

National Action Plan for Salinity and Water Quality

Social and Economic

State-level Investment Project SE01

Regional Agricultural Profile South West NRM Region

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The National Action Plan for Salinity and Water Quality (NAPSWQ) is a joint Australian and Queensland Government initiative that encourages governments and regional communities to work together to address salinity and water quality issues in priority catchments throughout Queensland. This document has been produced under the NAPSWQ using Australian and Queensland Government financial support.

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www.regionalnrm.qld.gov.au/research_sips/sips/social_economic/assistance.html

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Regional profile for the South West NRM region

Introduction

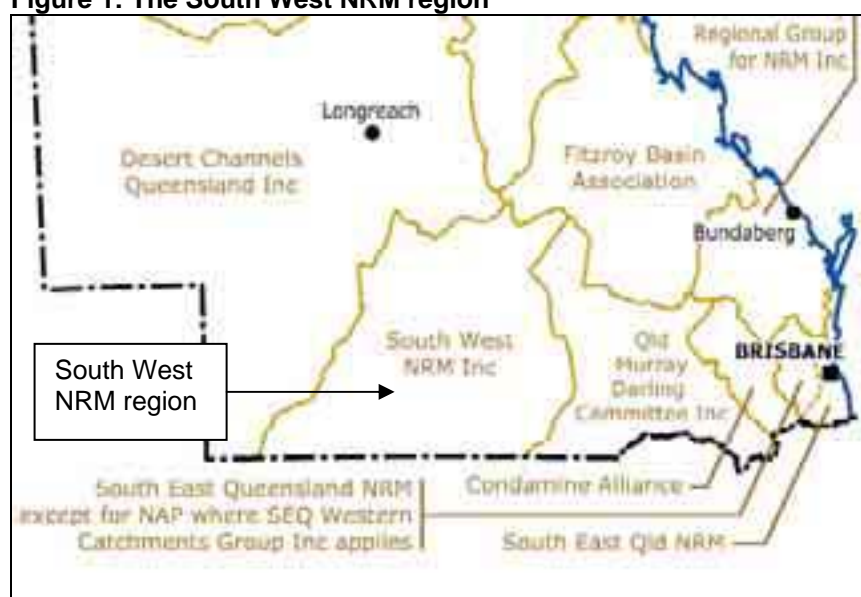
This report provides a basic social, agricultural and economic regional profile for the South West NRM region based on the information provided by the Queensland Regional Bodies Information System (QRBIS) and the Australian Bureau of Agricultural and Resource Economics (ABARE). The information provided in QRBIS is based on the 2000-01 Agricultural Census, the 1996 and 2001 Census of Population and Housing, and the 2004 Population Survey. This regional profile for the South West NRM region is designed to provide both a social and an agricultural profile of the region, and will also provide a baseline against which information from the 2005-2006 Agricultural Census can be compared. It is anticipated that future census information will be provided by the Australian Bureau of Statistics to match the boundaries of the natural resource management regions, making it easier to compare future data to the 2000-01 data presented in this report.

The information presented in this report includes; population and age structure, employment, agricultural commodities produced in the region, agricultural practices used, farm financial characteristics and some data for natural resource management practices.

Location of the South West NRM region

The South West NRM region is situated on the Queensland/New South Wales border (see Figure 1 below). The region includes all lands drained by the Bulloo, Paroo, Warrego and Culgoa River Basins and their tributaries within Queensland.

Figure 1: The South West NRM region



Matching available data to regional NRM bodies

Data from the various sources used in this report is collected and provided at different geographic levels. For example, the Population and Housing Census is reported at the finest level, the collection district, while the Agricultural Census is reported at the higher statistical local area level. Outside of the metropolitan area the statistical local area level roughly equates to local government areas. On the other hand, regional NRM body boundaries are much greater in scale and based roughly on catchment boundaries. The challenge is then to match (or concord) data collected based on administrative boundaries to the regional NRM body boundaries.

Regional Agricultural Profile – South West NRM Region

The data reported in QRBIS has been concorded to the regional NRM body boundaries where possible. The data reported here from ABARE has also been matched to the regional NRM boundaries. While it has been possible to match the Population and Housing Census to the regional NRM boundaries based on collection districts this has not been possible for the Agricultural Census based on statistical local areas.

Figure 2: The South West NRM region showing each local government area

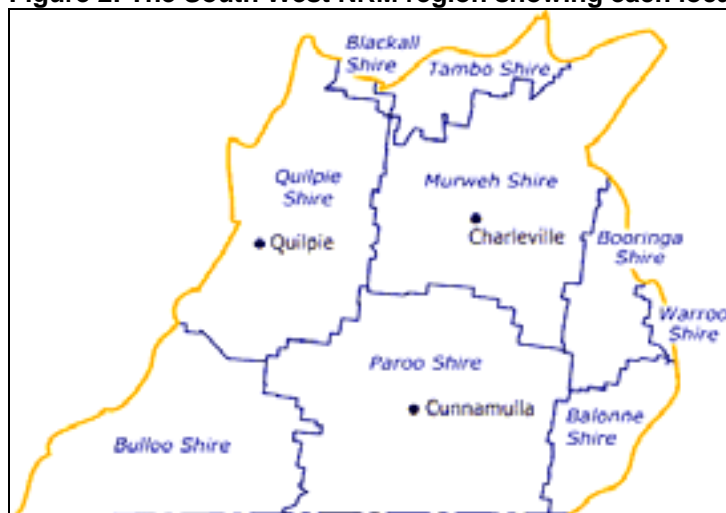


Figure 2 above shows the local government areas contained within the South West NRM region. These local government areas contain one statistical local area which falls wholly within the boundary of the region and eight partially (see Table 1). We had to assume that agricultural production is spread uniformly over the statistical local area, and agricultural production has been allocated to regional NRM bodies on this basis. Where less than 10% of a statistical local area fell within the region, however, the data from this statistical local area was not included. Where more than 90% of the statistical local area fell within the region, 100% of the data from this statistical local area was included. Table 1 below shows the statistical local areas that are contained within the region and indicates the percentage of each one that has been included within the boundaries of the region for the purpose of this report. Table 1 also shows where a statistical local area has been added or subtracted.

It should be noted that some ground truthing of land uses in the statistical local areas that sit on the boundary of the South West NRM region has been conducted using geographic information systems (GIS). Land use data from 1999 was used. Where ground truthing has identified that a specific land use sits mainly within or outside a statistical local area this will be indicated in a footnote to the tables in the agricultural profile section of this report.

Table 1: Percentage of statistical local area included in the South West NRM region

SLA	Percentage of SLA included in region	Percentage of SLA included in this report	Percentage added to another region	Percentage added from another region
Paroo	100%	100%		
Murweh	99.9%	100%		
Tambo	61.5%	66.4%		4.9% from Fitzroy
Quilpie	51.3%	51.3%		
Bulloo	43%	43%		
Boorunga	40.8%	40.8%		
Balonne	31.8%	31.8%		
Warroo	9.9%	0%	9.9% to QLD Murray Darling	
Blackall	7.9%	0%	7.9% to Desert Channels	

Social and demographic profile

Population

Estimated resident population

The estimated resident population of the South West NRM region was 9,103 on the 30th June 2004; this represents 0.2% of the total population of Queensland, while the area of the South West NRM region represents 11% of the total area of Queensland. Fifty-two per cent of the population were male and 48% of the population were female.

There was a population decline in the South West NRM region between the years of 1996 and 2004 (see Table 2); this decline was, on average, 0.3% each year. This population decline contrasts with the average 2% population increase for Queensland as a whole.

Table 2: Estimated resident population – South West NRM region, 1996, 2001, 2004

	Region	Queensland	Region as a percentage of Queensland
Area (km ²)	187,427 ^a	1,734,157	11
1996	9,362	3,338,721	0.3
2001	9,181	3,635,121	0.3
2004	9,103	3,882,037	0.2
Annual average change 1996-2004p (%)	-0.3	2.0
Annual average change 2001-2004p (%)	-0.3	2.3

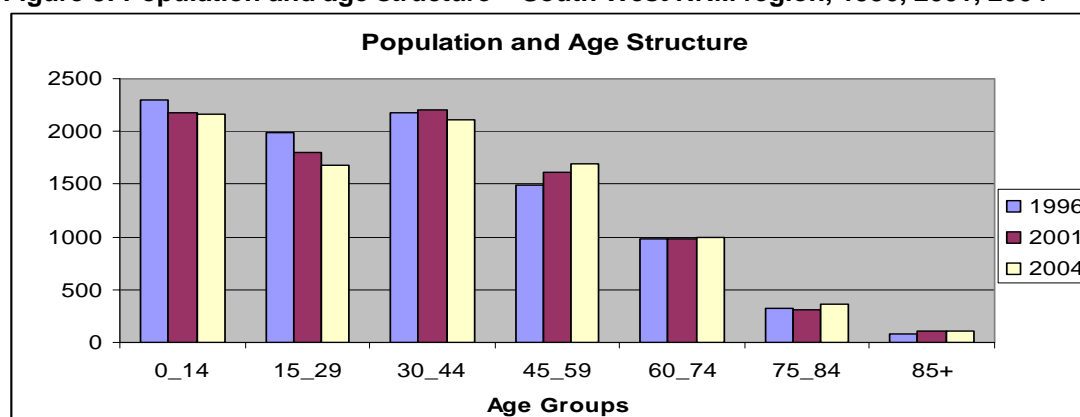
(a) The area for the region was calculated by adding together the portion of each SLA that fell within the region.

Source: ABS data, Census of Population and Housing 1996, 2001; ABS Population Survey 2004 (as reported in QRBIS).

Population and age structure

The data indicates that the structure of the population of the region is progressively ageing. Figure 3 illustrates the population decline in the South West NRM region for the age groups 0-14, 15-29, and to a lesser extent 30-44. Between 1996 and 2004 the 0-14 age group had declined by approximately 6%, the 15-29 age group had declined by approximately 15.7%, and the 30-44 age group had declined by approximately 4%.

Figure 3: Population and age structure – South West NRM region, 1996, 2001, 2004



Source: ABS data, Census of Population and Housing 1996, 2001; ABS Population Survey 2004 (as reported in QRBIS).

Regional Agricultural Profile – South West NRM Region

Employment

Employment by Industry

The three industries employing the greatest number of people in the South West NRM region in 2001 were; Agriculture, Forestry and Fishing (29.2%), Retail Trade (10.4%), and Health and Community Services (8.9%) (see Table 3). In 2001 only 5.8% of the total Queensland labour force was employed in the Agriculture, Forestry and Fishing industry.

The number of people employed increased between 1996 and 2001 for 9 out of 17 of the listed industries. In particular there were increases in agriculture, manufacturing, construction, and wholesale trade.

Table 3: Employment by Industry – South West NRM region, 1996, 2001

Industry	1996		2001		1996 to 2001 % Change
	No. employed	% ^a	No. employed	% ^a	
Agriculture, Forestry and Fishing	1,234	27.8%	1,367	29.2%	11%
Mining	138	3.1%	98	2.1%	-29%
Manufacturing	118	2.7%	187	4.0%	58%
Electricity, Gas and Water Supply	42	0.9%	32	0.7%	-24%
Construction	204	4.6%	293	6.3%	44%
Wholesale Trade	140	3.2%	209	4.5%	49%
Retail Trade	497	11.2%	484	10.4%	-3%
Accommodation, Cafes and Restaurants	208	4.7%	188	4.0%	-10%
Transport and Storage	243	5.5%	204	4.4%	-16%
Communication and Services	61	1.4%	64	1.4%	5%
Finance and Insurance	39	0.9%	46	1.0%	18%
Property and Business Services	208	4.7%	178	3.8%	-14%
Govt. Admin and Defence	314	7.1%	302	6.5%	-4%
Education	309	7.0%	323	6.9%	5%
Health and Community Services	374	8.4%	415	8.9%	11%
Cultural and Recreational Services	51	1.1%	57	1.2%	12%
Personal and Other Services	132	3.0%	117	2.5%	-11%
Not Stated	82	1.8%	97	2.1%	18%
Non Classifiable	41	0.9%	13	0.3%	-68%
Total	4,435	100%	4,674	100%	

(a) The values in this column represent the percentage of the South West NRM region's labour force that was employed in each of the separate industries.

Source: ABS data, Census of Population and Housing 1996, 2001 (as reported in QRBS).

Regional Agricultural Profile – South West NRM Region

Employment within Industries

The following tables provide more detail about employment in the primary industries and those industries that provide support to the primary industries in the South West NRM region. Table 4 gives a breakdown of the Agriculture, Forestry and Fishing industry and it is clear that in 2001 agriculture (89%) was by far the main employer within this industry. As would be expected the commercial fishing sector was a minor employer in the South West NRM region, dropping from 3 employed in 1996 to 0 employed in 2001.

Table 4: Employment - Agriculture, Forestry and Fishing – South West NRM region, 1996, 2001

Agriculture, Forestry and Fishing	1996		2001		1996 to 2001 % Change
	No. employed	% ^a	No. employed	% ^a	
Agriculture	1,056	86%	1,220	89%	16%
Services to Agric Hunting & Trapping	154	12%	131	10%	-15%
Forestry and Logging	7	1%	10	1%	43%
Commercial Fishing	3	0%	0	0%	-100%
Agric Forestry & Fishing, undef	14	1%	6	0%	-57%

(a) The values in this column represent the percentage of the South West NRM region's agriculture, forestry and fishing labour force that was employed in each of the separate sectors.

Source: ABS data, Census of Population and Housing 1996, 2001 (as reported in QRBS).

Table 5 provides more detail about employment in the mining industry in the South West NRM region. Although oil and gas extraction are represented as the major mining sector employer in 2001 ground truthing has revealed that the gas and oilfields in the Bullo Shire lie mostly outside the region.

Table 5: Employment - Mining – South West NRM region, 1996, 2001

Mining	1996		2001		1996 to 2001 % Change
	No. employed	% ^a	No. employed	% ^a	
Oil and Gas Extraction	34	25%	56	57%	65%
Other Mining	39	28%	23	23%	-41%
Services to Mining	65	47%	19	20%	-71%

(a) The values in this column represent the percentage of the South West NRM region's mining labour force that was employed in each of the separate sectors.

Source: ABS data, Census of Population and Housing 1996, 2001 (as reported in QRBS).

Regional Agricultural Profile – South West NRM Region

The main employer in the manufacturing sector in 2001 in the South West NRM region was the food, beverage and tobacco manufacturing sector (37%). This is not surprising considering that agriculture is the main industry in the South West NRM region.

Table 6: Employment - Manufacturing - South West NRM region, 1996, 2001

Manufacturing	1996		2001		1996 to 2001 % Change
	No. employed	% ^a	No. employed	% ^a	
Food, Beverage & Tobacco Mfg	37	31%	70	37%	89%
Textile Clothing Footwear & Leather Mfg	21	18%	20	11%	-5%
Wood & Paper Products Mfg	19	16%	25	13%	32%
Printing, Publishing & Recorded Media	11	9%	9	5%	-18%
Petroleum Coal Chem & Ass Prod Mfg	12	10%	15	8%	25%
Non-Metallic Minl Prod Mfg	0	0%	9	5%	-
Metal Product Manufacturing	1	1%	6	3%	500%
Machinery & Equipment Mfg	8	7%	12	7%	50%
Other Manufacturing	9	8%	4	3%	-56%
Manufacturing, undefined	0	0%	17	9%	-

(a) The values in this column represent the percentage of the South West NRM region's manufacturing labour force that was employed in each of the separate sectors.

Source: ABS data, Census of Population and Housing 1996, 2001 (as reported in QRBS).

The majority of the employees employed in the electricity, gas and water sector in 2001 were employed in electricity and gas supply (72%). Only nine people (28%) in 2001 were employed in water supply, sewerage and drainage services.

Table 7: Employment - Electricity, Gas and Water - South West NRM region, 1996, 2001

Electricity, Gas and Water	1996		2001		1996 to 2001 % Change
	No. employed	% ^a	No. employed	% ^a	
Electricity and Gas Supply	26	62%	23	72%	-12%
Water Supply Sewer & Drainage Serv	16	38%	9	28%	-44%
Electricity Gas Water Supply undef	0	0%	0	0%	-

(a) The values in this column represent the percentage of the South West NRM region's electricity, gas and water labour force that was employed in each of the separate sectors.

Source: ABS data, Census of Population and Housing 1996, 2001 (as reported in QRBS).

Regional Agricultural Profile – South West NRM Region

Table 8 below provides more detail about employment in the transport sector. In 2001 the majority of transport sector employees were employed in road transport (50%). Rail transport employees made up the second largest group (30%) in 2001.

Table 8: Employment - Transport - South West NRM region, 1996, 2001

Transport	1996		2001		1996 to 2001 % Change
	No. employed	% ^a	No. employed	% ^a	
Road Transport	101	42%	103	50%	2%
Rail Transport	108	44%	61	30%	-44%
Water Transport	0	0%	0	0%	-
Air and Space Transport	5	2%	5	2%	0%
Other Transport	4	2%	7	3%	75%
Services to Transport	8	3%	12	6%	50%
Storage	3	1%	2	1%	-33%
Transport & Storage, undef	14	6%	14	7%	0%

(a) The values in this column represent the percentage of the South West NRM region's transport labour force that was employed in each of the separate sectors.

Source: ABS data, Census of Population and Housing 1996, 2001 (as reported in QRBIS).

Employment by agricultural sector

The agriculture sector was the largest employer in the region for 2001. This sector has been further disaggregated, along with the forestry sector, in Table 9. The three main employers in the agricultural industry in the South West NRM region in 2001 were the sheep-beef, sheep, and beef farming sectors, which together accounted for 78% of all people employed. In comparison the fourth biggest employer in the agricultural industry in 2001, those businesses that also involved grain production, employed only 4.7% of all agricultural employees in the region.

The number of people employed in the sheep and beef cattle sectors had increased significantly between 1996 and 2001. The number of people employed in agriculture undefined, however, had decreased significantly; possibly some employees from the sheep and beef cattle sector may have been listed under agriculture undefined in 1996. Advice from the ABS suggests that the way in which employment information was coded in 1996 may have differed from the way in which the information was coded in 2001. Shearing services experienced a 56% decrease in numbers of people employed between 1996 and 2001.

Regional Agricultural Profile – South West NRM Region

Table 9: Employment by agricultural sector – South West NRM region, 1996, 2001

Sector	1996		2001		1996 to 2001 % Change
	No. employed	% ^a	No. employed	% ^a	
Livestock Production					
Sheep-Beef Cattle Farming	344	28.2%	450	33.1%	31%
Sheep Farming	135	11.1%	223	16.4%	65%
Beef Cattle Farming	152	12.5%	384	28.2%	153%
Dairy Cattle Farming	6	0.5%	4	0.3%	-33%
Pig Farming	3	0.2%	0	0%	-100%
Horse Farming	0	0%	1	0.1%	-
Livestock Farming, nec	14	1.1%	19	1.4%	36%
Other Livestock Farming, undef	1	0.1%	0	0%	-100%
Total Livestock Production^b	655	53.7%	1081	79.5%	65%
Crop Production					
Grain Growing	0	0%	8	0.6%	-
Cotton Growing	10	0.9%	26	1.9%	160%
Horticulture & Fruit Growing, undef	4	0.3%	0	0%	-100%
Plant Nurseries	3	0.3%	3	0.2%	0%
Grape Growing	4	0.3%	8	0.6%	100%
Fruit Growing, nec	0	0%	3	0.2%	-
Total Crop Production^b	21	1.8%	48	3.5%	129%
Services to Agriculture					
Cotton Ginning	4	0.3%	1	0.1%	-75%
Shearing Services	98	8.0%	43	3.2%	-56%
Aerial Agricultural Services	0	0%	5	0.4%	-
Services to Agriculture, nec	30	2.5%	34	2.4%	13%
Total Services to Agriculture^b	132	10.8%	83	6.1%	-37%
Forestry					
Forestry	3	0.2%	6	0.4%	100%
Logging	1	0.1%	1	0.1%	0%
Services to Forestry	0	0%	2	0.2%	-
Total Forestry^b	4	0.3%	9	0.7%	125%
Other					
Grain-Sheep Grain-Bf Cattle Farm	9	0.7%	64	4.7%	611%
Grain Sheep Bf Cattle Farm undef	134	11.0%	3	0.2%	-98%
Hunting & Trapping	23	1.9%	48	3.5%	109%
Agriculture, undef ^c	241	19.8%	24	1.8%	-90%
Total Other^b	407	33.4%	139	10.2%	-66%

(a) The values in this column represent the percent of all the people employed in the agricultural sector in the South West NRM region who are employed in each agricultural category.

(b) The 'total' rows represent the total number and the total percent of the South West NRM region labour force employed in each agricultural sector.

(c) Advice from the ABS suggests that the large decrease in value for agriculture undefined from 1996 to 2001 might be a result of a difference in the way coding was carried out between 1996 and 2001.

Source: ABS data, Census of Population and Housing 1996, 2001 (as reported in QRBS).

Agricultural profile

Introduction

The following agricultural profile includes information on the agricultural commodities produced in the South West NRM region (crops, pastures and grasses, livestock, and livestock products), information on agricultural practices (cultivation techniques, treatment of stubble, fertiliser use, and soil conditioner use), and information on farm profits (average farm cash income and average profit at full equity).

An estimate of the number of agricultural establishments in the South West NRM region at June 2001 is 626. This estimate was derived from the Agricultural Census 2000-01 and was based on the area of each statistical local area included within the regional body boundary.

Commodities

Crops

The volume and value of crops produced in the South West NRM region is represented below in Table 10, however ground truthing using a Geographic Information System (GIS) has revealed that most irrigated agriculture in the Booringa and Balonne Shires lies outside the region (see explanatory note below). The data presented below in Table 10 therefore will overestimate the volume and value of irrigated cotton and cereals for grain produced in the region. However, even taking into consideration ground truthing, irrigated cotton produced the highest value of production for a crop in the region for 2000-01. The second highest value of production came from cereal crops.

Table 10: Volume and value of crops – South West NRM region, 2000-01

Crops	Volume		Area		Value		Production of commodity as a percentage of Queensland total		
	t '000	ha	% of total ag. holdings in region	\$ '000	% of total ag. value in region	Vol	Area	Value	
Cereals for Grain ^a	24	45,044	0.26%	5,048	2%	0.9%	2.9%	1%	
Cotton-Irrigated ^{a,b}	62	15,102	0.09%	41,275	16.2%	9.2%	10.9%	10%	
Crops for hay	9	5,366	0.03%	ND	ND	5.2%	7.8%	ND	
Peanuts	1	349	0.00%	711	0.3%	2.7%	2.1%	2.7%	
Vegetables	ND	59	0.00%	176	0.1%	ND	0.2%	0.03%	
Total	95	65,921	0.38%	47,211	18.5%				

ND – No data or insufficient data.

(a) Ground truthing has revealed that in 1999 most irrigated agriculture in the Booringa and Balonne Shires lies outside the region. The data presented here therefore may overestimate the volume and value of irrigated cotton and cereals for grain produced in the region.

(b) The data provided for irrigated cotton represents cotton seed and cotton lint data combined.

Source: ABS data, Agricultural Census, 2000-01 (as reported in QRBIS).

Regional Agricultural Profile – South West NRM Region

Pastures and grasses

The majority of pastures in the South West NRM region in 2000-01 were native or naturalised pastures. Pastures cut for hay and sown pastures account for only 2% of the total agricultural holdings for the region. Pastures cut for hay in the region accounted for only 0.3% of the total volume of pastures cut for hay in Queensland.

Table 11: Volume and value of pastures and grasses – South West NRM region, 2000-01

Pastures and grasses	Volume		Area		Value		Production of commodity as a percentage of Queensland total		
	t	ha '000	% of total ag. holdings in region	\$ '000	% of total ag. value in region	Vol	Area	Value	
Pastures cut for hay	998	1	0%	156	0%	0.3%	2%	0.3%	
Sown pastures	N/A	423	2%	N/A	N/A	N/A	7%	N/A	
Native or naturalised pasture	N/A	6,652	39%	N/A	N/A	N/A	7%	N/A	

N/A – Not Applicable.

Source: ABS data, Agricultural Census, 2000-01 (as reported in QRBS).

Livestock

The agricultural commodity producing the highest value of production in the South West NRM region in 2000-01 was beef cattle (\$134m). The regional value of production for beef cattle, however, represented only 4.5% of Queensland's total value of production for beef cattle.

Table 12: Volume and value of livestock – South West NRM region, 2000-01

Livestock	Number		Value		Production of commodity as a percentage of Queensland total	
	No. of stock '000	\$ '000	% of total ag. value in region	No.	Value	
Cattle & calves	549 ^a	134,249 ^b	53%	5%	4.5%	
Sheep & lambs	2,132	14,222 ^b	6%	25%	22.3%	
Pigs	2	190 ^b	0.1%	0%	0.1%	

(a) The data given for number of stock - cattle and calves - represents meat and dairy cattle combined.

(b) These values represent the value of all slaughtered animals not the value of total livestock.

Source: ABS data, Agricultural Census, 2000-01 (as reported in QRBS).

Regional Agricultural Profile – South West NRM Region

Livestock products

The highest value of production from livestock products in the South West NRM region in 2000-01 came from wool (\$47m). Wool produced the second highest value of production for all of the agricultural commodities. The production of wool in the South West NRM region accounted for almost a quarter of all the wool production in Queensland. In contrast egg and milk production in the region represent a negligible part of Queensland's total production.

Table 13: Volume and value of livestock products – South West NRM region, 2000-01

Livestock Products	Volume		Value		Production of commodity as a percentage of Queensland total	
	Vol '000	\$ '000	% of total ag. value in region	Vol	Value	
Wool (t)	11	47,673	19%	26%	24%	
Cow milk production (L)	208	1,395	1%	0.02%	1%	
Eggs (dz)	0.2	0.3	0%	0%	0%	

Source: ABS data, Agricultural Census, 2000-01(as reported in QRBIS).

Regional Agricultural Profile – South West NRM Region

Agricultural practices

Cultivation techniques

In total approximately 62,500 ha of land was prepared for the sowing of crops in the South West NRM region during 2000-01. Forty-two per cent of land was cultivated once or twice, no cultivation was used on 31%, and on 27% other cultivation techniques were used.

The area of land prepared for sowing in the region represented only 3.1% of the total area prepared for sowing in Queensland.

Table 14: Cultivation technique – South West NRM region, 2000-01

Cultivation Technique	Area cultivated		Cultivation technique as a percentage of Queensland total
	ha '000	% of total area cultivated in region	Area
No cultivation ^a	19	31%	3.5%
1 or 2 cultivations ^a	26	42%	3.5%
Other cultivation technique ^a	17	27%	2.6%

(a) Ground truthing has revealed that in 1999 most irrigated agriculture in the Booringa and Balonne Shires lay outside the region. The data presented here therefore may overestimate the area of cultivation in the region.

Source: ABS data, Agricultural Census, 2000-01 (as reported in QRBIS).

Treatment of stubble

The most common treatment of crop stubble in the South West NRM region during 2000-01 was the ploughing of stubble into the soil, this accounted for the treatment of 45% of all crop stubble in the area. In comparison 25% of stubble was left intact and 16% of stubble was removed for baling or grazed.

Table 15: Treatment of stubble – South West NRM region, 2000-01

Treatment	Area treated		Stubble treatment as a percentage of Queensland total
	ha '000	% of total area treated in region	Area
Stubble ploughed into soil ^a	23	45%	3%
Stubble mulched ^a	4	8.7%	2%
Stubble left intact ^a	12	25%	2%
Stubble removed by hot burn ^a	0.1	0.3%	1%
Stubble removed by cool burn ^a	1	2%	2%
Stubble removed by baling or heavy grazing ^a	8	16%	5%
All other methods ^a	2	3%	2%

(a) Ground truthing has revealed that in 1999 most irrigated agriculture in the Booringa and Balonne Shires lay outside the region. The data presented here therefore may overestimate the area of stubble treated in the region.

Source: ABS data, Agricultural Census, 2000-01 (as reported in QRBIS).

Regional Agricultural Profile – South West NRM Region

Fertiliser use

Fertiliser use in the South West NRM region accounts for only a fraction of the total fertiliser used in Queensland. Of the ½ million tonnes of fertiliser used in the whole of Queensland only 1% is used in the South West NRM region. This reflects the small area of agricultural holdings in the South West NRM region used for cropping (0.38%).

Totals for hectares treated have not been included in Table 16; if more than one fertiliser was used on one hectare that hectare was counted twice in the agricultural census 2000-01, the total for hectares treated would therefore overestimate the number of hectares treated with fertiliser in the region.

Table 16: Fertiliser used – South West NRM region, 2000-01

Fertiliser	Quantity used		Area treated		Fertiliser use as a percentage of Queensland total	
	t'000	ha'000	% of total ag. holdings in region	Area	Vol	
Urea ^a	3.4	15.5	0.1%	2%	2%	
Ammonium Sulphate ^a	0.0	0.1	0.0%	0%	0%	
Ammonium Nitrate ^a	0.0	0.0	0.0%	0%	0%	
Anhydrous Ammonia ^a	1.1	4.8	0.0%	3%	6%	
Single Superphosphate ^a	0.0	0.8	0.0%	1%	0%	
Double Superphosphate ^a	0.0	0.1	0.0%	1%	0%	
Triple Superphosphate ^a	0.0	0.0	0.0%	0%	0%	
Muriate of Potash ^a	0.0	0.4	0.0%	0%	0%	
Potassium Sulphate ^a	0.0	0.1	0.0%	0%	0%	
Potassium Nitrate ^a	0.0	0.0	0.0%	0%	0%	
Mono Ammonium Phosphate ^a	0.5	9.3	0.1%	3%	3%	
Di Ammonium Phosphate ^a	0.1	1.3	0.0%	1%	0%	
Other ^a	1.0	6.9	0.0%	1%	0%	
Total^a	6.1	-	-	-	1%	

(a) Ground truthing has revealed that in 1999 most irrigated agriculture in the Booringa and Balonne Shires lay outside the region. The data presented here therefore may overestimate fertiliser use in the region.

Source: ABS data, Agricultural Census, 2000-01 (as reported in QRBIS).

Regional Agricultural Profile – South West NRM Region

Soil conditioner use

As with fertiliser use, soil conditioners are not used extensively in the South West NRM region with the total area treated with soil conditioners representing less than 0.01% of the total area of holding for the South West NRM region (see Table 17). Dolomite is used more commonly than lime to treat soil acidity, in comparison lime is used more commonly than dolomite in the rest of Queensland. Ninety-two percent of the area treated with soil conditioners was treated to correct physical soil problems.

Table 17: Soil conditioner used – South West NRM region, 2000-01

Soil conditioner	Quantity used		Area treated		Soil conditioner use as a percentage of Queensland total	
	t	ha	% of total ag. holdings in region	Area	Vol	
Lime - to correct or stabilise soil acidity ^a	2	8	0%	0%	0%	
Dolomite - to correct or stabilise soil acidity ^a	198	81	0%	1%	1%	
Dolomite - to correct physical soil problems ^a	0	0	0%	0%	0%	
Gypsum - to correct physical soil problems ^a	1,966	1,023	0.01%	3%	3%	

(a) Ground truthing has revealed that in 1999 most irrigated agriculture in the Booringa and Balonne Shires lay outside the region. The data presented here therefore may overestimate soil conditioner use in the region.

Source: ABS data, Agricultural Census, 2000-01 (as reported in QRBIS).

Regional Agricultural Profile – South West NRM Region

Farm profits

Average farm cash income

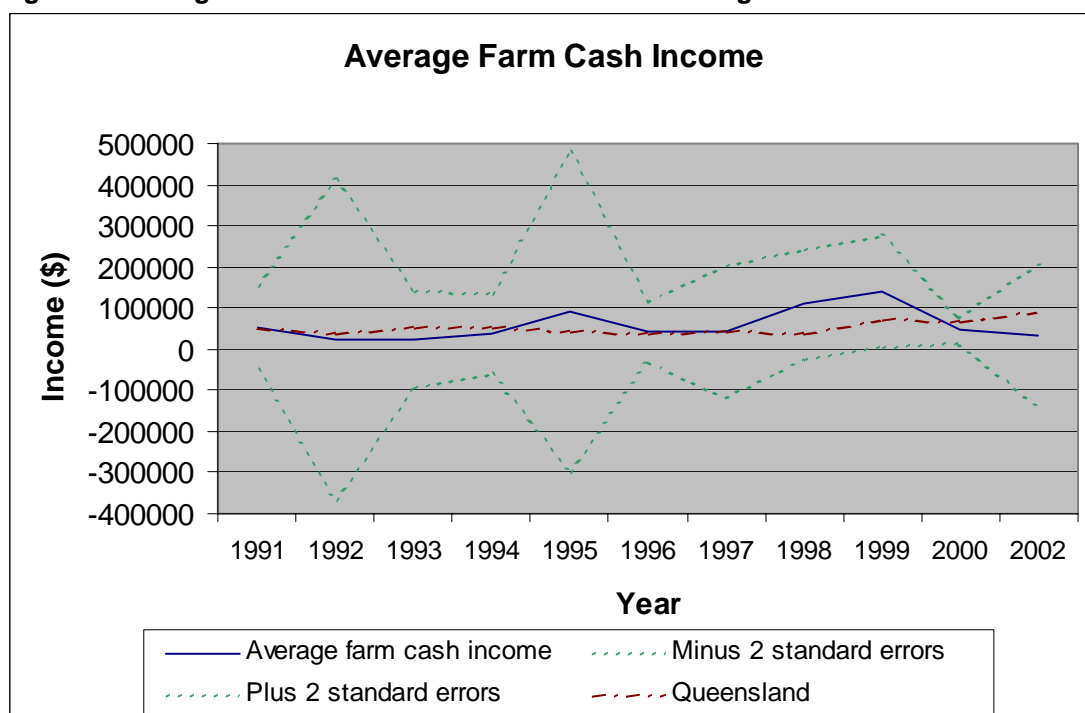
Average farm cash income for the South West NRM region, 1991-2002, is shown below in Figure 4. However no dates were available for 2001. Martin *et al* (2004) defines farm cash income as:

Farm cash income = total cash receipts – total cash costs.

Average farm cash income (represented by the solid blue line) in the region ranged from \$20,943 in 1992 to \$142,133 in 1999.

However, it must be noted that there may be a large variation in average values as these estimates were derived from a small sample of farms (27 out of 606) in the region. Nevertheless we can be 95% confident that the true values lie between the two dashed green lines (plus and minus two standard errors). The average farm cash income for Queensland (represented by the red dashed line) is shown for comparison.

Figure 4: Average farm cash income – South West NRM region



Source: ABARE, 2004.

Regional Agricultural Profile – South West NRM Region

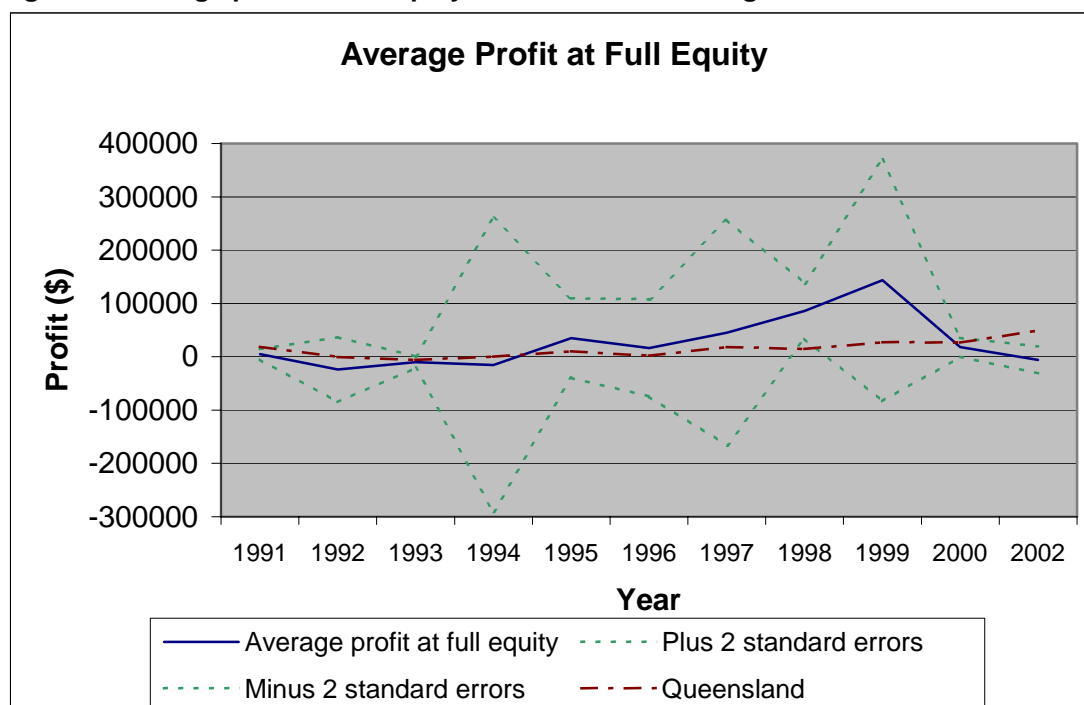
Average profit at full equity

The average profit at full equity (represented by the solid blue line) for farming enterprises in the South West NRM region, 1991-2002, is shown in Figure 5. However, as with farm cash income, no data was available for 2001. Martin *et al* (2004) defines profit at full equity as:

Profit at full equity = farm cash income + build-up in trading stocks + rent + interest + finance lease payments – depreciation – depreciation expense – the imputed value of the owner manager, partner(s) and family labour.

As with farm cash income the minimum average profit at full equity occurred in 1992 (-\$24,153) and the maximum occurred in 1999 (\$143,723). The data for profit at full equity was also obtained from a small sample of farms (27 out of 606). The true values for average profit at full equity sit (95% confidence) within the dashed green lines. The average profit at full equity for Queensland (represented by the red dashed line) is shown for comparison.

Figure 5: Average profit at full equity – South West NRM region



Source: ABARE, 2004.

Natural resource management profile

Fencing to exclude grazing

Thirty-two percent of fencing constructed in 2000-01 to exclude grazing in the South West NRM region was to protect creeks and rivers, while fencing constructed to protect undefined degraded areas accounted for 10%, and fencing to protect remnant native vegetation accounted for 5% of fencing constructed in the region in 2000-01. Forty-eight percent of fencing constructed in 2000-01 to exclude grazing was for reasons other than natural resource management. Fencing to protect other degraded areas represented 7% of the Queensland total for all fencing constructed in 2000-01 for this reason.

Table 18: Fencing to exclude grazing– South West NRM region, 2000-01

Reason	Length		Fencing to exclude grazing as a percentage of Queensland total
	km	% of total length of fencing constructed in region in 2000-01	Length
To protect remnant native vegetation	21	5%	4%
To protect planted trees and shrubs	16	4%	4%
To protect creeks and rivers	128	32%	6%
To protect saline areas	2	1%	1%
To protect other degraded areas	40	10%	7%
To protect all other areas	189	48%	5%
Total fencing for all reasons	395	100%	

Source: ABS data, Agricultural Census, 2000-01 (as reported in QRBIS).

Regional Agricultural Profile – South West NRM Region

Tree seedlings planted

Ninety-four percent of tree seedlings planted in 2000-01 in the South West NRM region were planted to enhance production. The second biggest reason for planting seedlings in 2000-01, at 3.7%, was for nature conservation. Seedlings planted in the South West NRM region in 2000-01 represented 4.5% of all tree seedlings planted in Queensland.

Table 19: Tree seedlings planted – South West NRM region, 2000-01

Purpose of Planting	Number planted		Area planted		Seedlings and trees planted as a percentage of Queensland total	
	No. '000	% of seedlings planted in region in 2000-01	ha	% of total ag. holdings in region	No.	Area
Seedlings planted for nature conservation	2	3.7%	38	0%	1%	3%
Seedlings planted for timber and wood pulp	1	2.3%	2	0%	0%	0%
Seedlings planted for enhanced production	49	93.9%	91	0%	36%	6%
Seedlings planted for protection of land and water	0.04	0.1%	29	0%	0%	4%

Source: ABS data, Agricultural Census, 2000-01 (as reported in QRBIS)

Conclusions

The South West NRM region represents 11% of the total area of Queensland, yet the region has only 0.2% of Queensland's total population. The population of the region is declining at a rate of approximately 0.3% per year; this is mainly the result of the decline in the younger age groups.

Twenty-nine percent of the labour force in the South West NRM region were employed in the Agriculture, Forestry and Fishing industry in 2001 compared with 5.8% of the Queensland labour force. The two main areas of agricultural production, both in terms of employment and output, are the wool and beef industries. While beef production produced the highest value of production for the region, wool production accounts for a greater percentage of Queensland's total. Twenty-six percent of all wool produced in Queensland is produced in the South West NRM region.

An insignificant percentage of all agricultural holdings in the region are used for cropping. Therefore agricultural practices in the region such as cultivation techniques, fertiliser use, and treatment of stubble, only account for a small percentage of all such practices across Queensland.

A greater percentage of tree seedlings planted in the region in 2000-01 were planted to enhance production than were planted to protect natural resource values. Similarly the largest percentage of fencing constructed in the South West NRM region in 2000-01 to exclude grazing was for reasons other than to protect natural resource values.

This report has provided a basic social and agricultural profile of the South West NRM region based on 2001 data. This information may aid planning and implementing of natural resource management in the region. More importantly it will also provide a baseline against which information from the censuses due in 2006 and future censuses can be compared. Advice from the Australian Bureau of Statistics suggests that data from future surveys (Agricultural Census 2005-06, Population and Housing Survey 2005-06, and Natural Resource Management Survey 2004-05) will be provided to match the boundaries of the natural resource management regions. It will not be necessary therefore to concord the new census data to regional NRM boundaries in order to compare it with the data in this report.

References

ABARE (Australian Bureau of Agricultural and Resource Economics) 2004, *Farm Survey Data (1990-2002) for regional NRM bodies, Queensland*, purchased by the Department of Natural Resources and Mines, Queensland.

Martin, P, Levantis, C, Shafron, W, Drum, F and Treadwell, R 2004, *Australian Farm Survey Results*, ABARE Report, Canberra, March.