

# Drought and climate adaptation program

## GrazingFutures Project Case Study

### Prickly acacia treatment and wet season spelling on Bendemeer

#### Summary

The Nichols have implemented several changes in their management practices including:

- Wet season spelling
- Lowering stocking rates
- Removing prickly acacia to allow grass recovery
- Using holding paddocks to stop weed seed spread

They understand that:

- Climatic variability has a huge impact on outcomes
- They need a good wet season to enhance positive outcomes
- Wet season spelling is a common sense practice for native pasture regeneration



Figure 1. One of Bendemeer's dry dams being cleaned in April 2020.

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## Background

In 2021, Jeff and Debbie Nichols will have been on Bendemeer Station for 40 years. During that time, they have seen a lot of things come and go, including grass. With the last 12 years being predominantly drought conditions, the land has been hard hit and grass is scarce. Despite this, they recently removed a significant number of prickly acacia trees and changed some management practices, so they are positioned to see grass coverage improve.

The 16,044 hectare property is situated 96 kilometres northwest of Winton and is dissected by the Diamantina River. The country is diverse which is a positive to their business. The property is broken up into three main types of country with approximately a third open downs, a third river channels and the rest is made up of white wood ridges. The different land types provide some seasonal and business resilience as each responds differently to the varying climatic conditions.

The beef they produce is either exported or sold locally through their butchery business in Winton. Bendemeer is a family run business with Jeff and Debbie managing the property mostly on their own but getting occasional help from their two sons who live nearby.

In good years, they will run around 800 to 1000 head of Brahman cattle plus progeny. They also run a few horses and sheep. Rain has been scarce for the last few years, so they have been running only half those numbers.

## Challenges

Climatic variability at Bendemeer presents challenges to operating a livestock business. While the last 12 years have typically been classified as drought, the last two years have been particularly difficult. They were hard hit in March 2018 with 14 inches (355 millimetres) in 48 hours.

In early January 2019, Bendemeer was in the centre of the North Queensland Flood event. They lost over 90% of their cattle and sustained major damage to fencing, with major erosion. One of the biggest impacts of erosion was the loss of topsoil and pasture soil seed reserves. "We badly needed a good summer rain season this year to help overcome that," said Mrs Nichols, "but alas we haven't had the rainfall, only receiving a little over 3 inches for the 2019/20 summer."

*"You have to keep biodiversity going and try to keep grass coverage. You have to care for ground if you wish to get a good response."*

They received 6 inches of much-needed rain from the tail of Cyclone Trevor in April of 2019 which grew some feed but then nothing until the beginning of 2020 with a total of 75mm, the biggest fall in that time being 15mm. Subsequently, their pasture condition is poor for this time of the year (Figure 1). Winton shire has been drought declared since 2012.

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Figure 2. Dry country on Bendemeer, April 2020

## Changes

Jeff and Debbie have attended several Grazing Land Management events where they heard presentations on building business resilience from Department of Agriculture and Fisheries (DAF) team members. The Nichols have also hosted a mini field day at Bendemeer where Desert Channels Queensland and DAF staff presented. They also attended several meetings on the neighbouring property of Nuken, as well as hearing presentations at other local field days. With years of experience on the land, they already understood aspects of keeping their business resilient. However, as a result of attending these events the Nichols have implemented a number of changes to improve the long-term viability of their livestock operation.

The first has been to remove a significant amount of prickly acacia trees across approximately 10,000 acres of country on Bendemeer. This program was spread across four large paddocks and three smaller holding paddocks. The removal of the prickly acacia will allow native grasses like Mitchell grass to re-establish once they receive decent rain.

After removing the prickly acacia, the Nichols family have become vigilant in reducing weed seed spread. When bringing in or selling stock, cattle are held for 7 days to empty out of seed. “We are very careful none of it is transferred,” says Debbie, “even though we haven’t seen many pods on the prickly trees. Even they are feeling it!”

The third change they have implemented is to lighten stock numbers significantly more than usual to increase spelling time for the country to recuperate from erosion. After losing cattle in the floods last year, they didn't restock until July to give land time to respond. “The ground has been so knocked around since the flood, it is full of cracks and holes,” Debbie said. “I still couldn't muster on a horse.” The country needs a proper wet season to recover. While some neighbouring properties have had 4 inches of rain, they have not seen runoff due to the extent of soil cracking (refer Figure 3).

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The Nichols see wet season spelling as common sense and something they will introduce more formally now that the prickly acacia is coming under control. “You have to keep biodiversity going and try to keep grass coverage. You have to care for ground if you wish to get a good response.” They know it will pay off in the long run and so they are juggling their resources until the rain comes.

Their approach is encapsulated in Debbie’s comment, “We have done as much as we can to get our paddocks ready for rain. Now Mother Nature needs to do her part.”

## The Cost

Lower stocking rates currently means less income, and there has been some extra outlay in the projects they have completed. While they know it is costing them in the short term, they understand they will reap the benefits when rain does come. It would have worked in their favour this year if they had received a wet season. Cattle production would have improved with more feed on offer. However, they are currently at a standstill with it being so dry.

## Building Resilience

To Jeff and Debbie, business resilience is about being there for the long haul and the next generation. That means looking after the land through activities like wet season spelling and keeping land weed-free. This is where they have recently invested time and money on Bendemeer. They are very aware though of how Mother Nature is a big player and they work hard to mitigate her variability.

Jeff and Debbie have considered diversifying by purchasing another block to build flexibility and resilience, but they feel there is nowhere in reasonable distance with feed on it to make this worthwhile.



Figure 3. Significant soil cracking after a run of extended dry years on Bendemeer.

***“Business resilience is about being there for the long haul and the next generation. That means looking after the land.”***

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Having spent so long on Bendemeer, learning how the country responds to different seasons, is invaluable knowledge for the Nichols family. This adds another tool to help manage seasonal risk. “Theory is good as it gives you background but you need to add practical and lifelong experience,” Debbie said. “There are many of our neighbours who know their country and it is important this knowledge isn’t lost.”

*“With long travel times to larger centres like Longreach and Hughenden, being able to attend focused local gatherings has been a boon.”*

## Producer Thoughts

The Nichols have found the workshops helpful and value being able to attend local events nearby. They are part of a cluster of neighbouring landholders who have been implementing change. With long travel times to larger centres like Longreach and Hughenden, being able to attend focused local gatherings has been a boon.

A future field day to be held on a neighbouring property will provide a good opportunity to throw around ideas, see where their neighbours are at and discuss what the next steps might be as local producers are all facing the same challenges.

They have learned much of the theory and potential cost-benefits. They now face the challenge of putting it into practice and implementing as they have the resources to do so. It is a long-term



Figure 4. A dry dam on Bendemeer, April 2020.

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