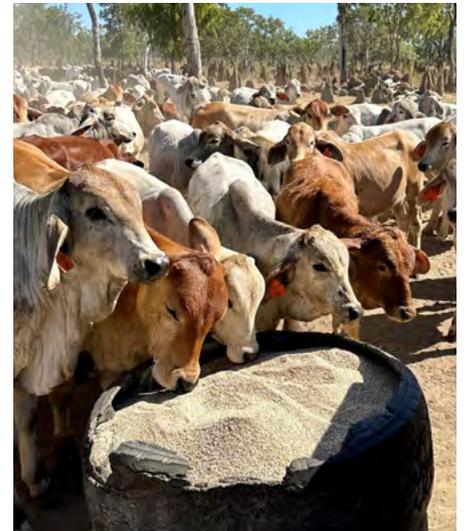
ENTERPRISE
7,500 cattle, predominately polled grey Brahman with a small composite herd

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 has ranged 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.



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 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 family 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 preg-testing muster. Herd bulls receive annual Bivalent, 7-in-1 and Vibrovax vaccines.

The Riggs family aim to keep cows in a minimum BCS of 2.5–3, which results in about 65% of cows re-conceiving while lactating.

Weaning

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

Here's a look at how the Riggs family manage their weaners.

First round muster

First-round mustering commences the week after Easter when the first peak calves are about six months old and an average of 160kg. Only a helicopter is 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 less than 100kg are tagged and branded, males are castrated using rings, and horned calves are dehorned 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 (Longrange botulism, 7-in-1 and an injectable parasite treatment) straight away. The yard period ensures these vaccines are effective before weaners are branded and turned out into the paddock.

Weaners also go through an education and training

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

process in the yards, conducted by Michelle.

During this, 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 and non-polls are dehorned using hot-iron dehorners. 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. They 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/head/day over the dry season and 0.36kg/head/day in the wet season.

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

✓ 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.



Second and third round musters

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

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 practices. Lakefield’s average annual calf/weaner mortality from pregnancy-test to weaning is 10%, which Garry estimates is caused by 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 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. If needed, their calves are bottle fed for as long as necessary.

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.

✔ After branding, Lakefield’s 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.



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 them and keep donkeys with their weaners to deter predators.

When the Riggs bought Lakefield 25 years ago, 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 10-year plans. Now that they have completed their development plans, the station can be run with ease 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/nth-weaner-manual

Tools and resources for northern cattle producers mla.com.au/northern-cattle Sarah Hassall shassall@mla.com.au

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