

Managing seasonal variation in north-west Queensland



December 2016

Overview



“Overstock your country at your peril. If you are hard on your country and things go bad, you don’t have options.”

“Our basic philosophy is “less is more”. We are looking for reasons to sell a cow rather than keep a cow. If you can run fewer cattle, you can achieve greater weaning rates and greater weaning weights.”

Lindsay and Sally Allan own and operate a beef cattle breeding and growing enterprise in the McKinlay district of north-west Queensland. Longford, 60 kilometres south-west of Cloncurry, was purchased in 1992 with Glenholme, south of McKinlay, added to the operation in 2003. Lindsay is a strong believer that big is not better. Losses from loss of control on big scale operations are too much. *“I know of no better model for running cows than the controllable family farm”* said Lindsay.

Longford averages 460 mm annual rainfall and is the breeding centre of the enterprise on 8 700 hectares (21 500 acres). The country is predominantly open Mitchell grass downs, interspersed with three limestone ridges with seasonal water holes that spread the cattle when full. Patches of Gidgee, Bloodwood and Supple Jack are common. The Fullarton River bisects Longford ($\frac{1}{3}$ to the west and $\frac{2}{3}$ to the east) providing alluvial flats of Cloncurry Buffel, River Red Gum, Carbeen trees and Bauhinia.

Glenholme, 70 kilometres south of McKinlay, near the Selwyn Range, is the growing and finishing base and receives less rainfall, averaging 425 mm across the 7 500 hectares (18 000 acres). The country is mostly pebbly black soils with predominantly Mitchell and Flinders grass, with scattered Whitewood and Bloodwoods. Gidgee is common on the major water course, WH Creek.

Historical records at McKinlay (Figure 1) show the extent of the seasonal variability in the region, where drought is part of the production cycle, not an unexpected occurrence. Managing an extensive enterprise in this variable climate is challenging, but imperative to remaining viable in the industry. Lindsay and Sally do not consider the management of their operation as any “rocket science”, but it is clear that the management during good seasons has helped them get through the poor.

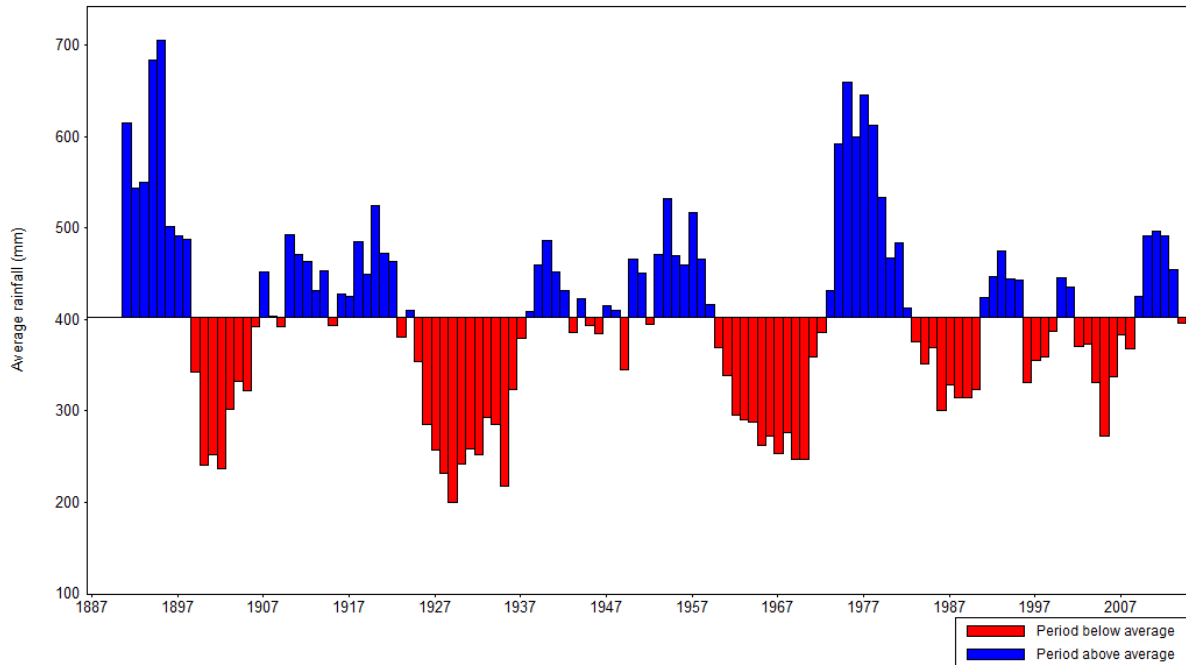


Figure 1: Five year moving average January to December rainfall at McKinlay. The long term average rainfall for McKinlay is 402 mm.

Pasture management

A lot of effort is devoted to pasture management in the operation as Lindsay believes that for animal production, “90% of what happens goes down their throat.”

In the first five years at Longford, Lindsay and Sally stocked the property lightly. They decided this was important to improve the land condition and ensure future breeder numbers could be carried safely and target weights met. Longford and Glenholme are now stocked at an average of 1AE to eight hectares (20 acres).

After attending a Grazing Land Management course in 2006, Lindsay and Sally implemented their own pasture monitoring and forage budgeting system on both properties. Quadrats were cut at all monitoring points and calculated out in forage budgets, providing them with their own set of pasture yield photo standards.

Monitoring is usually conducted in May each year, unless seasons dictate otherwise. With 10 years experience, quadrats are now cut less frequently, but still used to ensure accuracy of calculations.

Lindsay and Sally aim for a residual pasture yield of 800 kilograms dry matter per hectare (800 kg DM/ha) at the break of the dry season.

Yield measurements from the monitoring sites are used as a guide to map their position at the beginning of the dry season (Figure 2). From this, stocking rates for the coming dry are decided and whether or not they need to lighten off stock.

Stocking rates are most likely to be adjusted down, not up. In good years with high pasture yield (e.g. approximately 4 000 kg DM/ha), they prefer not to introduce more stock. These good years are used to increase the soil seed bank, and improve ground cover that will enable them to better manage through, and recover from, dry years. It does pose a fire hazard risk, but is still the preferred option to finding agistment when short of feed.



Figure 2: Sheep yard June 2012 (left), following a run of good seasons, with 3 400 kg DM/ha. The same site in May 2013 (right) following the failed wet season. Still 1 200 kg DM/ha of stubble left over for cattle to graze.

Paddocks and water distribution

The Fullarton River at Longford is completely fenced off and only used in the dry season. This is to minimise the mixing of cattle via broken flood gates and also provides a fresh, wet season spelled paddock of Cloncurry Buffel. Generally higher stocking rates are used the first graze after the wet to knock the buffel down, but will put cattle in and out throughout the dry season.

Apart from the Fullarton River alluvial at Longford, there is no set wet season spelling program at either property. When season and cattle numbers allow, they will combine all dry cattle at Glenholme into one paddock over the wet.

Larger paddocks at Longford were subdivided to address the evident uneven grazing of the past. Laneways connect each paddock back to the yards for ease of mustering (Figure 3), reducing the need for extra staff, and can be utilised for tailing weaners.



Figure 3: Pushing cattle through the gate at the head of the lane.

An existing bore and solar pump systems were used to establish new watering points in the newly subdivided paddocks at Longford. Water is pumped from the bore to storage tanks on a high point where it can be gravity fed up to five kilometres to tanks and troughs. There are open dams and mills on other bores throughout the property that also provide water. Problematic open dams are fenced and equipped with tank and trough to prevent cattle bogging in dry years. The new waters ensure every paddock at Longford now has at least two independent water points - if one is offline, there is a reliable alternative.

Water infrastructure is similar at Glenholme, however open dams do not pose bogging issues in dry years due to the harder soils. There is only one bore which has also been equipped with solar systems to pump six kilometres to a high point and can gravity feed from storage tanks to almost all paddocks.

Cattle have to travel no more than three kilometres to access water on both properties. Good water distribution improves business resilience through better access to available feed for stock. All tanks and troughs are monitored by uSee Remote Monitoring Cameras focussed on the tank level sensors. Systems are all on time clocks so that an issue with water supply is quickly and easily detected.

Herd management

The herd started out 25 years ago as red Brahman and Braford. The crossbreeding system now incorporates Charbray, Brangus, Senepol and red Brahman bulls and no terminal sires. Buy in bulls as needed, preferably from paddock sales. However, in an effort to increase polled cattle in their herd, have been keeping some of their own polled bulls over the last decade.

Home bred bulls are scrutinised for structure, growth rate and temperament from branding until their first mating with females at 15 months. Approximately twenty percent of selected bulls make it to mating, and only have three breeding seasons before being turned over at four years old. There are always more bulls coming through to replace them so it is preferred to keep the bulls young and reduce venereal disease or other break down. All bulls are vaccinated for botulism, leptospirosis and vibrio.

Breeders are control mated with bulls introduced on 23rd of January and removed at the main weaning round in early May. The calving window from 1st November to late February allows for branding in March with all calves returned to their mother until the main weaning round in early May.

Seventy-five percent of weaners come off in May at approximately 180 kilograms, with the remainder back to their mothers until weaning in August. All wet cows are returned to the same paddock, but with dry cows and other sale animals removed at branding, stocking rate is reduced which works well.

All calves are vaccinated for leptospirosis and botulism at branding and receive their follow up shots at weaning. Mature cattle receive leptospirosis and botulism shots at alternating years. Although Lindsay and Sally have never experienced great issues with either disease in their herd, it is considered cheap insurance with an added benefit for human health.

Weaners are fed hay in the yard (Figure 4) for three days and then tailed out on bikes for five. They are also educated through the yards and when satisfied they are quiet enough, are trucked to Glenholme and may be tailed out there for a day if possible.



Figure 4: Brangus weaners feeding on hay in the yard at Longford.

All cows that are wet at the branding round are returned to the paddock and get their chance again. If they come through dry at branding the following year, they are removed and sold. Heifers are mated as two year olds at Glenholme, pregnancy tested six weeks after the bulls are removed and pregnant are returned to Longford to be paddocked separately and calved out. Second calf heifers are in with the mature breeders and subjected to same treatment if they come through the yard dry at branding in March.

Marketing

Lindsay and Sally's operation suits the domestic market with their cattle type not suitable for live export. Of total turnoff, 52% is female, 48% male – a reflection of their less is more approach and strong selection pressure on females.

Flexibility is maintained at all times to secure the best possible option at the time. Generally, females make up majority of sales in the first half of the calendar year, male sales in the second half. Townsville abattoir is preferred to southern processors as past figures calculated have showed any profits are diminished by freight costs.

All dry cows that come through at branding in March are paddocked separately with some bulls until May or early June when decision on suitable market is made. Most commonly they are processed at Townsville abattoir but may be sold as PTIC if market is strong enough.

Depending on market and pasture supply, male cattle (Figure 5) are sold August to October to feedlots at approximately 450 kilograms liveweight and two years old. If held through to slaughter weight, they target the MSA market in Townsville at 33 months. They have achieved good (47%) compliance in the past, but planets need to be aligned to achieve this high compliance.



Figure 5: Steers at Glenholme in May 2013.

Nutrition

Attention to pasture management, strict sale of unproductive females and control mating has eliminated the need for dry season supplementation in normal years. With majority of weaners off in May, and dry cows removed in March, the lighter stocking rate sees the wet cows cope well

through the dry season. When cows start to calve, they are in forward store condition and they can rely on body reserves until a break in season.

Dry lick had to be used in 2008 and whole cotton seed (WCS) in the most recent drought (2013 to 2016), but under normal circumstances, don't feed any supplement.

Coping with dry years

Improving infrastructure in the good years will better prepare for the inevitable run of dry years. Good infrastructure makes life easier and important to lower the cost of production. Get more tanks and troughs, rather than relying on potentially boggy dams in dry years. Sub-divide paddocks to allow for breeder segregation, and laneways for ease of cattle handling.

Maintain conservative stocking even in good years with high pasture yield (Figure 2 and Figure 6). Don't introduce more stock to chew it down, but rather let soil seed store build up and improve ground cover. Overstock your country at your peril. If you are hard on your country and things go bad, you don't have options.



Figure 6: Sheep yard December 2016 – 2 500 kg DM/Ha. Careful management prior to, and throughout the drought, has seen this pasture respond quickly. See Figure 2.

Forage budget early

You need to know how much fuel is in the paddocks to get you through the dry season. Monitoring sites at Longford and Glenholme are visited earlier than May if the season is not looking good to help guide stocking rates and number of stock needed to be lightened off.

Take action early

Make judgements about reducing numbers early. Lindsay and Sally do not prescribe to critical dates they need to act by. Rather, they keep a close eye on the weather from October to March and if things are not looking good, will start selling cattle as soon as possible. In the failed 2012/13 wet season, they started selling cattle in January 2013. Better to have cash in the bank and grass in the paddock.

Wean early

All weaners were taken off at May muster in 2014 and 2015. Larger weaners treated as normal but smaller weaners split into size groups and fed Lucerne and WCS at a rate of a third of a kilogram per head per day ($\frac{1}{3}$ kg/hd/d) until August when normally weaned. The greatest boost you can give a cow is to remove her suckling calf, and the calf on its own is easier and cheaper to feed than a cow and calf unit.

Sell older stock

Get rid of older cows and in-condition older males and retain smaller heifers and steers. The breeder mob retained in 2016 is skewed towards the younger cows that will be less productive but at least have a reasonable number to breed on from rather than buying in.

By late 2016, male sale cattle have been reduced so male sales for the next few years will also be reduced. However, selling a large number of fat bullocks, even though market wasn't great, has put cash in the bank that will be looked after and used to help cushion the lower male sales over coming years.

Retain younger stock

Retain younger stock to maintain some cash flow and breeders, even if that means agistment or leasing a property. This is still cheaper than buying in at the end of drought. Lindsay and Sally were fortunate to secure a lease property in 2014 which was very lightly stocked from mid-2014. The light stocking provided greater diet selection to the young steers and heifers paddocked there. As a result, they did not have to feed any of these animals throughout their time there (Figure 7). The number three heifers that were retained are the cows calving November 2016 – February 2017.



Figure 7: Weaners feeding out at Glenholme, May 2013.

During current drought, they softened on usual strict selection pressure of dry cows, especially younger ones, as there were a higher number of them due to drought, and they were not in saleable condition. They were paddocked without bulls and marked with blue tags until being joined the following January as normal. All blue tagged cows were pregnancy tested and empties sold. Only eight percent of the mob was empty. These cows helped to fill a breeder hole and maintain calf crop and future cash flow.

Drought feeding

Lindsay does not drought feed with urea and molasses as considers there is too much infrastructure required and would *“rather the agony of a shovel and whole cotton seed”*. Stocking rates had come down to 1AE to 12 hectares (30 acres) so able to feed WCS while still some standing dry feed available. Fed cows WCS at a rate of one kilogram per head per day, fed out twice a week in troughs. They fed WCS at Longford from late 2013, through to 2015. Younger steers were fed WCS at Glenholme from late 2013 until moved to lease property in mid-2014.

Want further information?

For further information contact your local Department of Agriculture and Fisheries (DAF) Beef Extension Officer.

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Longreach: (07) 4650 1205