Resiliency Down Under
Drought-Proofing in New South Wales

As the world's most drought-prone country, Australia can be a tough place to make a living from grass. The recent drought across winter-rainfall dominant, southern Australia has been so pronounced that most of the world has been aware of the dire situation. When the world's driest continent makes news for being dry, it's really dry.

Conventional cattle and sheep farmers across New South Wales and Victoria have routinely spent on the order of $250/cow (and $55/sheep) on purchased feed to pull through the drought. Many sold out. Through the whole process, I periodically checked in with the Coughlan family (see "When Starting Out—Keeping Things Simple" and "Prosperity through Simplicity—The Coughlans of Tarabah"). Their focus on functional cattle, healthy ecosystem processes, and diligent grazing planning, I reasoned, was sure to give them a huge advantage in surviving this tough situation. Turns out that they not only survived, but thrived. Now, after having received reasonable moisture since April, they have *more* cattle than when the drought started, and they *didn't buy in a pound of forage*. It was a challenging experience, don't get me wrong. Tough decisions had to be made, and decisive action had to be taken.

Destocking Early

The Coughlans own two properties in southern New South Wales, Tarabah (drier) and Moombril (wetter, rolling country in the foothills of the Snowy Mountains). In 2006, Tarabah received eight inches (207 mm) of the 17-inch (425-mm) average, and Moombril 10.5 inches (267 mm) of the normal 30 inches (750 mm). Much of the rain that did come came outside of its normal concentrated period from May to November and was largely ineffective. In the 100+ years that rainfall records have been kept in New South Wales, 2006 ranked among the poorest 10 percent.

"We were getting nervous by the end of June," said Michael, "and started to sell surplus cattle in July and had them all off by the middle of August." Most of these cattle were yearling steers that would have been held over through the green season and not sold till October/November. Instead of the typical weight spread of 814 - 1,012 pounds (370-460 kg) at sale date, the yearlings came in a little lighter, from 704 – 898 pounds (320- 408 kg). But, getting those mouths off the farm early in the growing season resulted in lots more forage on hand when the sparse rains quit for good in November.

By August, which should have been the middle of the wet, the Coughlans were under no illusions that things were going to turn for the better, and stuck to their program of shipping all cows with no calves at side, no matter condition or price. They did feel they could afford to hold onto all of their yearling heifers. After culling just the bottom 5 percent, the balance was put in with mature cows.

Property Swapping and Herd Amalgamation

Back at the beginning of November, the Coughlans had done their forage assessments and dormant (closed) season grazing planning. They knew how much grass they could count on until, at the earliest, the following May (six months away), and made plans accordingly. They estimated that at Tarabah, they had enough feed for all of their

cattle still on hand (from both properties) to last the entire dormant season. Talk about peace of mind.

On Moombril, things were looking tighter, but they still had enough feed to last the pairs at Moombril for the first 90 days of the dormant season. After those first 90 days (now mid-Feb), calves were weaned on Moombril and sent to Tarabah. The cows were kept on for another 30 days and then, with the exception of a small herd of 200 cows (and all their bulls) kept at Moombril, all the Moombril cows were sent to Tarabah (mid-March). All of these cattle—Moombril cows, Tarabah cows, weaned calves from Moombril, and yearling heifers, were combined into one giant herd on Tarabah—a whopping 4,880 head of cattle.

On November 28, just a month into the dormant season, a fire took out 5,000 acres (2,000 ha) on Tarabah, which amounted to about 20 days worth of grazing. That was a big chunk, and necessitated tighter rationing of forage in the remaining paddocks. The Coughlans refined down to half day moves instead of one day moves. In general, 250 acres (100 ha) represented one day of grazing for the big mob of cows. In their grazing planning, a 375-acre (150-ha) paddock would have been slotted for only one day of grazing, after rounding down from 1.5 to one day. Now, with half day moves, the cows were left in these paddocks for 1.5 days. This enabled them to pick up these 20 lost days and make it to the end of April.

Throughout the entire dormant season, only one selection (or grazing period) was planned in each paddock. On both Tarabah and Moombril, the Coughlans have on the order of 90 paddocks, which means that for the bulk of the dormant season, when only one big herd of animals was being managed on each property, grazing periods were seldom longer than two days.

Production Protected

By early April, feed conditions were deteriorating, and the original Tarabah cows were starting to slip in condition. These cows had had their calves at side since June and July, nine to ten months earlier. On a body condition score scale of 1-5, they were falling from a 4 to a 3, so things weren't dire by any means, but action had to be taken, especially given that there was no guarantee that new green grass was on the horizon. Playing catch up with cow condition is always agonizing and costly.

So calves were weaned, and the cows immediately started to pick back up in condition, even without any rain or new green grass. On Moombril, it had started to rain in early April. Because only 200 cows plus the bulls remained on Moombril, and because the soil surface had been left in excellent condition when most of the cows left in March, the grass on Moombril sprang back to life immediately. So, to further relieve the pressure on Tarabah, the 950 Moombril cows were sent back home to their first green grass since November. Also, the drys were immediately sold and the Tarabah cows were all preg tested—with a 91 percent birth rate including the coming two year old heifers!

Those three actions relieved a lot of pressure on Tarabah. If the rains failed to start in May, the Coughlans felt they still had two months worth of standing dormant forage. The mature cows would have done fine, but Michael says the yearling heifers would have battled to reach breeding weight. Most of us are worried about getting yearling heifers bred in the good years, let alone in a year like this.

On April 28th, 2007 it started to rain on Tarabah. As of July 15th, Tarabah had received eight inches (195 mm), and Moombril 14.5 inches (360 mm). The grass is growing like gangbusters, all the new babies are on the ground, the yearlings are packing on the weight, and the cows are fat again. They made it.

Resiliency & Land Health

With good holistic grazing planning, the land gradually becomes more drought resistant. With a healthy water cycle and vigorous plants with deep root systems, dry years are a lot less dry, since water soaks in more effectively, and healthy plants use what does soak in more efficiently.

Also, with good graze/trample to recovery ratios and high stock density, grass plants have the chance to capture more sunlight, the grass that does grow can be efficiently rationed with little trampling waste, and the cattle can be maintained in good condition due to a steady plane of nutrition and frequent moves onto fresh, unfouled forage.

Allan Savory rightly points out that most droughts are man-made. The Coughlans' positive experience in surviving this drought is a strong testament to Savory's controversial assertion. Since 1997, when holistic grazing planning commenced on Tarabah, ecological conditions have improved immensely. Michael states that in normal years, Tarabah and Moombril now reach the end of the dormant season with 100 percent ground cover, perfectly primed to respond to the new season's rain. This year, he estimates that ground cover as of late April was closer to 90 percent, and the cover itself was thinner than normal. But, considering the difficult year, he and Anna were satisfied with the result. Now, since the rains have commenced and the land has had the chance to reveal its resilience, the Coughlans are relieved to see that their dormant season planning did its job from the land's point of view.

However, there are differences across the properties. On Tarabah, Michael has noted a marked difference in response to rain in different sized paddocks. The smallest paddocks averaging 250 acres(100 ha) have responded the best. Up to 1,000 acres (400 ha), the response has been "pretty good" overall. Michael feels that to go the next step and really build in resiliency, they would like to develop to 180 paddocks on both properties.

How'd the Neighbors Fare?

Certified Educator Bruce Ward, who works closely with the Coughlans in the same management club, has noted that across much of drought-stricken Australia, the response to rain has been much less dramatic. The winter in general has been quite cold, and the generally bare landscape has struggled to come away with new grass.

You might be wondering how heavily the Coughlans stock their properties. It's easy to negotiate a drought if you're stocked way below your carrying capacity. Admittedly, Michael acknowledges that they haven't been pushing stocking rate, but are building their herd through retaining replacements as their specific ecological conditions dictate. In the drier district where Tarabah is located, they are nonetheless stocked at about the average of the district. But, although they don't have hard data, they suspect that virtually no average farmer survived the drought with more cattle than they started with (as the Coughlans did), especially after having bought in no outside feed.

In the district surrounding Moombril—an inherently much higher producing area—high input farmers are stocked roughly 30 percent heavier than the Coughlans. But these high input operations apply lots of fertilizer and put up lots of hay, something the Coughlans have steer cleared of.

All things considered, excessive, untapped carrying capacity had nothing to do with this success story. It was the result of a holistically resilient pastoral model—solid ecology, adapted genetics, sound, timely decision-making, and skilled, decisive action. Congratulations, Coughlans—your pastoral prowess continues to inspire.

PHOTOS

Coughlan Moombril drought.jpg

After months of no moisture, a scant .68 inches (17 mm), the first to come as the drought gradually subsided, created an immediate response on Moombril, the Coughlans' wetter property at the base of the Snowy Mountains. Moombril is on the right of the fence, the neighbors on the left. Note the difference in cover, which was the key to the rainfall response. Toward the end of the drought, the Coughlans moved the bulk of the Moombril herd to their other property, Tarabah, before depleting their source of litter on Moombril. On the neighbor's side, due to no litter, a severely damaged water cycle, and poor plant vigor, response to this first rain was negligible at best.

Coughlan Tarabah drought.jpg

These are the Tarabah cows on Sept. 1, 2006, after negligible precipitation through what should have been the heart of the rainy season. Nonetheless, the grass is coming, due to Tarabah's nearly 100 percent covered soil surface. Enough grass ended up growing over the balance of the next two months (with continued way below normal precipitation) to carry all of the Coughlan's cattle straight through the drought, which (on Tarabah) finally broke in late April, 2007. The mother cows had calves at side for 10 months, and bred up 91 percent straight through, including yearling heifers.