

Strategic management boosts Mitchell grass recovery post drought

After four years of drought the most common question western Queensland-based scientist David Phelps gets asked isn't about rain, it's about grass and it's asked anxiously.

The Longreach Department of Agriculture and Fisheries (DAF) principal scientist said one of the biggest concerns for western landholders was whether Mitchell grass would recover after the prolonged dry.



Dr David Phelps from the Department of Agriculture and Fisheries in Longreach believes Mitchell grass will recover from drought with strategic management.

Speaking at a Leading Sheep restocking forum in Longreach he offered sheep and wool growers historical evidence indicating the resilience of the native pasture, but explained good management would play a critical role in its recovery.

"People can be optimistic that their Mitchell grass pastures will recover with rain, even though there may be losses due to a prolonged period of low rainfall and high evaporation," Dr Phelps said.

"But how well pastures come back will depend on how long they are rested or spelled as they start growing after rain."

Given relief rain has been sporadic through western Queensland and much of the region remained drought-affected his talk to Leading Sheep producers had two aspects: estimating critical feed budgets for those with sheep still in paddocks, and spelling country for those who had destocked.

"Accurately estimating what feed you have available is critical, especially when it's very dry and your pasture management is challenged," Dr Phelps said.

"Ideally with Mitchell grass you should not graze (alive) tussocks below 15 cm, because the taller the plant the more responsive it is to rain."

"For example if you have 15 cm stubble it will respond with fresh leaf along the stalk, if you get just 25-50 mm of rain."

"If you graze Mitchell grass right to ground level, it is more susceptible to dying and will need 100-150 mm of rain to get a real response."

For those producers fortunate enough to have had rain are now preparing to bring stock back from agistment, Dr Phelps urged them to try to spell Mitchell grass for a minimum of six weeks before restocking.

"I understand the financial pressure and it's a tough situation to be in, because agistment is expensive but if you can give your country 6-12 weeks to recover it will work better for your long-term pasture levels."

If daytime temperatures were around 30 degrees and the nights were above 12 degrees then rain would benefit the predominately summer growing grass.

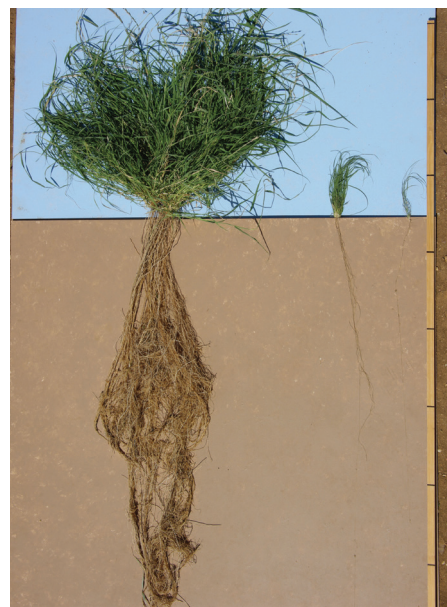
"In 2007 we had 4-6 inches (100-150 mm) of general rain in June and mild temperatures for a fortnight and the Mitchell grass responded incredibly," Dr Phelps said.

"It is an extraordinarily resilient grass, individual plants can live for 20 to 30 years, so the more you look after it in the good years, the better it will see you through the dry."

He said historical data from the millennium drought between 2001 and 2009 showed Mitchell grass country, which had been spelled during summer, had a better response to rain, than even areas that had been lightly stocked.

Wet season spelling should ideally be for a minimum of six weeks, but pasture that was struggling to respond could need 4-5 months' rest.

"If you give it time and rest it will usually recover. The other question I have been asked



Plant 1 was spelled for six months (ungrazed), plant 2 was spelled for eight weeks then grazed, plant 3 was grazed as soon as leaves grew.

is: is it worth putting out Mitchell grass seed? My advice is save your money," he said.

"Trials in the 1990s found there was more Mitchell grass seed in the soil than we could commercially put out, so it really is about managing your country so it has a chance to recover. Ideally you will have at least one Mitchell grass plant every square metre, but as few as 12 or so Mitchell plants in a hectare can produce the equivalent of commercial sowing rates. Taking good care of those isolated plants can save you hundreds of thousands of dollars in sowing costs."

"Yes there will be tussocks in the paddock that are dead, but there will also be Mitchell grass that survives and that's what makes it such a valuable pasture."

Top 5 tips for Mitchell grass management

1. Give pasture a minimum of six weeks, and ideally 12 weeks, to spell after rain and before restocking.
2. Ideally Mitchell grass tussocks should not be grazed below 15 cm – the taller the plant the more responsive it is to rain.
3. If you have 15 cm stubble it will respond with fresh leaf along the stalk, with just 25-50 mm of rain.
4. If Mitchell grass is grazed to ground level, it is more susceptible to dying and will need 100-150 mm of rain to get a response.
5. Annual wet season spelling should be for a minimum of six weeks, but pasture that is struggling to recover could need 4-5 months' rest.



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For many this has been one of the worst droughts in memory, but hopefully by the time of printing it will be a distant memory and the much needed relief rain has arrived.

This edition of *Flock talk* is focusing on pasture management and although the articles are centred on Mitchell grass the principles apply to all grasses.

If you have received some rain then hopefully you are able to spell your pasture for a minimum of six weeks as recommended by Dr David Phelps. If not then you will need to consider destocking or agisting before your pasture is eaten down too far. This will allow it to recover more quickly and easily when it does rain, similar to what happened on Somerset, Dave Owen's property.

If you want to know more about pasture management then the Leading Sheep website, www.leadingsheep.com.au, has a range of useful resources on this topic as well as many more including:

- a series of three short webinars on the changes to the Ovine Johne's Disease framework for Queensland
- two short webinars on the transport subsidy available for restocking and stock returning from agistment
- a fact sheet on important considerations when restocking.

If you want to keep up to date with upcoming events and activities, please sign up to our monthly e-newsletter 'Around the Camp' at www.leadingsheep.com.au.

Leading Sheep is a proactive network of Queensland sheep and wool businesses; at the forefront of practical and relevant information and technology to equip progressive and thriving producers for the future.

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Making grass budgets a base for business

Traditionally, **Dave Owens** has described himself as a 'wool grower', but he says today it would be more accurate to say he was in the 'Mitchell grass business'.

A seventh generation landholder, Mr Owens runs a 11,500 ha sheep and wool operation at Somerset, a grazing property 70 km south east of Longreach in western Queensland.



Dave Owens 'Somerset' Longreach describes himself as being in the Mitchell grass business.

For him, a run of dry seasons, coupled with the predatory challenges of wild dogs, the grazing pressure of kangaroos and a volatile wool market forced him to reassess his operational approach. This brought him face-to-face with the base element of his business: grass and land condition.

"The average rainfall here is about 14-15 inches and we had that in 2014, but last year we measured less than half that, so early on I knew I was in trouble grass-wise," Mr Owens said.

"I was forced to start feeding lambing ewes and while I'm accustomed to supplementary feeding in late August/September I couldn't afford to feed from May so I had to sell, completely destock. It was a tough decision, but I knew it was the right one for my country."

He said the decision was made easier and significantly less stressful by the fact he knew the feed budget figures wouldn't stack up.

"It gave me hard data to work with instead of emotion. I could look ahead and see the implications of my actions on my finances and importantly on my Mitchell grass in the long-term," Mr Owens said.

"In my case the Mitchell grass was only about 15 cm high from the rain at the start of the year. So as soon as the end of March came I knew that I had to enter into a destocking program.

"Agriculture has always been considered a bit of a gamble and there are still elements you can't control like the weather, but the fact is we now have the capacity to put some hard data around feed budgets and stock number mixes. It empowers you when it comes to making management decisions.

"It has allowed me to see how and what I need to do in terms of stock rates, down to specific paddocks, to manage my grass for the long-term, because it is the basis of my operation."

Rain earlier this year has allowed Mr Owens to buy sheep in to restock his country: he is now running around 3000 young merino ewes on a property with carrying capacity of 7000 dry sheep equivalent (DSE).

He said he was surprised by how his country responded once it rained.



Longreach producer Dave Owens has been impressed by how his pasture country responded to 150 mm of rain spread over three falls.

"This year I have been very impressed by the response from the rainfall events. I have had about 30 per cent mortality in the Mitchell grass tussocks overall, but the ones that survived have responded tremendously to the 150 mm (6 inches) in three falls."

He works on spelling the majority of his country for 14-16 weeks during the wet season, but admits it isn't always possible to give pasture such an extended break. But he believes resting or spelling country has paid dividends in terms of the Mitchell grass response this year.

"I am comfortable projected stock numbers at the moment match our grass budgets, however I am also very conscious I currently have significant roo pressure," Mr Owens said.

"So when I do my stock calculations I have to factor in an additional 3000 DSE animals, because I estimated (based on paddock counts and local environmental figures) there are between 5000-6000 roos on Somerset at the moment.

"It is the downside of being one of the few places to get reasonable rain in a very large area, but that's where feed budgeting allows you to get a realistic idea of what you really have available in the paddock."

He admits calculating feed budgets can be a complex task, but he believes working through the figures becomes easier with practice.

"The information that you need to collect to do a feed budget is quite involved, but it's all down to the quality of the soil and the quality of the grass, in particular, land type areas. Then the amount of your annual grasses and the amount of unpalatable types," Mr Owens explained.

"This all goes into a calculation and you decide how much you need to leave to maintain pasture and land condition and gives you an amount of kilograms of dry matter that can be used for grazing."

Despite the situational challenges facing his enterprise and the sheep and wool industry in general, the 33-year-old landholder is optimistic about the future of agriculture.

"My immediate plan is to stay in the sheep industry, it is what this country is best suited for," he explained.

"Yes we have had some issues with wild dogs, in the worst affected paddocks I lost 50 per cent of my lambs. But I now have a 14 km dog



A dry paddock on Somerset in December last year. The Mitchell grass was grazed to a height of about 15 cm.



The same paddock in April this year - despite the dry 70% of the Mitchell grass tussocks survived.

fence with one neighbour and we are looking to do more exclusion fencing this year, so I am confident that will make a significant difference to the dog pressure.

"Overall I think, what makes it easier to determine the direction your business should be taking, or whether it really is worth doing, are the facts and figures available now for individual grazing enterprises.

"For me personally, the more science and data available, the better tools I have to make decisions about managing grass and land condition. These two things are first and foremost in a grazing business like mine."



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