

Northern Australia Climate Program

NACP case study

Southern Gulf, Queensland
June 2020

Subject: Patrick and Edwina Hick

Property: Argyle Pastoral Co. (APC)
operates Argyle Station and 4 others

Location: Julia Creek, Qld

Size: total area managed by APC is 600,000
acres (~242,800 ha)

Enterprise: breeding and trading

Breed: Brahman

Herd size: 16,000

Key message:

The major challenges of operating in Queensland's Southern Gulf region are 'definitely climatic... dealing with the seasons and the variability' and seasonal climate information is critical to decision-making, especially prior to the wet season.

Managing climate variability and extremes in Queensland's Southern Gulf region

The Hick family bought Argyle Station, near Julia Creek in the Southern Gulf region of northern Queensland, in 1956 and ran sheep until 2005. 'We used to shear 26,000 sheep here. When the wool market collapsed, we went out of sheep into cattle and of course the live export. Cattle are easier to run and manage in this country than sheep were.'

Argyle Pastoral Co. now operates five beef cattle properties, all in the Julia Creek area, on country varying from open black soil downs to sandy heavily timbered tea tree and wattle country. The properties are managed for different purposes, with the forested country kept specifically for the breeding herd and the open downs for growing out and fattening. The Hicks also 'almost always' have cattle - generally breeders - away on agistment, allowing 'just that bit more flexibility if the rainfall conditions are against you.'

Like others in the region, Argyle Pastoral Co. suffered significant stock losses in the February 2019 flood event, especially on the open downs country where there was little shelter: 'close enough to 6000, mainly young cattle that we had on the black soil country.'

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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 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.

Megan Munchenberg, regional Climate Mate, says of the role: *The forecasts and information available can be quite confusing and there are a lot to choose from. My role as Climate Mate is to assist people to understand and interpret the climate information available. The other significant part of the program is for producers to be given the opportunity to provide feedback to the Bureau of Meteorology on the forecasting tools and information available. This feedback enables the development of more practical and user-friendly climate tools. This then allows for better integration of this information into a grazing business.*

Goals

Patrick and Edwina's goal is to keep growing the company in the local area. Patrick sees several benefits to continuing to focus their operations here. 'Geographically, we've got access to the live export market and the southern markets. We're far enough north to get a little bit more reliable rain, than say if we were to buy down in the Central West; we're on a better growing country and we've got access to that more affordable breeding country. This is pretty productive country and I guess we understand it a bit.'

In terms of marketing, Argyle Pastoral Co. sells into both the northern live export and southern domestic markets. 'We aim to produce a 450 kg beast that is suited to a couple of different markets ... a softer Brahman beast that we can sell in the south but that's got enough content it can go to live exporters.'

Climate risk management strategic decisions

Over the last 25 years, the Hick family have been buying properties with different land types to spread risk and to be able to manage different parts of their herd in different ways. As part of this strategy they use the sandy timbered country around Julia Creek for their breeding herd. 'It's poorer country but safer rainfall country, safe breeding country. It's country where you don't have to be shifting stock out like the black soil downs, where you just run out of grass.'

Patrick says that having the variety of country has also enabled them to survive both flood events and drought. 'I don't know that we'd still be here as a company – certainly not the way we are – if we didn't have that safer country. We are well into a drought cycle now and we've been through a flood and our numbers are still pretty solid. We certainly wouldn't be that way if we'd only had this black soil country.'

He says that having several properties plus agistment options has been beneficial, giving them the opportunity to look at where there's sufficient feed to carry stock through and 'a little bit of room to juggle.'

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Challenges

The major challenges of operating in Queensland's Southern Gulf region are 'definitely climatic... dealing with the seasons and the variability. That's the most difficult thing about operating in this country - making a decision about whether it is or isn't going to rain.'

Seasonal climate information is critical to decision-making, especially prior to the wet season: 'We get to November, December, January, and we've got to start to make a lot of fairly big decisions based on whether we think it's going to rain or not. Those decisions, right or wrong, as we all know, cost you a lot of money or save you a lot of money. And the difference between a good season and a light season, or between a light season and a really dry year, can often be a couple of storms ... a late storm can be the difference between it being really dry and having just enough to get through.'

Links with the NACP and expected benefit

Patrick says that, like most people in the region, he pays attention, especially towards the end of the year, to what Dr. Roger Stone is saying in interviews on the radio about the upcoming wet season. He also looks at the UK Met Office forecasts and other links provided by the NACP regional Climate Mate, Megan Munchenberg, and keenly follows the MJO (Madden Julian Oscillation) to know how active it is likely to be and when it might influence the region's rainfall.

He says that products such as predictions about when the wet season might begin and whether it's likely to be a lighter or heavier wet season are of particular interest: 'I look at as many different sources as I can. If most of the sources are saying we're in for a good wet season, then I'm going to get some confidence; if most of the sources are saying the season is looking pretty dodgy for next year, then I'm getting worried. None of us are thinking of making a cut and dry decision. But we're listening and following the pattern.'

He's especially hopeful that the lead time for the seasonal forecasts for the end of the year can eventually be extended to enable them to plan ahead: 'You always love that bit of margin. Then you could make decisions ... where to send weaners; how many cattle to carry through to the end of February.'



Steers at Rutchillo, April 2019



Cooradine weaners at Argyle, November 2018

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Relevance to others in the region

While seasonal climate forecast information is valued and considered in APC operational decision-making, Patrick says that their decision-making is based on not only the forecast seasonal conditions but also the amount and condition of pasture and the state of the markets.

He says that the end of the year is a particularly critical period for producers in Queensland's Southern Gulf region. In November-December-January, they are deciding - based on the market, their available pasture and what the indications are for the coming wet season - whether to continue with their normal sale pattern and carry the next year's sale cattle through the wet season or to sell them early. 'If you're a cattle person, you like running cattle, having lots of cattle, but experience teaches us we've got to be more conservative. We've seen that too often, where we don't get a break until the end of February.'

Like other producers in the Julia Creek region, Argyle Pastoral Co. suffered significant stock losses in the February 2019 flood event, when an estimated 500,000 cattle died as a result of flooding and excessively cold winds especially on the open downs country where there was little shelter. Patrick says that while there was a prediction of significant rain two or three days prior to the event, 'it obviously wasn't a prediction of as much as rain as we had', followed by a 'shrieking cold wind - that's what did the damage, it was just too cold. All you can do is have your livestock in good enough condition to survive the wet. Wets can be pretty tough up here, but there is a limit to what you can do.'

In response to the floods in February 2019, the NACP and the [Forewarned is Forearmed \(FWFA\) project](#) on climate extremes have collaborated to develop a forecast of a Chill Index that calculates the potential heat loss in livestock using daily wind speed, average daily temperature and daily rainfall. This product may help producers in the early identification and action to reduce the risk of these events in future.



Storm over Cooradine, March 2018 – all photographs are courtesy of Argyle Pastoral Company