

# Northern Australia Climate Program

## NACP case study

Sturt Plateau/VRD, NT

June 2020

**Subject:** Rebecca & Jay Mohr-Bell

**Property:** Mathison Station

**Location:** Katherine, NT

**Size:** 650 km<sup>2</sup>

**Enterprise:** breeding for the live export & southern markets

**Breed:** Brahman x Brangus

**Herd size:** 1100 breeders plus 2000 agistment cattle

### Key message:

Good information is essential for good planning and decision-making and climate forecasting is an important part of that.

## Sustainable & profitable livestock production in the Katherine region, Northern Territory

Mathison Station is situated between the Sturt Plateau and the Victoria River District (VRD), at the head of the catchment drained by Mathison Creek, a tributary of the Flora River which flows into the Victoria River. Rebecca and Jay Mohr-Bell bought the property as an undeveloped block in 2011 and have been developing it since. This has involved a lot of fencing and yard building, drilling groundwater bores and installing watering points, as well as feral donkey and weed control.

Mathison is hilly and treed – a low open grassy woodland dominated by ironwood and rosewood, with native pastures that include kangaroo grass and black spear grass. There is no permanent surface water on the property and production relies on seasonal streams and groundwater bores that access a couple of different aquifer systems. Soil types are mostly phosphorous deficient red soils, with some black clays on the creek flood out. Annual rainfall is about 1000 mm rainfall, although rainfall records for the station have only been kept since 2008.

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## **About NACP**

The Northern Australia Climate Program (NACP) is a partnership between the Queensland Government (through the [Drought and Climate Adaptation Program](#)), Meat and Livestock Australia and the University of Southern Queensland (USQ) to help red meat producers in northern Australia to manage drought and climate risks. A core component of the program is the 'Climate Mates' initiative, which employs and trains local climate extension experts who are connected through the program to leading climate science researchers at the USQ, BoM and UK Meteorological Office.

The NACP Climate Mates have two key roles: to 'translate' the best available climate information for the local regional context to help producers make informed decisions; and to pass feedback from producers back to researchers to ensure research and product development is targeted to producer needs.

The Climate Mate for the Kimberley, Anne Marie Huey, says her role is largely about being a conduit of information between producers, researchers and scientists, rather than a climate expert. As she runs a cattle station herself, she understands the challenges but also sees the opportunities in incorporating climate information into business management and planning.

## **Goals**

The Mohr-Bells currently run Brahman cross cattle but are breeding towards Brangus with the aim of improving fertility and lifting growth rates through hybrid vigour. While they currently supply the live export market, the Brangus type will allow them to also access the southern domestic market 'if that's where the money is.' In addition to running 1100 breeders, they have established a small stud to breed their own Brangus bulls. In their view 'when you bring in bulls, it takes them time to adapt. By breeding and raising them here in this environment, we're hoping that they are better adapted to be able to perform from the get-go.'

The goal for the Mohr-Bells is to produce fertile high growth rate animals that can go to a variety of markets. And 'to do it in such a way that we're not wrecking the country.'

## **Climate risk management strategic decisions**

Apart from their breeding herd, the Mohr-Bells also run a couple of thousand head of agistment cattle for additional cash flow. They say that any decision to destock in poor years would mean moving these agistment cattle off Mathison Station. 'We're not fully stocked with our own cattle and long term our intention will always be to run our core breeder herd at a level that we don't need to destock even in a [dry] year. Eventually, in good years, we'll trade cattle to take up the difference. That's what we're ultimately heading towards.'

Jay and Rebecca have also designed the station's infrastructure – roads, yards and internal fencing – so that they have paddocks they can access at any time of year, 'so that we can sell cattle during the wet season when prices are high, but also have fences and water in places that we can spread cattle out when we need to.'

Rebecca says they consider short- and longer-term climate forecasts in most decisions on the property – 'All your budgeting. How much lick you're going to need, when to employ staff, what kind of capital development projects you're going to tackle that year, when you're going to wean, how you're going to manage your breeders, how long you'll have to carry them through until it's going to rain again ... right down to should we spray weeds today or is it likely to rain this afternoon?'

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## **Challenges**

Originally from northern NSW, the Mohr-Bells say that they opted to move north 'because it rains every year. While we effectively have a drought this year [2020], it does rain every year. Low rainfall you can deal with; it's the unpredictability ... and the extremes that are difficult to deal with.'

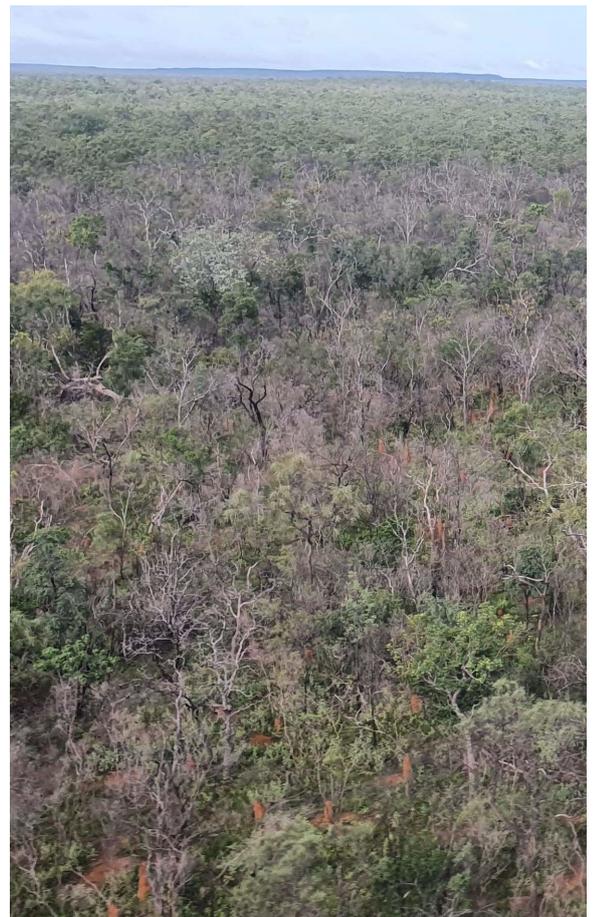
This was especially the case in December 2015, when 11 inches of rain fell on Christmas Eve and Christmas Day causing significant flooding in the Upper Daly Catchment. 'We lost 22% of the herd; we lost all our erosion control; it washed out fences and spread weeds into places there've never been weeds before. Across the road from us, they lost something like 7000 head and hundreds of kilometres of fencing.' Despite this, Rebecca says that the scale of damage was little acknowledged, which caused its own difficulties in terms of recovery support.

Rebecca has also observed a shift in the rainfall distribution over recent years. 'Not only have we had low rainfall, it's been concentrated in a very short space of time and the dry seasons have been incredibly long.' Significant tree deaths in 2020, both on Mathison Station and [across the region](#), confirm that recent seasons have been unusually dry.

## **Links with the NACP and expected benefit**

Rebecca says she has known Anne Marie, the NACP Climate Mate for the Kimberley region, for several years and believes that the Climate Mates approach - especially the link provided by the Climate Mates between producers and technical people in the BoM - is particularly useful. 'That interpretation service is pretty valuable ... especially translating information down to what producers need and into language producers understand ... it's a language barrier a lot of the time.' Personally, she says that, through Anne Marie and the NACP, she has gained confidence in interpreting the climate forecast information for relevant regional climate drivers such as the Indian Ocean Dipole. 'and I know where to find that information ... I now know where to find the answers or who to ask.'

Rebecca also runs [ArGyll Consulting](#), providing economic and business skills training to agricultural and associated businesses. As such, the knowledge she has gained through the NACP also informs her conversations with clients aimed at supporting improved decision-making and business outcomes.



Drought impact on Mathison, 2020

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## ***Relevance to others in the region***

More generally, in Rebecca's view, 'I think the weather systems in this region have been pretty consistent and pretty good for the last 25-30 years. So, a lot of people haven't worried about it too much, because it has been pretty reliable and you could predict, reasonably accurately, when you were going to get a start and you'd have a wet season. But last year, we almost didn't get one and, the last couple of years, a lot of people have been caught; they'd eaten their buffer out and they had to destock dramatically. So, I think that there's going to be a much greater focus on [forecasts], particularly the corporates and some of these foreign owned places, where there's increasing pressure being put on managers to run higher numbers and get higher returns from the place. And the only way you do that is by having good information so that you can make pretty accurate decisions. And climate is a big part of that. It's not quite there yet, but I think the interest will ramp up over the next few years. And more and more people are using satellite imagery, they're using that type of technology to help make decisions. So, you know, the climate forecasting becomes part of that.'

NACP Climate Mate, Anne Marie Huey, adds that, as noted by Rebecca, the Katherine region has experienced a sustained run of generally above average rainfall years since the mid-1990s. The recent drier years between 2018 and 2020, while unexpected, were certainly not unusual when considering the long-term rainfall records. Managing for rainfall variability is a key component of a sustainable pastoral business and having strategies in place to mitigate the impacts of poor seasons is essential.

These strategies include conservative stocking, pasture spelling, effective fire management regimes, strategic marketing and targeted herd management. Understanding the climate drivers for the region and how these are likely to affect upcoming seasons allows for early decisions and more resilient businesses.



Cattle on Mathison Station – June 2020