

## CHAPTER 1 – Regional profile of the South East Queensland NRM region

### Introduction

This report provides a basic social, demographic and agricultural regional profile for the South East Queensland NRM region based on the information provided by the Queensland Regional Bodies Information System (QRBIS). This is the area designated under the National Action Plan for Salinity and Water Quality to be administered by South East Queensland Catchments. 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 East Queensland 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 report begins with a chapter on the South East Queensland NRM region as a whole. This chapter includes information on population and age structure, employment, agricultural commodities produced in the region, agricultural practices used, and some data for natural resource management practices. Following chapters provide a breakdown of agricultural data and natural resource management data for the local government areas listed in Appendix 1. The Redcliffe local government area will not be included as there was no agricultural or natural resource management activity in Redcliffe in 2000-01.

### Location of the South East Queensland NRM region

The South East Queensland Western Catchments includes the Stanley and Upper Brisbane Catchments, the Lockyer Catchment, and the Bremer and Mid Brisbane Catchments (see Figure 1 below).

Figure 1: South East Queensland 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 (SLA) 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.

The data reported in QRBIS has been concorded to the regional NRM body boundaries where possible. 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.

## Regional Agricultural Profile – South East Queensland NRM Region

Figure 2: South East Queensland NRM region showing local government areas



Figure 2 above shows a map of the South East Queensland NRM region. For the South East Queensland NRM region 286 statistical local areas fall wholly within the boundary of the region and 24 partially. We had to assume that agricultural production was 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 1.1 below shows the statistical local areas that are partially 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 1.1 also shows where a statistical local area has been added or subtracted. Appendix 1 also contains the names of the other statistical local areas that fall wholly within the South East Queensland NRM region.

## Regional Agricultural Profile – South East Queensland NRM Region

**Table 1.1: Percentage of statistical local area partially included in 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
Beaudesert - Pt B	99.5%	100%		
Bilinga	99.3%	100%		
Boonah	99.9%	100%		
Caboolture - Pt B	92.9%	100%		7.1% from Burnett Mary
Caloundra - Hinterland	20.8%	18.5%	2.3% to Burnett Mary	
Cambooya - Pt B	18%	18.0%		
Coolangatta	98.4%	100%		
Cooloola (excl. Gympie)	11.9%	11.9%		
Crow's Nest - Pt A	23.9%	23.9%		
Crow's Nest - Pt B	87.7%	87.7%		
Currumbin Waters	99.4%	100%		
Esk	99.8%	100%		
Gatton	99.9%	100%		
Kilcoy	74.9%	74.9%		
Maroochy Bal	51.7%	51.7%		
Nanango	19.8%	19.8%		
Noosa Bal	61.5%	61.5%		
Pine Rivers Bal	99.2%	100%		
Rosalie - Pt B	30.9%	30.9%		
The Gap	99.9%	100%		
Toowoomba - North-East	79.1%	79.1%		
Toowoomba - South-East	31.4%	31.4%		
Toowoomba - North-West	4.8%	0%	4.8% to Condamine Alliance	
Upper Brookfield	99.8%	100%		

Note: See Appendix 1 for a full list of the statistical local areas that sit 100% within the South East Queensland NRM region.

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

## Social and demographic profile

### Population

#### Estimated resident population

The estimated resident population of the South East Queensland NRM region at 30<sup>th</sup> June 2001 was 2,570,436. While two thirds of the population of Queensland (66.2%) live in the South East Queensland NRM region, the region represents only a fraction (1.3%) of the total area of Queensland. Males represented 49.4% of the population while females represented 50.6% of the population.

## Regional Agricultural Profile – South East Queensland NRM Region

**Table 1.2: Estimated residential population, South East Queensland NRM region, 1996, 2001, 2004**

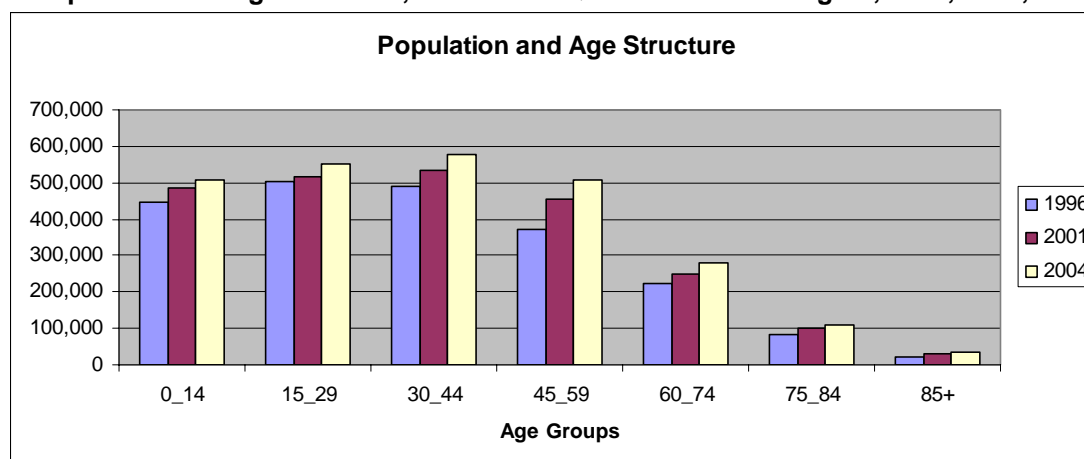
	Region	Queensland	Region as a percentage of Queensland
Area (km <sup>2</sup> )	23,000	1,734,157	1.3%
1996	2,138,505	3,338,721	64.1%
2001	2,373,283	3,635,121	65.3%
2004	2,570,436	3,882,037	66.2%
<b>Annual average change 1996-2004p (%)</b>	<b>2.5</b>	<b>2.0</b>	.....
<b>Annual average change 2001-2004p (%)</b>	<b>2.8</b>	<b>2.3</b>	.....

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

### Population and age structure

Figure 3 below shows a significant increase in population in all age groups in the South East Queensland NRM region, with the population of the older age groups increasing by a larger percentage. Between 1996 and 2004 the 45-59 age group increased by 36.7%, the 60-74 age group increased by 25.5%, the 75-84 age group increased by 36.2%, and the 85+ age group increased by 55.1%. There was also a significant population increase in the younger age groups with the 0-14 age group increasing by 13.6%, the 15-29 age group increasing by 9.3%, and the 30-44 age group increasing by 17.7%.

**Figure 3: Population and age structure, South East Queensland NRM region, 1996, 2001, 2004**



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

### Employment

#### Employment by Industry

Retail Trade (15.7%), manufacturing (11.6%), property and business services (11.5%), and health and community services (10%) were the four industries in 2001 employing the largest percentage of the South East Queensland NRM region labour force (see Table 3). Agriculture, Forestry and Fishing accounted for only 1.7% of the labour force employed in the South East Queensland NRM region.

Of the 17 listed industries 14 experienced an increase in the number of people employed between 1996 and 2001. The largest increases were in retail trade (21%), education (20%), accommodation, cafes and restaurants (19%), and property and business services (18%). Small decreases in the number of people employed between 1996 and 2001 occurred in wholesale trade (7%), electricity, gas and water supply (5%), and communication and services (2%).

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**Table 1.3: Employment by Industry, South East Queensland NRM region, 1996, 2001**

Industry	1996		2001		1996 to 2001 % change
	No. employed	% <sup>a</sup>	No. employed	% <sup>a</sup>	
Agriculture, Forestry and Fishing	17,033	1.9%	17,957	1.7%	5%
Mining	3,928	0.4%	4,166	0.4%	6%
Manufacturing	103,155	11.3%	118,882	11.6%	15%
Electricity, Gas and Water Supply	5,065	0.6%	4,819	0.5%	-5%
Construction	67,820	7.4%	75,568	7.3%	11%
Wholesale Trade	55,397	6.1%	51,660	5%	-7%
Retail Trade	132,991	14.6%	161,387	15.7%	21%
Accommodation, Cafes and Restaurants	47,691	5.2%	56,720	5.5%	19%
Transport and Storage	42,428	4.7%	49,233	4.8%	16%
Communication and Services	17,692	1.9%	17,325	1.7%	-2%
Finance and Insurance	32,238	3.5%	35,339	3.4%	10%
Property and Business Services	100,119	11%	118,336	11.5%	18%
Govt. Admin and Defence	43,273	4.7%	44,254	4.3%	2%
Education	65,136	7.1%	77,851	7.6%	20%
Health and Community Services	88,037	9.7%	103,321	10.0%	17%
Cultural and Recreational Services	24,347	2.7%	27,907	2.7%	15%
Personal and Other Services	35,587	3.9%	40,844	4%	15%
Not Stated	16,030	1.8%	17,751	1.7%	11%
Non Classifiable	13,100	1.4%	5,158	0.5%	-61%
<b>Total</b>	<b>911,067</b>	<b>100%</b>	<b>1,028,478</b>	<b>100%</b>	

(a) The values in this column represent the percent of all people employed in the South Queensland NRM region who are employed in the separate industries.

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

### 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 East Queensland NRM region.

Table 1.4 provides a breakdown of the Agriculture, Forestry and Fishing industry. In 2001 agriculture (85%) was the main employer within this industry, and services to agriculture, hunting and trapping (6%) was the second largest employer within the industry.

**Table 1.4 Employment – Agriculture, Forestry and Fishing – South East Queensland NRM region, 1996, 2001**

Agricultural	1996		2001		1996 to 2001 % change
	No. employed	% <sup>a</sup>	No. employed	% <sup>a</sup>	
Agriculture	14,331	84%	15,329	85%	7%
Services to Agriculture Hunting & Trapping	857	5%	991	6%	16%
Forestry and Logging	834	5%	668	4%	-20%
Commercial Fishing	828	5%	769	4%	-7%
Agriculture Forestry & Fishing, undef	183	1%	200	1%	9%

(a) The values in this column represent the percentage of the South East Queensland 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 QRBIS).

Table 1.5 provides more detail on employment within the mining industry in the South East Queensland NRM region. Metal ore mining (23%) was the largest employer in this industry in 2001 and experienced a large increase (70%) between 1996 and 2001. Oil and gas extraction was the smallest employer in the mining industry but experienced the largest increase between 1996 and 2001 (188%).

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**Table 1.5: Employment – Mining - South East Queensland NRM region, 1996, 2001**

Mining	1996		2001		1996 to 2001 % change
	No. employed	% <sup>a</sup>	No. employed	% <sup>a</sup>	
Coal Mining	751	19%	826	20%	10%
Oil and Gas Extraction	132	3%	380	9%	188%
Metal Ore Mining	560	14%	953	23%	70%
Other Mining	1,082	28%	610	15%	-44%
Services to Mining	994	25%	936	22%	-6%
Mining, undefined	409	10%	461	11%	13%

(a) The values in this column represent the percentage of the South East Queensland NRM region 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).

Machinery and equipment manufacturing (19%) was the largest employer in the South East Queensland NRM region in the manufacturing industry in 2001, food, beverage and tobacco manufacturing (15%) was the second largest employer. The largest increases in employment between 1996 and 2001 occurred in the manufacturing undefined (157%) category and in machinery and equipment manufacturing (33%).

**Table 1.6: Employment – Manufacturing - South East Queensland NRM region, 1996, 2001**

Manufacturing	1996		2001		1996 to 2001 % change
	No. employed	% <sup>a</sup>	No. employed	% <sup>a</sup>	
Food, Beverage & Tobacco Mfg	19,035	18%	18,215	15%	-4%
Textile Clothing Footwear & Leather Mfg	6,483	6%	6,473	5%	0%
Wood & Paper Products Mfg	7,192	7%	7,892	7%	10%
Printing, Publishing & Recorded Media	10,694	10%	11,025	9%	3%
Petroleum Coal Chemical & Ass Prod Mfg	8,773	9%	10,586	9%	21%
Non-Metallic Mineral Prod Mfg	5,045	5%	5,899	5%	17%
Metal Product Manufacturing	15,182	15%	15,510	13%	2%
Machinery & Equipment Mfg	17,217	17%	22,892	19%	33%
Other Manufacturing	9,722	9%	10,581	9%	9%
Manufacturing, undefined	3,812	4%	9,809	8%	157%

(a) The values in this column represent the percentage of the South East Queensland 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 QRBIS).

Table 1.7 outlines employment in the electricity, gas and water sector in the South East Queensland NRM region. The largest employer in the industry in 2001 was the electricity and gas supply sector (61%); the second largest employer was water supply, sewerage and drainage services (39%).

**Table 1.7: Employment – Electricity, Gas and Water - South East Queensland NRM region, 1996, 2001**

Electricity, Gas and Water	1996		2001		1996 to 2001 % change
	No. employed	% <sup>a</sup>	No. employed	% <sup>a</sup>	
Electricity and Gas Supply	3,411	67%	2,942	61%	-14%
Water Supply Sewerage & Drainage Serv	1,645	32%	1,874	39%	14%
Electricity Gas Water Supply undef	9	0%	3	0%	-67%

(a) The values in this column represent the percentage of the South East Queensland 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 QRBIS).

Further detail on employment in the transport industry in the South East Queensland NRM region is provided in Table 1.8. The largest employer in the industry in 2001 was road transport (44%); while the second largest employer was services to transport (18%). Employment in transport and storage undefined (132%) and rail transport (44%) had the largest increases between 1996 and 2001.

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**Table 1.8: Employment – Transport - South East Queensland NRM region, 1996, 2001**

Transport	1996		2001		1996 to 2001 % change
	No. employed	% <sup>a</sup>	No. employed	% <sup>a</sup>	
Road Transport	18,428	43%	21,876	44%	19%
Rail Transport	3,545	8%	5,106	10%	44%
Water Transport	987	2%	1,134	2%	15%
Air and Space Transport	4,612	11%	6,062	12%	31%
Other Transport	136	0%	80	0%	-41%
Services to Transport	9,793	23%	8,954	18%	-9%
Storage	3,135	7%	1,855	4%	-41%
Transport & Storage, undef	1,792	4%	4,166	8%	132%

(a) The values in this column represent the percentage of the South East Queensland 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 QRBIS).

### Employment by agricultural sector

The agriculture, forestry and fishing industry has been further disaggregated into sectors in Table 1.9. The main employers in the agricultural industry in the South East Queensland NRM region in 2001 were beef cattle farming (16.1%), fruit growing nec (not elsewhere classified) (12.5%), plant nurseries (11.2%), and vegetable growing (11%).

There were significant increases in the number of people employed in both the beef cattle farming sector (187%) and the vegetable growing sectors (353%) between 1996 and 2001. However the number of people listed in the agriculture undefined sector decreased significantly between 1996 and 2001; possibly some employees from the sectors mentioned 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.

Sectors which experienced a significant decline between 1996 and 2001 were the logging sector (55% decline) and the services to forestry sector (39% decline).

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**Table 1.9: Employment by agricultural sector –South East Queensland NRM region, 1996, 2001**

Sector	1996		2001		1996 to 2001 % change
	No. employed	% <sup>a</sup>	No. employed	% <sup>a</sup>	
<b>Livestock Production</b>					
Sheep-Beef Cattle Farming	57	0.3%	192	1.1%	237%
Sheep Farming	59	0.4%	194	1.1%	229%
Beef Cattle Farming	988	5.9%	2,838	16.1%	187%
Dairy Cattle Farming	1508	9%	1350	7.6%	-10%
Pig Farming	89	0.5%	110	0.6%	24%
Horse Farming	195	1.2%	239	1.4%	23%
Deer Farming	10	0.1%	12	0.1%	20%
Livestock Farming, nec	288	1.7%	150	0.8%	-48%
Other Livestock Farming, undef	10	0.1%	3	0%	-70%
Poultry Farming, undef	372	2.2%	306	1.7%	-18%
Poultry Farming (Meat)	220	1.3%	215	1.2%	-2%
Poultry Farming (Eggs)	198	1.2%	282	1.6%	42%
<b>Total Livestock Production<sup>b</sup></b>	<b>3994</b>	<b>23.8%</b>	<b>5891</b>	<b>33.4%</b>	
<b>Crop Production</b>					
Grain Growing	111	0.7%	305	1.7%	175%
Cotton Growing	30	0.2%	130	0.7%	333%
Sugar Cane Growing	336	2%	382	2.2%	14%
Horticulture & Fruit Growing, undef	649	3.9%	394	2.2%	-39%
Plant Nurseries	1,736	10.3%	1,984	11.2%	14%
Cut Flower & Flower Seed Growing	484	2.9%	346	2.0%	-29%
Vegetable Growing	430	2.6%	1,948	11%	353%
Grape Growing	18	0.1%	47	0.3%	161%
Apple & Pear Growing	14	0.1%	50	0.3%	257%
Stone Fruit Growing	20	0.1%	79	0.4%	295%
Kiwi Fruit Growing	10	0.1%	4	0%	-60%
Fruit Growing, nec	1,630	9.7%	2,204	12.5%	35%
Crop & Plant Growing, nec	461	2.7%	593	3.4%	29%
Other Crop Growing, undef	127	0.8%	0	0%	-100%
<b>Total Crop Production<sup>b</sup></b>	<b>6056</b>	<b>36.1%</b>	<b>8466</b>	<b>48%</b>	
<b>Services to Agriculture</b>					
Cotton Ginning	14	0.1%	31	0.2%	121%
Shearing Services	6	0%	6	0%	0%
Serv to Agrictre Huntng Trappng undef	0	0%	6	0%	-
Services to Agriculture, undef	4	0%	34	0.2%	750%
Aerial Agricultural Services	28	0.2%	15	0.1%	-46%
Services to Agriculture, nec	812	4.8%	859	4.9%	6%
<b>Total Services to Agriculture<sup>b</sup></b>	<b>864</b>	<b>5.1%</b>	<b>951</b>	<b>5.4%</b>	

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**Table 1.9: (Continued)**

Sector	1996		2001		1996 to 2001 % change
	No. employed	% <sup>a</sup>	No. employed	% <sup>a</sup>	
<b>Forestry</b>					
Forestry & Logging, undef	12	0.1%	16	0.1%	33%
Forestry	139	0.8%	266	1.5%	91%
Logging	333	2%	150	0.8%	-55%
Services to Forestry	337	2%	206	1.2%	-39%
<b>Total Forestry<sup>b</sup></b>	<b>821</b>	<b>4.9%</b>	<b>638</b>	<b>3.6%</b>	
<b>Fishing</b>					
Commercial Fishing undef	386	2.3%	258	1.5%	-33%
Marine Fishing, undef	43	0.3%	79	0.4%	84%
Rock Lobster Fishing	9	0.1%	13	0.1%	44%
Prawn Fishing	114	0.7%	145	0.8%	27%
Finfish Trawling	47	0.3%	27	0.2%	-43%
Squid Jigging	0	0%	0	0%	-
Line Fishing	11	0.1%	0	0%	-100%
Marine Fishing, nec	61	0.4%	62	0.4%	2%
Aquaculture	185	1.1%	178	1%	-4%
<b>Total Fishing<sup>b</sup></b>	<b>856</b>	<b>5.1%</b>	<b>762</b>	<b>4.3%</b>	
<b>Other</b>					
Grain Sheep Bf Cattle Farm undef	324	1.9%	40	0.2%	-88%
Grain-Sheep Grain-Bf Cattle Farm	209	1.2%	316	1.8%	51%
Hunting & Trapping	59	0.4%	31	0.2%	-47%
Agriculture, undef <sup>c</sup>	3,608	21.5%	558	3.2%	-85%
<b>Total Other<sup>b</sup></b>	<b>4200</b>	<b>25.0%</b>	<b>945</b>	<b>5.4%</b>	

nec – not elsewhere classified

(a) The value in this column represent the percentage of the South East Queensland NRM region Agriculture Forestry and Fishing labour force employed in each sector.

(b) The 'total' rows represent the total number and the total percent of the South East Queensland 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 QRBIS).

## Agricultural profile of the South East Queensland NRM region

### Introduction

The following agricultural profile includes information on the agricultural commodities produced in the South East Queensland NRM region (pastures and grasses, crops, livestock, and livestock products) and information on agricultural practices (cultivation techniques, treatment of stubble, fertiliser use, and soil conditioner use).

An estimate of the number of agricultural holdings in the South East Queensland NRM region at June 2001 is 4,547 (Australian Bureau of Statistics 2005).

### Commodities

#### Pastures and grasses

Native or naturalised pastures represent 29% of the total agricultural holdings in the South East Queensland NRM region in 2000-01. Sown pastures only represented 1% of the total agricultural holdings in the region and pastures cut for hay only 0.7%. However pastures cut for hay in 2000-01 in the South East Queensland NRM region represented 34% of the total volume of pastures cut for hay in Queensland.

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**Table 1.10: Volume and value of pastures and grasses, South East Queensland NRM region, 2000-01**

Pastures and grasses	Volume		Area		Value		Production of commodity as a percentage of Queensland total		
	t '000	ha '000	% of total ag. holdings in region	\$ '000	% of total ag. value in region	Vol	Area	Value	
Pastures cut for hay	99	12	0.7%	18,996	2%	34%	22%	36%	
Sown pastures	N/A	20	1%	N/A	N/A	N/A	0.3%	N/A	
Native or naturalised pasture	N/A	493	29%	N/A	N/A	N/A	1%	N/A	

N/A – Not Applicable.

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

### Crops

Table 1.11 below represents the volume and value of crops in South East Queensland NRM region in 2000-01. The crop producing the highest value of production in the region in 2000-01 were vegetable crops (\$218m), with the second highest value of production being produced by fruit and nut crops (\$94m). Sugar cane (\$13m) produced the third highest value of production in the South East Queensland NRM region in 2000-01.

Vegetable crops produced in the South East Queensland NRM region in 2000-01 represented 34% of the total value of all vegetable crops in Queensland in 2000-01. Soybeans produced in the South East Queensland NRM region in 2000-01 represented 31% of the total value of all soybeans produced in Queensland in 2000-01.

**Table 1.11: Volume and value of crops, South East Queensland NRM region, 2000-01**

Crops	Volume		Area		Value		Production of commodity as a percentage of Queensland total		
	t '000	ha '000	% of total ag. holdings in region	\$ '000	% of total ag. value in region	Vol	Area	Value	
Cereals for Grain <sup>a</sup>	30	12	0.7%	5,203	1%	1%	1%	1%	
Cotton-Irrigated <sup>ab</sup>	1	0.1	0.0%	329 <sup>c</sup>	0%	0.1%	0.1%	0.1%	
Cotton-Non-Irrigated <sup>ab</sup>	0.08	0.1	0.0%	N/A	N/A	0.1%	0.3%	N/A	
Crops for hay	18	4	0.3%	N/A	N/A	11%	6%	N/A	
Soybeans	4.5	3	0.2%	2,086	0%	31%	23%	31%	
Peanuts	1	0.4	0.0%	905	0%	3%	2%	3%	
Sugar Cane <sup>d</sup>	568	8	0.5%	13,098	1%	2%	2%	2%	
Fruit and nuts <sup>e</sup>	N/A	10	0.6%	94,467	10%	N/A	18%	13%	
Vegetables <sup>e</sup>	N/A	14	0.8%	218,794	24%	N/A	38%	34%	
Total	623	52		334,880					

N/A – Not Applicable.

(a) Ground truthing has revealed that in 1999 the majority of cereals for grain produced in the Cambooya Pt B, Crow's Nest Pt A, Rosalie Pt B, Nanango, and Cooloola (excl. Gympie) statistical local areas, and most cotton produced in the Cambooya Pt B and the Rosalie Pt B SLA, lay outside

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the South East Queensland NRM region. Therefore the data presented here may underestimate cereals for grain and cotton produced in the region.

- (b) These values for irrigated and non-irrigated cotton represent lint and seed values combined.
- (c) This value represents the value of both irrigated and non-irrigated cotton.
- (d) Ground truthing has revealed that in 1999 all sugar production in the Maroochy Balance SLA lay within the South East Queensland NRM region, and all sugar production in the Cooloola (excl. Gympie) SLA lay outside the South East Queensland NRM region. Overall the data presented here may underestimate sugar production in the South East Queensland NRM region.
- (e) Ground truthing has revealed that in 1999 all fruit and vegetable production in the Crow's Nest Pt B, Nanango, Kilcoy, and Maroochy Balance SLAs, and most fruit production in the Caloundra Hinterland and Crow's Nest Pt A SLAs lay within the South East Queensland NRM region. Conversely all fruit and vegetable production in the Cooloola (excl. Gympie) SLA, all fruit production in the Toowoomba South East SLA, and all vegetable production in the Caboolture Pt. B SLA lay outside the South East Queensland NRM region. Overall data presented here may underestimate vegetable and fruit production in the region.

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

### Livestock

The highest value of production for slaughtered livestock in the South East Queensland NRM region in 2000-01 came from cattle and calves (\$171m); poultry (\$144m) produced the second highest value of production. Significantly the value of slaughtered poultry in the South East Queensland NRM region represented 90% of the total value of all slaughtered poultry in Queensland in 2000-01.

**Table 1.12: Volume and value of livestock, South East Queensland 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	451 <sup>a</sup>	171,873 <sup>b</sup>	19%	4%	6%	
Sheep & lambs	18	253 <sup>b</sup>	0.03%	0.2%	0%	
Pigs <sup>c</sup>	39	12,909 <sup>b</sup>	1%	7%	7%	
Poultry <sup>d</sup>	8,930	144,419 <sup>b</sup>	15.8%	86%	90%	

(a) The number of stock for cattle and calves includes the number of meat cattle and dairy cattle combined.

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

(c) Ground truthing has revealed that in 1999 all pig production in the Crows Nest Pt A SLA fell within the South East Queensland NRM region. Conversely all pig production in the Cambooya Pt B and Cooloola (excl. Gympie) SLAs, and most pig production in the Caboolture Pt B SLA lay outside the South East Queensland NRM region. Overall data presented here may overestimate pig production in the South East Queensland NRM region.

(d) Ground truthing has revealed that in 1999 all poultry production in the Crow's Nest Pt B SLA lay within the South East Queensland NRM region. Conversely all poultry production in the Cambooya Pt B and Cooloola (excl. Gympie) SLAs lay outside the South East Queensland NRM region. Overall data presented here may underestimate poultry produced in the South East Queensland NRM region.

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

## Regional Agricultural Profile – South East Queensland NRM Region

### Livestock products

The highest value of production from livestock products in the South East Queensland NRM region in 2000-01 was from cow's milk production (\$79m). The second highest value of production in 2000-01 was from egg production (\$9m). The value of cow's milk production in the region in 2000-01 represented 34% of the value of all cow's milk production in Queensland, while the value of egg production in the region in 2000-01 represented 15% of all egg production in Queensland.

**Table 1.13: Volume and value of livestock products, South East Queensland 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) <sup>a</sup>	0.1	322	0%	0.2%	0.2%	
Cow milk production (L) <sup>b</sup>	254,360	79,678	9%	29%	34%	
Eggs (dz) <sup>c</sup>	5,959	9,058	1.0%	15%	15%	

(a) Ground truthing has revealed that in 1999 all wool production in the Kilcoy SLA fell within the South East Queensland NRM region, while all wool production in the Cooloola (excl. Gympie) SLA lay outside the South East Queensland NRM region. Overall the data presented here may overestimate wool production in the South East Queensland NRM region.

(b) Ground truthing has revealed that in 1999 all dairy in the Kilcoy SLA and most dairy in the Maroochy Balance SLA lay within the South East Queensland NRM region. All dairy in the Cooloola (excl. Gympie) and Cambooya Pt B SLA, and most dairy within the Nanango and Noosa Balance SLAs lay outside the South East Queensland NRM region. Overall the presented here may overestimate dairy production in the South East Queensland NRM region.

(c) Ground truthing has revealed that in 1999 all egg production in the Cambooya Pt B SLA lay outside the South East Queensland NRM region. Data presented here may therefore overestimate egg production in the South East Queensland NRM region.

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

### Agricultural practices

#### Cultivation techniques

The cultivation techniques used in the South East Queensland NRM region in 2000-01 are represented below in Table 1.14. In total 29,695 ha of land was prepared for cropping in the South East Queensland NRM region in 2000-01. No cultivation was carried out on 13% of the land prepared for cropping in the region, 37% of the land prepared for cropping was cultivated once or twice, and other cultivation techniques were used on the remaining 50% of land prepared for cropping in the region in 2000-01. Given the low level of cropping in the region cultivation techniques represent only a fraction of the Queensland total for those cultivation techniques.

**Table 1.14: Cultivation technique, South East Queensland NRM region, 2000-01**

Cultivation Technique	Area cultivated		Cultivation technique as a percentage of Queensland total
	ha '000	% of total area cultivated in region	
No cultivation	4	13%	1%
1 or 2 cultivations	11	37%	1%
Other cultivation technique	15	50%	2%

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

## Regional Agricultural Profile – South East Queensland NRM Region

### Treatment of stubble

Table 1.15 represents the methods employed to treat stubble in the South East Queensland NRM region in 2000-01. The most common method for the treatment of stubble was to plough the stubble into the soil (50%). The second most common method was to remove the stubble by heavy grazing or baling (20%); mulching the stubble (14%) was the third most common method of stubble treatment in the region in 2000-01. All methods of stubble treatment represented only a small percentage of the use of that method across Queensland, again reflecting the small area of the South East Queensland NRM region used for cropping in 2000-01.

**Table 1.15: Treatment of stubble, South East Queensland 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	12	50%	2%
Stubble mulched	3	14%	1%
Stubble left intact	2	10%	0%
Stubble removed by hot burn	0.3	1%	2%
Stubble removed by cool burn	0.5	2%	1%
Stubble removed by baling or heavy grazing	5	20%	3%
All other methods	1	4%	1%

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

### Fertiliser used

The volume of fertiliser used in the South East Queensland NRM region in 2000-01 represented 7% of the total amount of fertiliser used in the whole of Queensland. Urea was the most common fertiliser used in the region in terms of both volume used and area treated.

Totals for hectares treated have not been included in Table 1.16; 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.

## Regional Agricultural Profile – South East Queensland NRM Region

**Table 1.16: Fertiliser used, South East Queensland NRM region, 2000-01**

Fertiliser	Quantity used		Area treated	Fertiliser use as a percentage of Queensland total	
	t'000	ha'000		Area	Vol
Urea	13.9	41.1		4%	7%
Ammonium Sulphate	0.6	2.9		7%	6%
Ammonium Nitrate	0.7	3.2		20%	16%
Anhydrous Ammonia	0.1	0.4		0.3%	1%
Single Superphosphate	2.0	6.9		8%	13%
Double Superphosphate	0.3	0.8		5%	15%
Triple Superphosphate	0.1	0.4		3%	5%
Muriate of Potash	1.1	4.8		3%	6%
Potassium Sulphate	2.3	4.6		18%	30%
Potassium Nitrate	0.6	2.3		13%	13%
Mono Ammonium Phosphate	0.3	2.9		1%	2%
Di Ammonium Phosphate	0.9	4.9		3%	4%
Other	15.0	35.3		6%	6%
Total	37.7				7%

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

### Soil conditioner used

The predominant use of soil conditioners in the South East Queensland NRM region in 2000-01 was to stabilise soil acidity (66%). Lime was the most common treatment for soil acidity (71%) while gypsum was the most common treatment to correct physical soil problems (88%). Although the use of dolomite in the South East Queensland NRM region was less than the use of lime and gypsum, the use of dolomite in the region in 2000-01 represented 15% of the total volume of dolomite used in the whole of Queensland.

**Table 1.17: Soil conditioner used, South East Queensland NRM region, 2000-01**

Soil conditioner	Quantity used		Area treated		Soil conditioner use as a percentage of Queensland total	
	t'000	ha'000	% of total ag. holdings in region	Area	Vol	
Lime - to correct or stabilise soil acidity	5	3	0.17%	9%	7%	
Dolomite - to correct or stabilise soil acidity	2.1	1.2	0.07%	16%	15%	
Dolomite - to correct physical soil problems	0.4	0.3	0.02%	7%	6%	
Gypsum - to correct physical soil problems	3	2	5.41%	5%	5%	

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

### Area irrigated

The total area of agricultural holding in the South East Queensland NRM region in 2000-01 was 1,718,984 ha; of this area 46,499 ha was irrigated, this represents 2.7% of the total area of holding in the South East Queensland NRM region in 2000-01. The irrigated area in the South East Queensland NRM region in 2000-01 represented 8% of the total area of Queensland irrigated.

## Regional Agricultural Profile – South East Queensland NRM Region

**Table 1.18: Area irrigated, South East Queensland NRM region, 2000-01**

	Area		Percentage of Queensland total
	ha '000	% of total ag. holdings in region	Area
Total area of holding	1,719	100%	1%
Irrigated - total area	46	2.7%	8%
Non-irrigated - total area	1,672	97.3%	

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

### Natural resource management profile

#### Fencing to exclude grazing

The main reasons for the construction of fencing to exclude grazing in the South East Queensland NRM region in 2000-01 were for the protection of undefined areas (61%), to protect creeks and rivers (15%), to protect planted trees and shrubs (12%), and to protect remnant native vegetation (7%).

**Table 1.19: Fencing to exclude grazing, South East Queensland 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	54	7%	10%
To protect planted trees and shrubs	94	12%	23%
To protect creeks and rivers	110	15%	5%
To protect saline areas	17	2%	10%
To protect other degraded areas	18	2%	3%
To protect other areas	462	61%	13%
Total fencing for all reasons	757	100%	

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

#### Tree seedlings planted

By far the main reason for the planting of tree seedlings in the South East Queensland NRM region in 2000-01 was for timber and wood pulp (70%). Other reasons included nature conservation (11%), the protection of land and water (10%), and to enhance agricultural production (5%). Tree seedlings planted for timber and wood pulp in the South East Queensland NRM region in 2000-01 represented 33% of the total number of tree seedlings planted in Queensland in 2000-01 for timber and wood pulp.

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**Table 1.20: Tree seedlings planted, South East Queensland 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	25	11%	120	0%	9%	9%
Seedlings planted for timber and wood pulp <sup>a</sup>	163	70%	154	0%	33%	30%
Seedlings planted for enhanced production	11	5%	11,060	0%	8%	12%
Seedlings planted for protection of land and water	23	10%	139	0%	17%	21%
Seedlings planted for all other purposes	11	5%	35	0%	8%	13%

(a) Ground truthing has revealed that in 1999 all forestry in the Rosalie Pt B SLA and most forestry in the Caloundra Hinterland SLA lay within the South East Queensland NRM region, while most forestry in the Kilcoy and Maroochy Balance SLAs lay outside the South East Queensland NRM region. Overall the data presented here may underestimate the number of trees planted for timber and wood pulp in the South East Queensland NRM region.

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

### Conclusion

The South East Queensland NRM region represents only 1.3% of the total area of Queensland yet it holds 66.2% of the entire population of Queensland. Between 1996 and 2004 the population of the region increased by 2.5% per year; an increase 0.5% greater than the Queensland population increase for this period of 2% per year. The region experienced population increase in all age groups, but the population increase in the older age groups was greatest.

Agriculture, Forestry and Fishing only employed 1.7% of the total labour force in the South East Queensland NRM region in 2000-01. Compared to the percentage of the total labour force in Queensland employed in Agriculture, Forestry and Fishing (5.8%) this is a relatively small percentage. The largest employers in the region were retail trade (15.7%), manufacturing (11.6%), property and business services (11.5%), and health and community services (10%).

The largest sectors in the Agriculture, Forestry and Fishing industry both in terms of employment and value of production were beef cattle farming, vegetable production, and fruit production. Poultry meat production was important in terms of the value of production but only employed 1.2% of the South East Queensland NRM region labour force.

The fact that only a small percentage of the South East Queensland NRM region was used for the cultivation of crops in 2000-01 is reflected by the fact that cultivation and stubble treatment in the region represented only a small percentage of the total amount of cultivation and stubble treatment in the region. The total area irrigated in the South East Queensland NRM region in 2000-01 was only 8% of the total area of land irrigated in Queensland, however considering the small area of land used for cropping in the South East Queensland NRM region this is a significant percentage.

The majority of fencing constructed in the region in 2000-01 was for the protection of undefined areas (61%), the protection of creeks and rivers was the second most common reason (15%), followed by the protection of

## Regional Agricultural Profile – South East Queensland NRM Region

planted trees and shrubs (12%). Most tree seedlings planted in the South East Queensland NRM region during 2000-01 were for timber and wood pulp (70%); nature conservation (11%) was the second most common reason for planting tree seedlings in the region.

This chapter has provided a basic social and agricultural profile of the South East Queensland NRM region based on 2001 SLA data. Due to the diversity and complexity of the South East Queensland NRM region, the following chapters are provided to further break down the available agricultural and natural resource management information as it pertains to each local government area in the region.