



Drought Survival Stories 3



as told by Queensland
sheep and wool producers

Leading the way

for a more profitable Queensland
sheep and wool industry through
new technologies
knowledge and skills



This e-book is an initiative of the Leading Sheep Central West regional committee and contains stories written by producers, or compiled from their ideas and thoughts. The drought book idea was conceived by producer Jan Taylor, the contents collated by Jenny Keogh, proof-read by Nicole Sallur, and published by Jane Milburn. Photos provided by producers.

Leading Sheep is an Australian Wool Innovation initiative in partnership with the Department of Primary Industries and Fisheries and supported by AgForce, which targets the adoption of new technologies and practices to increase the productivity and profitability of the Queensland industry.
© May 2007 Leading Sheep

CONTENTS

Page

1	E-book endorsement	4-5
2	Even in drought, life is really pretty good	6-7
3	Planting saltbush as a drought-feed strategy	8-9
4	Connect Country	10
5	Drought thoughts!	11
6	Rain from nowhere - by Murray Hartin	12-13
7	Mitchell grass tips for drought recovery	14-16

www.leadingssheep.com.au

DISCLAIMER: Articles appearing in this e-book represent the views of the authors, contributors or subjects about which the stories were written. These views are personal, and do not represent the policies, opinions or views of the Leading Sheep project or any of its funding bodies. The information should not be relied upon as definitive drought advice. For application to specific circumstances, professional expertise should be sought.

*COVER photos: Top, young ram weaners on feed at Banyham by Guy Newell.
Bottom, storm over Amaroo homestead by Vynka Greenhalgh.*

E-book endorsement

By Jenny Keogh and Nicole Sallur *

The idea of this drought e-book was conceived by The Optimism Group and congratulations must go to them for instigating this successful Leading Sheep activity.

Well done to those producers who were kind (and brave!) enough to contribute their experiences to share with others. The past seven years has been a challenging time for producers trying to maintain a positive attitude, so we commend

those who contributed their stories for their 'can do' attitude.

Stories published in the series of three *Drought Survival Stories* e-books have related to the inevitability of future drought events, individual stock supplementation strategies, Stockplan (an electronic drought scenario planning tool), how a business training program supported decision-making for one producer, pasture monitoring and the value of community support and interaction during these times.

Many more stories conveyed a strong commitment by producers to their land and welfare of their animals through some very difficult drought years.

In most stories there was a strong recommendation for planning, anticipation and the need to design a drought management strategy early. This helps ensure the strategy fits with the individual's production program and

finances, and hopefully offers some options and choices.

This e-book has not just been read by our central western Queensland producer network. It has been widely distributed and read outside our own community and industry. There has been direct comment and inquiry from a diverse range of people and organisations, a few of which are highlighted below.

The first inquiry came from a student studying his PhD in Anthropology at the University of Melbourne researching how Australians respond psychologically and culturally to natural disasters.

Then the ABC Radio National's *Bush Telegraph* producer Tara Vickers interviewed some of the contributors to the e-book. Another contact was made from ABC Radio National regarding the impact of drought on those families running farm stay accommodation or tours and we were able to put them in touch with one such western Queensland family.

Deb Alick, Acting Public Health Officer, South West Population Health wrote in stating that she had been following our drought



Photo by Rod Green, QCL.

e-book with interest. Deb mentioned that she used to work for the Charleville School of Distance Education and was well aware of the impact that drought can have on the property as well as a huge toll on the family and their stress levels.

According to Deb rural men's mental health (particularly on-property) is an area that is of concern and that the opportunity for men and family to share their stories is a good one. It links 'survival' to dealing with financial stresses, coping with relationships and avoiding negative health impacts.

Deb supplied details of a University of Southern Queensland (USQ) book called *Tough Times: 10 men tell their stories on how they got through some difficult times in their lives*. If this book is of interest, please contact Professor Desley Hegney at USQ on 07 4631 5456 or email hegney@usq.edu.au.

The Leading Sheep e-book project demonstrates a new model for sharing information and experiences, and how we can support each other through this drought.

We would like to acknowledge AWI, DPI&F and AgForce for their support of this activity. Thanks also to David Phelps DPI&F, Longreach for wrapping up this final e-book with an article on managing Mitchell grass.



We acknowledge the skilled support of Jane Milburn, communications coordinator for Leading Sheep, in the formatting of this e-book. Jane also needs commendation on her energetic and professional approach to all she undertakes.

Finally thank you all for sharing your stories and also to those who have taken the time to read those stories, that is what it is all about. We hope you enjoy this final in the *Drought Survival Stories* e-book series.

*** Nicole Sallur is a Department of Primary Industries and Fisheries sheep extension officer working with the Leading Sheep project. Jenny Keogh is the Leading Sheep regional coordinator for the Central West group.**



PHOTOS: above and far left, Jenny Keogh working on her property Amaroo at Blackall, and left, Nicole Sallur with her endurance horse Henry.

Even in drought, life is really pretty good

By Fiona Owens, Gydia Park, Isisford

In 2002 when things became really bad, every day I wished I could shut out the bleak landscape and lay awake at night my mind in a whirl with thoughts of "why doesn't it rain, how long can we go on feeding stock?"

Social events became fewer and the whole topic of conversation revolved around the dreaded "D" word. Better to just stay home.

It was very easy to slide into dark despair at this point, until I had a wake up call with a health scare. That put things in perspective for me.

Why was I wasting my life stressing and worrying about a mere drought, something which we have NO control over.

I was able to remind myself that we have three good meals day, a bed to sleep in, and the freedom to live as we choose. I tried harder to think positive thoughts and believe in my husband

Joe's philosophy of "there's never been a drought yet that hasn't broken" or whenever the topic of rain came up, he would respond, "rain! ruination of a good drought!" It is better to laugh than cry!

We were certainly much better off than others, as although all our dams were dry at one stage we had access to river waterholes and in previous dry spells put in poly pipe, tanks and troughs giving us the capability of watering the entire place off the river when necessary.

So no worries of bogged sheep but it was usually when it was hottest that the pipe busted, a 'roo stuck his head under a trough float and emptied a tank or the pump blew up ... all of which still made for constant pressure keeping the water up.

On the twice weekly feed runs we trailed the cottonseed along the roads, the sheep held condition and it encouraged them to move around the paddock.

They seem to get depressed too sitting in the same old corner looking at black stumps where the grass used to be.

It was still VERY hard on the emotions driving through bare paddocks, so I focused on the road ahead to get the job done and back home I'd then immerse myself in something I enjoyed.

I realised here, too, how fortunate I was to be able to water and keep my garden and lawn. I often felt guilty when so many had to watch their lawns and gardens wilt and die.

There seemed to be a turning point for most people, we DO all need to get away for a short break, get together for social BBQs, craft days etc. They are good for body and soul. This does improve your outlook on things.

Just watch the news on any night to see all the misery and suffering in the world then you realise WHY WE LIVE WHERE WE LIVE. Drought and all!!!

It was still VERY hard on the emotions driving through bare paddocks, so I focused on the road ahead to get the job done and back home I'd then immerse myself in something I enjoyed.



Gydia Park in a good year. *Photo by Fiona Owens.*



Water from the Tank. *Photo by Jenny Keogh.*

Planting saltbush as a drought-feed strategy

By Jane Milburn

Where once he grew 1200 hectares of prime hard wheat, Duncan Banks now grows old-man saltbush.

The rains failed once too often for his liking so instead of persisting with dryland farming winter wheat at Dirranbandi, Duncan planted saltbush for sheep and cattle grazing.

Saltbush was native to the Maranoa region west of the Darling Downs until it was grazed out by rabbits and livestock in the 1902 drought, but Duncan replanted it from seedlings which will grow into hardy, deep-rooted, drought-tolerant bushes.

On their 4000 ha property Dunwold, Duncan and his wife Gerry believe that when the saltbush country is fully in production it will lift their carrying capacity to 10,000 DSE. The entire property is managed using cell grazing, which enables certified organic food and fibre production.

They have fenced the saltbush into 20 ha paddocks that are intensively grazed for 10 days and then rested for 6-9 months to rejuvenate.



PHOTO: Duncan Banks in revegetated saltbush at Dirranbandi. Photo by Gerry Grant.

This is a management tool to handle climate variability and change, which Duncan expects will return a margin similar to cropping once the saltbush is established.

Nigel Brumpton and his wife Rosemary from Baynham at Mitchell have been growing saltbush for the past 12 years and have planted about 450,000 bushes.

The plan is for saltbush plants to maintain stock through drought and for breaking up some of the hard claypan country for better water infiltration.

Nigel plants it in the same

way he would a crop, by fallowing the land for about 12 months to build up the soil moisture profile. He plants using a tree-planter behind a tractor using lots of labour.

"If you don't plant it into soil with enough moisture, it always seems to struggle," Nigel said.

The saltbush at Mitchell is rotationally grazed and seems to be surviving well in the drought and greening up without rain, although the Brumpton's have seen substantial losses of saltbush on their Cunnamulla property.

Nigel says the sheep

don't really "love" it and the kangaroos don't eat it, therefore the saltbush tends to be held over until it is really needed in drought times.

"It is a good tough plant which helps in drought but is not the whole solution. The sheep need carbohydrates to go with it."

"It provides good shade and shelter, at the same time as having some fodder value."

Nigel says the saltbush has not spread out, through self-seeding, because conditions have not been wet enough.

Meanwhile, Hughenden producer Bob Little, from Moonby Downs, tried planting saltbush for the first time last year and had success wherever there was sufficient soil moisture.

The seedlings that did have sufficient sub-soil moisture to grow have now taken off with the rain and are

nearly 1 metre high.

"The sheep seem to like it, particularly those that have come up from Cunnamulla. They can smell it, and go running to it when we open up the paddock," Bob said.

In hindsight, he said it was a bit ambitious to try and plant 30,000 seedlings in one go, and thinks planting in 10,000 seedling lots might generate a better success rate.

"We are going to try it again with the view to

having a fenced off area in each paddock. But this time I know that we can keep the seedlings in the shed and water them until the conditions are right for planting."

Bob said each seedling cost 26c, and all-up the planting cost was about \$10,000.

"It is hardy drought fodder which brightens up after rain, and we'll use it to fatten lambs or as a supplement for ewes," Mr Little said.



PHOTO: Nigel Brumpton, top left, of Mt Ascot Merino Stud with John Beitz, of Middle Ridge.





Connect country

Break the drought, make a friend

www.connectcountry.com.au

Connect Country was established by Jeannie Baker. Jeannie lives near the small town of Wyandra in western Queensland.

Jeannie was saddened to hear the endless stories of hardship and farmer suicide in her industry.

Jeannie has developed a website to connect isolated rural Australians via the internet and help people support each other.

The way Connect Country does this is through a series of rooms. The site contains five rooms; ladies, blokes, teens, parents and school. In each room there are live chat and discussion

formats, which enable people to communicate in an anonymous way.

These rooms also have rural service provider links. These services relate directly to that room, allowing quick access to information.

A community event area in each room provides clubs a platform to promote their events for FREE.

Connect Country has its own newsletter which comes out every month.

It provides up to date information from service providers and some light relief. Rural people are encouraged to write

and participate in the newsletter.

Connect Country views every rural Australian as precious.

If we truly value and support each other, we will grow and prosper. If we do nothing, then nothing will change.

Have a look at www.connectcountry.com.au and come and make some new friends today.

Drought thoughts!

By Stuart Mackenzie, Plevna Downs, Eromanga

In the six years from January 2001 to December 2006 we have averaged 134.6 mm annually. Our long-term average (from 1888) is 224 mm.

I look back on the past six years and know that I have been places that I have never been before, in a lack of rainfall sense, in a business sense and in a personal sense.

When I think of all the management strategies we have used, the selling off, the feeding, the water carting, etc, there was one activity that we did which, with hindsight, I believe was the most critical of them all.

In late 2002 we obtained the rainfall records of our area, most importantly our neighbour, Mt Howitt, which went back to 1888. We studied and analysed them in depth and it all became clearer.



“Accepting the incredible unpredictability of rainfall is a simple thing but at the end of the day, perhaps the most important.”

After a great season in 2000 we had 105 mm in 2001 and by January 2002 we were in as bad a drought as I had encountered. In all previous ‘droughts’ this was about the time when it would break. Thus, I was in the mindset of “it just has to rain soon, this is ridiculous.”

We had 54 mm in 2002 – nothing of consequence for 12 months and this came after we were already in serious ‘drought’. It was in this period that we started to study the rainfall records.

Analysis of the records proved that in fact it had happened before, in the 1900 drought, and that the dry period could go a lot longer yet.

Just because you have one dry year (105 mm) there is no reason why you can’t have another one straight after, or even two or three. You can have dams that don’t get water in them for three or four years. You can see your grass butts not grow a green leaf for five years. You can go six years without a fall in summer exceeding an inch (24 mm).

WHY? Because it had happened before and will happen again.

Once we got out of the ‘it has got to rain soon’ mentality, the whole drought management thing fell into place. It was all about making decisions based on what ‘was’ not what ‘could be’.

Our country has not been as dry as it was in 2002-03 even though the feed base has slowly dwindled away because of six years of no summer rain and I think the reason is we manage according to the rain we have had not what we ‘should’ have.

Accepting the incredible unpredictability of rainfall is a simple thing but at the end of the day, perhaps the most important!!

Rain from nowhere

By Murray Hartin

His cattle didn't get a bid, they were fairly bloody poor,
What was he going to do? He couldn't feed them anymore,
The dams were all but dry, hay was thirteen bucks a bale,
Last month's talk of rain was just a fairytale,
His credit had run out, no chance to pay what's owed,
Bad thoughts ran through his head as he drove down Gully Road
"Geez, great grandad bought the place back in 1898,
"Now I'm such a useless bastard, I'll have to shut the gate.
"Can't support my wife and kids, not like dad and those before,
"Crikey, Grandma kept it going while Pop fought in the war."
With depression now his master, he abandoned what was right,
There's no place in life for failures, he'd end it all tonight.
There were still some things to do, he'd have to shoot the cattle first,
Of all the jobs he'd ever done, that would be the worst.
He'd have a shower, watch the news, then they'd all sit down for tea
Read his kids a bedtime story, watch some more TV,
Kiss his wife goodnight, say he was off to shoot some roos
Then in a paddock far away he'd blow away the blues.
But he drove in the gate and stopped – as he always had
To check the roadside mailbox – and found a letter from his Dad.
Now his dad was not a writer, Mum did all the cards and mail
But he knew the writing from the notebooks that he'd kept from cattle sales,
He sensed the nature of its contents, felt moisture in his eyes,
Just the fact his dad had written was enough to make him cry.
"Son, I know it's bloody tough, it's a cruel and twisted game,
"This life upon the land when you're screaming out for rain,
"There's no candle in the darkness, not a single speck of light
"But don't let the demon get you, you have to do what's right,
"I don't know what's in your head but push the bad thoughts well away
"See, you'll always have your family at the back end of the day
"You have to talk to someone, and yes I know I rarely did
"But you have to think about Fiona and think about the kids.
"I'm worried about you son, you haven't rung for quite a while,
"I know the road you're on 'cause I've walked every bloody mile.
"The date? December 7 back in 1983,
"Behind the shed I had the shotgun rested in the brigalow tree.
"See, I'd borrowed way too much to buy the Johnson place
"Then it didn't rain for years and we got bombed by interest rates,
"The bank was at the door, I didn't think I had a choice,
"I began to squeeze the trigger – that's when I heard your voice.
"You said 'Where are you Daddy? It's time to play our game'
"I've got Squatter all set up, we might get General Rain.'
"It really was that close, you're the one that stopped me son,
"And you're the one that taught me there's no answer in a gun.

"Just remember people love you, good friends won't let you down.
"Look, you might have to swallow pride and take that job in town,
"Just 'til things come good, son, you've always got a choice
"And when you get this letter ring me, 'cause I'd love to hear your voice."
Well he cried and laughed and shook his head then put the truck in gear,
Shut his eyes and hugged his dad in a vision that was clear,
Dropped the cattle at the yards, put the truck away
Filled the troughs the best he could and fed his last ten bales of hay.
Then he strode towards the homestead, shoulders back and head held high,
He still knew the road was tough but there was purpose in his eye.
He called his wife and children, who'd lived through all his pain,
Hugs said more than words – he'd come back to them again,
They talked of silver linings, how good times always follow bad,
Then he walked towards the phone, picked it up and rang his Dad.
And while the kids set up the Squatter, he hugged his wife again,
Then they heard the roll of thunder and they smelt the smell of rain.

Murray Hartin
February 21, 2007



Murray Hartin Australian storyteller

His poem, *Rain From Nowhere*, addresses the issue of rural suicide and has created more interest than any other spoken word piece in recent history. So who is Murray Hartin?

Some may think it would take a lot of guts, or a fair amount of stupidity, to recite poetry in front of a corporate audience. Or any audience for that matter. But with Murray Hartin it's different. It's clever, it's contemporary, it's thought-provoking, oh yeah, and it's bloody funny.

The rhyming bush style is no doubt a legacy of his childhood growing up in the Northern NSW town of Moree, where the poems of Banjo Paterson first crept into his life.

His five years of boarding at Sydney's Barker College didn't quite knock out all of the rough edges and combined with his experience of living in Sydney, Tamworth, Newcastle, Melbourne, Moree and now back in Sydney again has given Muz a great insight into the Aussie way of life.

Muz has the ability to paint the picture with his words and take you to the yarn – you feel like you're there.

Murray Hartin
PO Box 445 Artarmon NSW 1570
www.murrayhartin.com

Mitchell grass tips for drought recovery

Story and photos by David Phelps, DPI&F Longreach

In this article I hope to provide useful background on the frequency and impact of droughts on the Mitchell grass pastures of Queensland. I certainly don't need to tell you that the current drought has been severe; but has it been the worst in history?



People have been telling me since I came to western Queensland in 1990, that you can't tell the severity of a drought from rainfall records alone.

The current period reinforces this local wisdom. For example, Longreach has experienced 12 extended drought events between January 1898 and December 2006, based on the rainfall records (see table below). The last three years (2004

to 2006) do not even rate as drought.

The defined drought period of January 2001 to December 2003 is 35 months less than the Federation drought of 1898 to 1904.

The 'noughties' drought (2001-03) does not rate

as bad as the 1960s, with two drought periods of a combined 67 months. It is roughly on par with the 1990s drought, which had 33 months with 40 percent of the time in severe drought.

Overall, I don't think that the rainfall records show us just how severe the current

Periods of extended drought for Longreach between 1893 and May 2004.

Drought	Period	Duration (months)	Total rainfall (mm)	% of time in severe drought ¹
1	Mar 1898 to Jan 1904	71	1,395	46
2	Mar 1913 to Jun 1916	40	840	35
3	Mar 1918 to Apr 1920	26	607	0
4	Feb 1925 to Aug 1931	79	1,705	23
5	Jan 1934 to Feb 1936	26	585	33
6	Apr 1937 to Sep 1939	30	532	14
7	Jul 1944 to Jul 1947	37	793	14
8	May 1965 to Jan 1968	33	648	10
9	Mar 1968 to Dec 1970	34	748	64
10	Feb 1987 to Feb 1989	25	614	0
11	Mar 1991 to Nov 1993	33	590	40
12	Jan 2001 to Dec 2003	36	706	31

(Footnotes)

¹ SEVERE drought refers to the driest 5% of years for each 24-month period.

drought has been. My impression from reading historical articles and seeking local experience, is the 'noughties' drought probably is the worst since the Federation drought.

The photographs of the Mitchell grass pastures on Melrose, on page 7 of the second issue of this publication, show quite clearly that there has been a lack of pasture-growing rain since 2003, despite what the records show.

Indeed, pasture surveys conducted by DPI&F staff throughout 2005 estimated that 60-75 percent of Queensland's Mitchell grasslands were still affected by drought. Whilst the rainfall records may not clearly show the severity of the current drought, the lack of pasture response does.

Poor pasture response, and widescale death of Mitchell grass tussocks has occurred before, with reports of concern over the loss of Mitchell grass to be found in the historical literature.



There are sketchy historical records describing poor pastures and extreme stock losses during 1898 to 1904, with the 1930s being the best scientifically recorded event.

The Queensland Government botanist, Selwyn Everist, reported concerns in a number of articles throughout the drought years of the 1930s. Generally, the response was recorded as patchy. In the Winton district in 1934, response to early rains was not very good, and it was thought that after eleven years of drought the Mitchell

grasses would not come back at all.

However, experiments conducted on the (then) Australian Estates Company property, Eldersleigh, in the Winton district during the summer of 1935-36 revealed a dominance of Mitchell grass biomass in yield harvests following good January rains in 1936. This suggests that the Mitchell grass in the Winton district recovered quite rapidly.

In the Boulia district, the response 'was rather patchy. In those areas which received rains in November and December, the Mitchell grass responded well, but in those areas which missed the early rains and received only the February rains, the response was poor' (Everist 1935).

For the Longreach district, reports were conflicting. For the Longreach-Jundah district, it was written that 'Mitchell grasses ... responded remarkably well, having regard to the



Mitchell grass recovery

seasonal conditions. Old tussocks believed to be dead showed a wonderful recovery.' However, the district inspector of stock reported that 'the Mitchell grass responded very poorly even in places where conditions were favourable, and where it was reasonable to expect good results. Only a percentage of the old roots responded to the good rains'.

Local knowledge from central western Queensland also reports the 1960s, and for some areas the 1980s, as severely affecting Mitchell grass tussocks. However, it is difficult to find detailed records of the pasture condition for the remaining seven drought events; highlighting the necessity of capturing detailed observations and conducting field experimentation during the current event.

Mitchell grass has recovered following each of these historical drought events, thanks to drought-breaking rains. So why should we worry about the current drought? The Mitchell grass will recover; there is little doubt about that. In some areas – such as the Aramac and Richmond districts – it already has.

We have enough



experience and knowledge now, however, to understand that there are ways to speed the recovery of Mitchell grass tussocks. A speedy recovery of Mitchell grass means a speedier recovery for the country's carrying capacity and a faster return to full productivity.

In situations where there is still a reasonable density of living Mitchell grass (one tussock for every 5-10 paces, or better), then light grazing early in the wet season will allow these tussocks to replenish their store of starch. A good store of starch allows the tussocks to grow more vigorously with further rains. A good rule of thumb is to spell country following the first summer rains, until the Mitchell grass has gone to seed. A single wet season spell can be sufficient to promote the rapid recovery of existing Mitchell grass tussocks.

In situations where most of the Mitchell grass has died and the density of tussocks is low (one tussock for every 20-30 paces or less), recovery will be through encouraging seedling establishment. Mitchell grass seedlings germinate best over summer, and establish well if there is follow-up rain. Follow-up rain promotes seedling root growth, and allows seedlings to survive over the dry season. Grazing pressure at the time of seedling establishment appears to make little difference to their survival – which is basically dependent on rain.

However, overgrazing in subsequent summers prevents these seedlings from growing properly. Light grazing, or two to three years of wet season spelling, is the best management option to promote rapid seedling

recovery. Heavy grazing of the seedlings inhibits root growth and also prevents the expansion at the base which is needed for storage of starch and promotion of new stems.

In addition, we now understand that it is possible to reduce the impact of drought on Mitchell grass through burning or alternative grazing strategies.

For instance, some areas which were burnt in the early 2000s have consistently shown a better response from rain than areas which were not burnt, yet other areas – generally where grazed by kangaroos or livestock – have not. Areas burnt prior to 2001 do not demonstrate the same benefits; so what is the difference, and is it possible to tap into the benefits by using fire? We do not yet know, but the potential to mitigate the impact of drought is apparent.

In some areas where grazing has been confined to the dry season whilst Mitchell grass is not growing, but rested over summer whilst it is, the Mitchell grass plants have consistently shown a better response than neighbouring areas.

In contrast, other areas grazed heavily by sheep at the start of the wet season have reduced the competition from Flinders grass and annual herbages, leaving more soil moisture available to promote rapid Mitchell grass growth.

There has not yet been enough research or trial and error to define practical management strategies based on burning or alternative grazing approaches. However, there is enough evidence to give hope that there will be more options available to reduce the impact of drought on pasture in the next drought.

Further reading

- Chambers, A. (1998). *Battlers of the Barkly*. CQU Press, Rockhampton. 137 pp.
- Everist, S. L. (1935). *Inland Pastures. Part II. Response during 1934 season of Mitchell and other grasses in western and central Queensland*. Queensland Agricultural Journal 43: 274-87.
- Everist, S. L. (1964). *The Mitchell grass country*. Queensland Naturalist 17: 45-50.
- Forrest, P. (1988). *A Rush for Grass*. Murrumbidgee Shire Council. 265 pp.
- Griffiths Davies, J., Scott, A. E. and Kennedy, J. F. (1938). *The yield and composition of a Mitchell grass pasture for a period of twelve months*. Journal of the Council of Scientific and Industrial Research (Australia) 11: 127-39.
- Hoch, I. (1990). *Barcardine 1846-1986*. Barcardine Shire Council. 135 pp.
- Moffat, A.G.I. (1987). *The Longreach Story*. The Jacaranda Press. Longreach Shire Council. 380 pp.

