

# Northern Australia Climate Program

## NACP case study

Southern Queensland

May 2024

Producers: Clayton & Fiona Vincent

Properties: Reedsdale & Pleasant Valley

Location: Bymount & Injune, Qld

Property size: 17,000 acres

Enterprise: beef breeding

Average rainfall: 600 mm

Soil types: Sandy loam, loam

Main pastures: Buffel grass with mixed native pastures

Key message:

*'Rain is our number one. If it doesn't rain, we don't make money. So, understanding what's happening helps you make decisions, and it helps you manage your risks.'*

## Seasonal climate forecasts provide insights that take the hard work out of making decisions

Clayton and Fiona Vincent run a beef breeding business on their properties, 'Reedsdale' and 'Pleasant Valley', in the Maranoa region of southern Queensland. Covering approximately 17,000 acres (almost 7,000 hectares), dominant pastures on the properties are buffel grass and mixed native pastures on sandy loam/loam soil types. Average annual rainfall is around 600 mm.

The region offers productivity benefits, being close to the Roma saleyards and feedlots. However, the Vincents say that there is concern in their region that some buffel grass pastures appear increasingly susceptible to dieback\*, potentially impacting production.

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\* Pasture dieback occurring in tropical and sub-tropical introduced pasture grass species is likely caused by pathogens (insects, fungi and viruses) and associated with environmental stress (e.g., drought, high temperatures, soil compaction, waterlogging). Monitoring of pasture condition, strategic pasture utilisation and pasture diversification with tolerant species are recommended by the MLA ([2021](#)).

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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 (UniSQ) 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 UniSQ, the Bureau of Meteorology (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 Maranoa region of southern Queensland, Elsie Dodd, says the benefits of using climate forecasts are that they help you to make a range of decisions: whether or not to reduce stock numbers because of the season; how much feed will you need if you don't get that early spring break; can you carry on into the summer and hopefully have an event come through then. She adds that decisions to reduce grazing pressure when the climate outlook is unfavourable can also help maintain land condition - stop it slipping too far.

## Climate Awareness & understanding

Clayton says that his involvement with the NACP has provided him with skills and confidence in being able to decipher and better understand the climate forecasts issued by the Bureau of Meteorology (BoM) - particularly regarding the role of the Indian and Pacific Oceans - and how these can help to inform the decisions he makes. *'Those ocean temperatures and winds are our biggest climate drivers. That's the way I understand it. And to have that explained to you - I reckon it to be a big thing for people in our industry.'*

He says that Elsie Dodd, the regional NACP Climate Mate, has been instrumental also in enhancing his confidence in then using this understanding in making decisions. In his view, *'It's not saying that it's a definite thing. That's what I gained most out of it. When you start getting around 30% probability - as far as decision making goes - you would be very wary. But if it's an 80% possibility, you would be making decisions on that.'*

For the Vincents, being better able to judge the likelihood of rainfall over the upcoming season allows them to more effectively manage stocking rates and other aspects of their production system.



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## Climate risk decision-making

Clayton says that short-term forecasts, alongside monitoring the El Niño Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD) patterns, play a critical role in their planning and livestock management decisions, but that, rather than relying entirely on them in their decision-making, forecasts are still just one of many factors they'll consider.

Specifically, Clayton says that short-term forecasts play an important role in planning imminent tasks like mustering and transporting cattle. *'If you've booked to muster next week, you're probably looking at that the week beforehand. If there's a 90% chance of rain next week, you would make a decision on the basis of that forecast not to do the job.'* They also play a major role in the Vincent's operational decisions about burning *'right down to the day, to the hour that you're going to burn.'*

For them, burning to reduce the risk of wildfire is an important strategic decision, given their location adjacent to government land. Clayton says that *'Fire control is a big tool for us. We burn every second year. It'd be a danger if we let it go and didn't burn. We could lose everything. And there's benefit in burning - stress reduction, yes, but also pasture regeneration and weed control.'*

The Vincents also consider longer-term seasonal trends, particularly ENSO predictions, which significantly impact their weaning and marketing strategies. Clayton says that rain is the number one factor that rules what decisions they make, especially during critical times like transitioning from winter to spring. *'I'll start watching what the ENSO and IOD are doing ... look at the seasonal forecasts to help with decisions probably coming out of winter into spring. If we can get an early break - get good rain before Christmas - it sets you up for the following summertime. So I would say that coming out of winter into spring, when you've got cows calving, that'll be my biggest decision maker probably. And if you are going to get rain early on, it makes the decisions on cattle sales and everything easier. It's probably the most important time of the year for me.'*



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## ***Triple bottom line***

Clayton says he relies on a range of factors in his decision-making and has a long-term management strategy that allows him to make informed proactive choices that take the panic out of decision-making. He takes a cautious approach, avoiding overstocking, especially during dry spells, meaning his pastures are better able to recover when conditions improve. *'If you overstock that leads to a range of issues. When you do hit a dry spell, if you're overstocked, you put yourself at risk and it takes you longer to recover the following year.'* His biennial burning regime also helps in pasture regeneration and weed control. *'You save costs on herbicide, and you're putting less herbicides in your country. Fire is a natural way. It's better as far as I can see.'*

As a tool in the Vincent's decision-making, weather and seasonal climate forecasts provide insights that contribute to both reduced costs and increased cash flow. With forecasts of El Niño events - often associated with drier conditions - Clayton says he looks to adjust his livestock management strategies to

optimise resources. Forecasts, in combination with his understanding of market dynamics, also inform decisions about when to sell cattle or weaners to ensure the best return possible. *'These decisions help in increasing your cash flow or reducing some costs. If we were running out of feed and we had a protein drought and the weather forecast didn't look promising, that's when we'd started making decisions. If you're going to have a long winter and your pastures aren't going to be enough to get you through, you get in and order protein, and that helps to make the decision on when you do that. So, you can save money on product.'*

Beyond financial implications, weather forecasts also play a role in reducing stress by providing a framework for decision-making. Clayton says that viewing weather forecasts as a tool rather than a definitive predictor alleviates pressure and allows for a more measured response to changing environmental conditions. *'Reduced stress ... absolutely. It helps you. It's a tool, and yeah, it takes the pressure off. It takes the hard work out of it. It helps you make decisions.'*

