

National Action Plan for Salinity and Water Quality

Social and Economic

State-level Investment Project SE01

Regional Agricultural Profile Burdekin Dry Tropics 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 Burdekin Dry Tropics NRM region

Introduction

This report provides a basic social and agricultural regional profile for the Burdekin Dry Tropics NRM region based on the information provided by the Queensland Regional Bodies Information System (QRBIS). The information provided in QRBIS is based on the 2000-2001 Agricultural Census, the 1996 and 2001 Housing and Population Censuses, and the 2004 Population Survey. This regional profile for the Burdekin Dry Tropics 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, and some data for natural resource management practices.

Location of the Burdekin Dry Tropics NRM region

The location of the Burdekin Dry Tropics NRM region is shown below in Figure 1. The Burdekin Dry Tropics NRM region includes all lands drained by the Burdekin (including the Belyando and Sutter Rivers), Haughton, Black, Ross and Don River Basins and their tributaries and marine waters and islands to the 3-mile nautical limit.

Figure 1: The Burdekin Dry Tropics 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 body boundaries.

The data reported in QRBIS has been concorded to the regional body boundaries where possible. While it has been possible to match the Population and Housing Census to the

Regional Agricultural Profile – Burdekin Dry Tropics NRM Region

regional boundaries based on collection districts this has not been possible for the Agricultural Census based on statistical local areas.

Figure 2: Burdekin Dry Tropics NRM region showing each local government area



Figure 2 above shows the local government areas contained within the Burdekin Dry Tropics NRM region. These local government areas contain 33 statistical local areas which fall wholly within the boundary of the region and 10 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 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 Burdekin Dry Tropics 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.

Regional Agricultural Profile – Burdekin Dry Tropics NRM Region

Table 1: Percentage of statistical local area included in the Burdekin Dry Tropics 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
Aitkenvale	100%	100%		
Belyando	83.2%	83.2%		
Bowen	97.5%	100%		2.5% from Mackay Whitsunday
Burdekin	100%	100%		
Charters Towers	100%	100%		
City	100%	100%		
Cranbrook	100%	100%		
Currajong	100%	100%		
Dalrymple	92.1%	100%		6.2% from Desert Channels
Douglas	100%	100%		
Etheridge	1.5%	0%	1.5% to Northern Gulf	
Flinders	1.5%	0%	1.5% to Southern Gulf	
Garbutt	100%	100%		
Gulliver	100%	100%		
Heatley	100%	100%		
Herberton	24.5%	26.1%		1.6% from Northern Gulf
Hermit Park	100%	100%		
Hinchinbrook excl. Palm I.	3.6%	0%	3.6% to Far North Queensland	
Hyde Park-Mysterton	100%	100%		
Jericho	66.6%	66.6%		
Kelso	100%	100%		
Kirwan	100%	100%		
Magnetic Island	100%	100%		
Mirani	54.9%	54.9%		
Mt Louisa-Mt St John-Bohle	100%	100%		
Mundingburra	100%	100%		
Murray	100%	100%		
Nebo	31.5%	31.5%		
North Ward-Castle Hill	100%	100%		
Oonoonba-Idalia-Cluden	100%	100%		
Pallarenda-Shelley Beach	100%	100%		
Pimlico	100%	100%		
Railway Estate	100%	100%		
Rosslea	100%	100%		
Rowes Bay-Belgian Gardens	100%	100%		
South Townsville	100%	100%		
Stuart-Roseneath	100%	100%		
Thuringowa Pt A Bal	100%	100%		
Thuringowa Pt B	100%	100%		
Townsville Pt B	100%	100%		
Vincent	100%	100%		
West End	100%	100%		
Wulguru	100%	100%		

Social profile

Population

Estimated resident population

The estimated resident population of the Burdekin Dry Tropics NRM region was 194,906 on the 30th June 2004; this represents 5% of the total Queensland population. The region represents 8% of the total area of Queensland. Fifty-one per cent of the population were male and 49% were female.

There has been an annual average increase in population in the Burdekin Dry Tropics NRM region of 1.6% over the period between 1996 and 2004. The population increase for the Burdekin Dry Tropics NRM region is just below the annual average Queensland population increase of 2%.

Table 2: Estimated resident population – Burdekin Dry Tropics NRM region, 1996, 2001, 2004

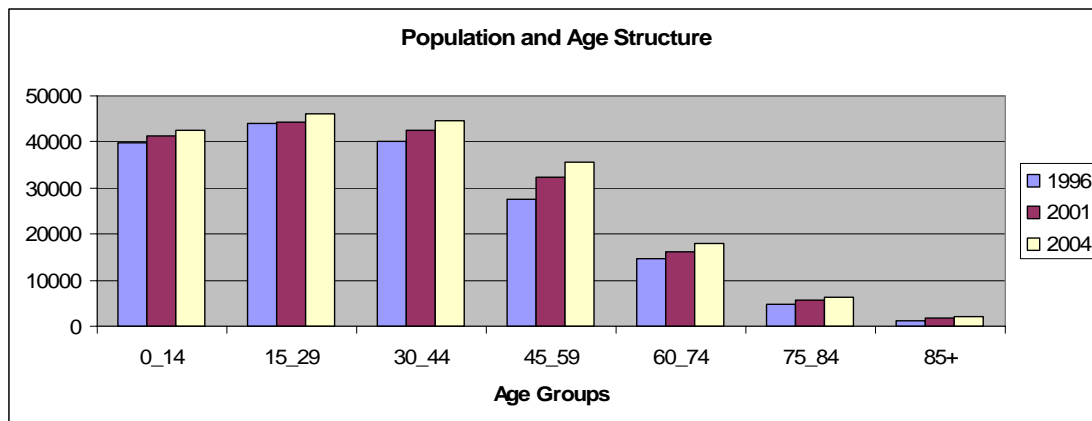
	Region	Queensland	Region as a percentage of Queensland
Area (km ²)	133,432	1,734,157	8%
1996	172,375	3,338,721	5.2%
2001	183,978	3,635,121	5.1%
2004	194,906	3,882,037	5.0%
Annual average change 1996-2004 (%)	1.6	2.0
Annual average change 2001-2004 (%)	2.0	2.3

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

Population and age structure

The trend for population increase is reflected in all age groups in the Burdekin Dry Tropics NRM region (see Figure 3). The percentage of growth for the older age groups, however, is greater than the percentage of growth for the younger age groups. The 45-59 age group increased 28.9% between 1996 and 2004; the 60-74 age group increased by 22.5%; the 75-84 age group increased by 32.8%; and the 85+ age group increased by 57%. In contrast the 0-14 age group increased by 6.5%; the 15-29 age group increased by 4.3%; and the 30-44 age group increased by 11%.

Figure 3: Population and Age Structure - Burdekin Dry Tropics 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 – Burdekin Dry Tropics NRM Region

Employment

Employment by Industry

The three largest employers in the Burdekin Dry Tropics NRM region in 2001 were retail trade (15%), Government administration and defence (9.8%), and Health and Community Services (9.8%). The Agriculture, Forestry and Fishing industry (5.8%) was the 8th largest employer in the region. Employment in most industries increased in the period between 1996 and 2001 with the largest increase in the construction industry (19%).

Table 3: Employment by Industry - Burdekin Dry Tropics NRM region - 1996, 2001

Industry	1996		2001		1996 to 2001 % change
	No. employed	% ^a	No. employed	% ^a	
Agriculture, Forestry and Fishing	4,621	6.1%	4,872	5.8%	5%
Mining	1,931	2.5%	2,004	2.4%	4%
Manufacturing	6,657	8.8%	7,114	8.5%	7%
Electricity, Gas and Water Supply	726	1.0%	795	1.0%	10%
Construction	4,905	6.5%	5,830	7.0%	19%
Wholesale Trade	3,934	5.2%	3,701	4.4%	-6%
Retail Trade	10,561	13.9%	12,473	15.0%	18%
Accommodation, Cafes and Restaurants	3,586	4.7%	4,061	4.9%	13%
Transport and Storage	3,652	4.8%	4,218	5.1%	15%
Communication and Services	1,144	1.5%	1,108	1.3%	-3%
Finance and Insurance	1,524	2.0%	1,480	1.8%	-3%
Property and Business Services	5,551	7.3%	6,169	7.4%	11%
Govt. Admin and Defence	6,993	9.2%	8,139	9.8%	16%
Education	6,063	8.0%	6,738	8.1%	11%
Health and Community Services	6,950	9.1%	8,134	9.8%	17%
Cultural and Recreational Services	2,182	2.9%	1,860	2.2%	-15%
Personal and Other Services	2,596	3.3%	2,975	3.5%	15%
Not Stated	1,493	2.0%	1,399	1.6%	-6%
Non Classifiable	958	1.2%	351	0.4%	-63%
Total	76,027	100%	83,421	100%	

(a) The values in this column represent the percentage of the Burdekin Dry Tropics NRM region labour force employed in each industry.

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

Regional Agricultural Profile – Burdekin Dry Tropics NRM Region

Employment within Industries

The following tables provide further detail about the primary industries and those industries that provide support to the primary industries in the Burdekin Dry Tropics 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. The forestry and logging sector (1%) was the smallest employer in 2001.

Table 4: Employment: Agriculture, Forestry and Fishing - Burdekin Dry Tropics NRM region, 1996, 2001

Agriculture, Forestry and Fishing	1996		2001		1996 to 2001 % Change
	No. employed	% ^a	No. employed	% ^a	
Agriculture	4,008	87%	4,359	89%	9%
Service to Agric Hunting & Trapping	387	8%	248	5%	-36%
Forestry and Logging	32	1%	31	1%	-3%
Commercial Fishing	173	4%	180	4%	4%
Agric Forestry & Fishing, undef	21	0%	54	1%	157%

(a) The values in this column represent the percentage of the Burdekin Dry Tropics 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 5 below provides more detail about the mining industry in the Burdekin Dry Tropics NRM region. The metal ore mining sector (49%) employed the greatest number of employees in the mining industry in 2001. The oil and gas extraction sector employed the smallest number of employees, only 3 people, in 2001.

Table 5: Employment - Mining - Burdekin Dry Tropics NRM region, 1996, 2001

Mining	1996		2001		1996 to 2001 % Change
	No. employed	% ^a	No. employed	% ^a	
Coal Mining	520	27%	529	26%	2%
Oil and Gas Extraction	0	0%	3	0%	-
Metal Ore Mining	674	35%	987	49%	46%
Other Mining	169	9%	132	7%	-22%
Services to Mining	357	18%	194	10%	-46%
Mining, undef	211	11%	159	8%	-25%

(a) The values in this column represent the percentage of the Burdekin Dry Tropics 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 QRBIS).

Regional Agricultural Profile – Burdekin Dry Tropics NRM Region

The main employer in the manufacturing industry in the Burdekin Dry Tropics NRM region in 2001 was the food, beverage and tobacco manufacturing sector (24%), followed closely by the metal product manufacturing sector (23%).

Table 6: Employment - Manufacturing - Burdekin Dry Tropics NRM region – 1996, 2001

Manufacturing	1996		2001		1996 to 2001 % Change
	No. employed	% ^a	No. employed	% ^a	
Food, Beverage & Tobacco Mfg	2,191	33%	1,698	24%	-23%
Textile Clothing Footwear & Leather Mfg	192	3%	208	3%	8%
Wood & Paper Product Mfg	307	5%	284	4%	-7%
Printing, Publishing & Recorded Media	484	7%	446	6%	-8%
Petroleum Coal Chemical & Ass Prod Mfg	233	4%	491	7%	111%
Non-Metallic Mineral Prod Mfg	253	4%	371	5%	47%
Metal Product Manufacturing	1,635	24%	1,660	23%	2%
Machinery & Equipment Mfg	1,010	15%	1,051	15%	4%
Other Manufacturing	214	3%	317	5%	48%
Manufacturing, undef	138	2%	588	8%	326%

(a) The values in this column represent the percentage of the Burdekin Dry Tropics 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 in the electricity, gas and water industry were employed in electricity and gas supply (70%) in 2001. Water supply, sewerage and drainage services employed 30% of the employees in the industry in 2001.

Table 7: Employment - Electricity, Gas and Water - Burdekin Dry Tropics NRM region, 1996, 2001

Electricity, Gas and Water	1996		2001		1996 to 2001 % Change
	No. employed	% ^a	No. employed	% ^a	
Electricity and Gas Supply	517	71%	554	70%	7%
Water Supply Sewerage & Drainage Serv	209	29%	241	30%	15%
Electricity Gas Water Supply undef	0	0%	0	0%	0%

(a) The values in this column represent the percentage of the Burdekin Dry Tropics 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 – Burdekin Dry Tropics NRM Region

Table 8 below provides more detail about the transport industry. In 2001 the majority of transport industry employees in the Burdekin Dry Tropics NRM region were employed in road transport (44%). Rail transport employees made up the second largest group (24%).

Table 8: Employment - Transport - Burdekin Dry Tropics NRM region, 1996, 2001

Transport	1996		2001		1996 to 2001 % Change
	No. employed	% ^a	No. employed	% ^a	
Road Transport	1,581	43%	1,861	44%	18%
Rail Transport	881	24%	1,000	24%	14%
Water Transport	130	4%	144	3%	11%
Air and Space Transport	223	6%	268	6%	20%
Other Transport	7	0%	3	0%	-57%
Services to Transport	588	16%	516	12%	-12%
Storage	103	3%	102	3%	-1%
Transport & Storage, undef	139	4%	324	8%	133%

(a) The values in this column represent the percentage of the Burdekin Dry Tropics 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).

Regional Agricultural Profile – Burdekin Dry Tropics NRM Region

Employment by agricultural sector

The Agriculture, Forestry and Fishing industry has been further disaggregated in Table 9 below. Three sectors clearly stand out as the major employers in 2001 in the agricultural industry, sugar cane growing (35.4%), beef cattle farming (25.8%), and vegetable growing (14.1%).

There was a substantial increase in employment in all three of these areas between 1996 and 2001; sugar cane growing employed 15% more people, beef cattle farming employed approximately 141% more people, and vegetable growing employed 134% more people in 2001 compared to 1996. Some of the employees listed in sugar cane growing, vegetable growing, and beef cattle farming in 2001, however, may have been listed in agriculture undefined, which experienced a large decrease between 1996 and 2001. 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.

Two of the sectors where decreases in employment occurred between 1996 and 2001 were commercial fishing undefined (47%) and dairy farming (39%).

Table 9: Employment by agricultural sector – Burdekin Dry Tropics NRM region, 1996, 2001

Sector	1996		2001		1996 to 2001 % change
	No. employed	% ^a	No. employed	% ^a	
Livestock Production					
Sheep-Beef Cattle Farming	6	0.1%	17	0.4%	183%
Sheep Farming	8	0.2%	30	0.6%	275%
Beef Cattle Farming	518	11.2%	1247	25.8%	141%
Dairy Cattle Farming	33	0.7%	20	0.4%	-39%
Pig Farming	18	0.4%	11	0.2%	-39%
Horse Farming	10	0.2%	9	0.2%	-10%
Poultry Farming (Eggs)	17	0.4%	29	0.6%	71%
Livestock Farming, nec	8	0.2%	10	0.2%	25%
Other Livestock Farming, undef	8	0.2%	0	0.0%	-100%
Total Livestock Production^b	626	13.6%	1373	28.4%	
Crop Production					
Sugar Cane Growing	1,480	32.1%	1708	35.4%	15%
Vegetable Growing	292	6.3%	683	14.1%	134%
Horticulture & Fruit Growing, undef	122	2.6%	117	2.4%	-4%
Plant Nurseries	106	2.3%	95	2.0%	-10%
Cut Flower & Flower Seed Growing	9	0.2%	7	0.1%	-22%
Grape Growing	6	0.1%	12	0.2%	100%
Apple & Pear Growing	0	0.0%	6	0.1%	-
Stone Fruit Growing	6	0.1%	3	0.1%	-50%
Fruit Growing, nec	117	2.4%	171	3.5%	46%
Grain Growing	10	0.2%	17	0.4%	70%
Cotton Growing	0	0.0%	10	0.3%	-
Crop & Plant Growing, nec	46	1.0%	23	0.5%	-50%
Other Crop Growing, undef	31	0.6%	0	0.0%	-100%
Total Crop production^b	2,225	48.3%	2852	59.1%	

Regional Agricultural Profile – Burdekin Dry Tropics NRM Region

Table 9 continued

Sector	1996		2001		1996 to 2001 % change
	No. employed	% ^a	No. employed	% ^a	
Services to Agriculture					
Cotton Ginning	3	0.1%	0	0.0%	-100%
Shearing Services	3	0.1%	0	0.0%	-100%
Aerial Agricultural Services	9	0.2%	14	0.3%	56%
Services to Agriculture, nec	366	7.9%	228	4.7%	-38%
Services to Agriculture, undef	4	0.1%	3	0.1%	-25%
Total Services to Agriculture^b	385	8.4%	245	5.1%	
Forestry					
Forestry	0	0.0%	6	0.1%	-
Logging	20	0.5%	8	0.2%	-60%
Services to Forestry	10	0.2%	28	0.6%	180%
Total Forestry^b	30	0.7%	42	0.9%	
Fishing					
Commercial Fishing undef	91	2.0%	48	1.0%	-47%
Marine Fishing, undef	12	0.3%	21	0.4%	75%
Prawn Fishing	31	0.6%	50	1.0%	61%
Finfish Trawling	5	0.1%	7	0.1%	40%
Line Fishing	0	0.0%	2	0.0%	-
Marine Fishing, nec	7	0.2%	4	0.1%	-43%
Aquaculture	25	0.5%	39	0.9%	56%
Total Fishing^b	171	3.7%	171	3.5%	
Other					
Grain Sheep Bf Cattle Farm undef	81	1.7%	6	0.1%	-93%
Grain-Sheep Grain-Bf Cattle Farm	16	0.3%	32	0.7%	100%
Agriculture, undef ^c	1,063	23.1%	106	2.2%	-90%
Hunting & Trapping	9	0.2%	0	0.0%	-100%
Total Other^b	1169	25.3%	144	3.0%	

nec – not elsewhere classified

- (a) The values in this column represent the percentage of the Burdekin Dry Tropics 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 Burdekin Dry Tropics 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 Burdekin Dry Tropics NRM region (crops, pastures and grasses, 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 establishments in the Burdekin Dry Tropics NRM region at November 2005 is 1635 (Australian Bureau of Statistics 2006).

Commodities

Pastures and grasses

Native or naturalised pastures represented 41% of all agricultural holdings in the region in 2000-01. In contrast sown pastures represented only 6%, and pastures cut for hay less than 0.1%. Sown pastures represented 14% of Queensland's total sown pastures in 2000-01, whereas the region's native or naturalised pasture represented 9% of the Queensland total.

Table 10: Volume and value of pastures and grasses – Burdekin Dry Tropics 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	7,415	1.8	0%	1,156	0.2%	3%	3%	2%	
Sown pastures	N/A	825	6%	N/A	N/A	N/A	14%	N/A	
Native or naturalised pasture	N/A	5,761	41%	N/A	N/A	N/A	9%	N/A	

N/A – Not applicable

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

Regional Agricultural Profile – Burdekin Dry Tropics NRM Region

Crops

The data presented below in Table 10 shows that sugar cane produced the highest value of production for crops in 2000-01 (\$169m) and the second highest value for all agricultural commodities in the Burdekin Dry Tropics NRM region. Vegetables produced the second highest value of production for crops in 2000-01 (\$160 m), and the third highest for all agricultural commodities. It should be noted however that ground truthing using 1999 GIS land use data has shown that in 1999 all sugar cane grown in the Mirani, Herberton and Nebo Shires, and all vegetables grown in the Herberton Shire, lay outside the Burdekin Dry Tropics NRM region. When the values for sugar cane and vegetables in these shires is removed sugar cane and vegetables are still the most valuable crops in the Burdekin Dry Tropics NRM region, however vegetables have a slightly higher value of production than sugar cane.

Table 11: Volume and value of crops – Burdekin Dry Tropics 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 ^a	239	101.2	0.7%	42,457	6%	9%	7%	9%	
Cotton-Irrigated ^b	0.8	0.2	0%	451	0%	0.1%	0.2%	0.1%	
Cotton-Non-Irrigated ^b	3.7	2.9	0%	1,637	0%	5%	6%	ND	
Crops for hay	2.6	1.6	0%	ND	0%	2%	2%	5%	
Soybeans	0.01	0.03	0%	3	0%	0%	0%	0%	
Peanuts ^a	0.09	0.03	0%	60	0%	0%	0%	0%	
Sugar Cane ^{c,d}	7,170	80.5	0.6%	169,657	24%	27%	16%	27%	
Fruit and nuts	ND	3.1	0%	21,818	3%	ND	6%	3%	
Vegetables ^a	ND	8.3	0%	160,264	23%	ND	22%	25%	
Total	7,417	197.9	1.4%	396,347	57%				

ND – no data or insufficient data.

(a) Ground truthing has revealed that in 1999 all irrigated agriculture in the Herberton and Nebo Shires, and all cropping and peanuts in the Herberton Shire lay outside the Burdekin Dry Tropics NRM region. The data presented here may therefore overestimate the volume and value of cereals for grain, peanuts, and vegetables.

(b) The data for cotton lint and seed (for both irrigated and non-irrigated cotton) has been combined.

(c) The data for sugar grown for crushing and sugar grown for plants has been combined.

(d) Ground truthing has revealed that in 1999 sugar cane in the Mirani, Nebo and Herberton Shires lay completely outside the Burdekin Dry Tropics NRM region. The data presented here may therefore overestimate the volume and value of sugar cane produced in the region.

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

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Livestock

The highest value of production for livestock in 2000-01 came from slaughtered cattle and calves (\$269m); this represented 9% of Queensland's total value of production. Pigs produced the second highest value of production (\$4m); this represented only 2% of Queensland's total. Sheep and lambs produced a much lower value of production (\$350,000), and represented only 1% of Queensland's total value of production for sheep and lambs.

Table 12: Volume and value of livestock – Burdekin Dry Tropics 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	1,581 ^a	269,095 ^b	39%	14%	9%	
Sheep & lambs	18	350 ^b	0%	0%	1%	
Pigs	14	4,314 ^b	1%	2%	2%	
Poultry	ND	265 ^b	0%	ND	0%	

ND- no data or insufficient data

(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 QRBIS).

Livestock products

The highest value of production from livestock products in the Burdekin Dry Tropics NRM region in 2000-01 came from eggs (\$3m), and cow's milk produced the second highest value of production (\$2m). It should be noted that ground truthing using GIS (1999 data) has shown that in 1999 all dairy within the Herberton Shire lay outside the Burdekin Dry Tropics NRM region. However, even with Herberton Shire's values removed, cow's milk is still the second highest value livestock product in the Burdekin Dry Tropics NRM region. The lowest value of production for livestock products in 2000-01 came from wool (\$447,000). The value of egg production in the region represented 6% of the Queensland total, while the value of wool production in the region represented only 0.2% of the Queensland total.

Table 13: Volume and value of livestock products – Burdekin Dry Tropics NRM region, 2000-01

Livestock products	Volume	Value		Production of commodity as a percentage of Queensland total	
		\$ '000	% of total ag. value in region	Vol	Value
Wool (t)	115.97	447	0%	0.3%	0.2%
Cow milk production (L) ^a	ND	2,237	0.3%	ND	1%
Eggs (dz)	ND	3,275	0.5%	ND	6%

ND – no data or insufficient data

(a) Ground truthing has revealed that in 1999 while most dairy in the Mirani Shire lay within the Burdekin Dry Tropics NRM region, all dairy in the Herberton Shire lay outside the Burdekin Dry Tropics NRM region. The largest dairy area from the two shires was in the Herberton Shire, the data presented here therefore may overestimate the volume and value of cow's milk production in the Burdekin Dry Tropics NRM region.

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

Agricultural practices

Cultivation technique

Table 14 below provides information on the cultivation techniques used on cropping land in the Burdekin Dry Tropics NRM region. In total 107,526.10 ha of land in the region was prepared for cropping in 2000-01. The cultivation techniques used on this cropping land were almost equally divided between no cultivation, 1 or 2 cultivations, and other cultivation techniques. However the no cultivation technique represents a greater percentage (7%) of the Queensland total in 2000-01; this indicates that this technique may have been employed more frequently in the Burdekin Dry Tropics region in 2000-01 than in some other regions.

Table 14: Cultivation technique used – Burdekin Dry Tropics NRM region, 2000-01

Cultivation Technique	Area		Cultivation technique as a percentage of Queensland total
	ha '000	% of total area cultivated in region	Area
No cultivation ^a	36	33%	7%
1 or 2 cultivations ^a	37	35%	5%
Other cultivation technique ^a	35	32%	5%

(a) Ground truthing has revealed that all irrigated agriculture in 1999 in the Nebo and Herberton Shires and most irrigated agriculture in the Mirani Shire lay outside the Burdekin Dry Tropics NRM 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 methods employed for treating crop stubble in the Burdekin Dry Tropics in 2000-01 are outlined below in Table 15. The most common stated method for treating crop stubble was to leave the stubble intact (39%); this contrasts with the most common method used in the whole of Queensland, which was to plough the stubble into the soil. Ploughing stubble into the soil (24%) was the second most common method, followed by mulching the stubble (20%). The area of stubble treated by hot burn in 2000-01 was only 2%, but this represented 11% of Queensland's total for this treatment method.

Table 15: Treatment of stubble – Burdekin Dry Tropics NRM region, 2000-01

Treatment	Area		Stubble treatment as a percentage of Queensland total
	ha '000	% of total area treated in region	Area
Stubble ploughed into soil ^a	25	24%	4%
Stubble mulched ^a	21	20%	8%
Stubble left intact ^a	41	39%	7%
Stubble removed by hot burn ^a	2.4	2%	11%
Stubble removed by cool burn ^a	1.8	2%	3%
Stubble removed by baling or heavy grazing ^a	8.7	8%	5%
All other methods ^a	5	5%	6%

(a) Ground truthing has revealed that all irrigated agriculture in 1999 in the Nebo and Herberton Shires and most irrigated agriculture in the Mirani Shire lay outside the Burdekin Dry Tropics NRM region. Data presented here therefore may overestimate stubble treatment in the region.

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

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Fertiliser use

The volume of fertiliser used in the Burdekin Dry Tropics NRM region in 2000-01 represented 14% of the total volume of fertiliser used in Queensland, while the total area of agricultural holdings in the region represented 10% of the total Queensland agricultural holdings. Urea was the most common type of fertiliser used in the Burdekin Dry Tropics NRM region both in terms of volume used and area of land treated.

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 – Burdekin Dry Tropics 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	32.2	85.8	1%	9%	16%	
Ammonium Sulphate ^a	4.7	15.3	0%	37%	48%	
Ammonium Nitrate ^a	0.8	3.4	0%	21%	19%	
Anhydrous Ammonia ^a	0.2	6.1	0%	4%	1%	
Single Superphosphate ^a	0.5	2.6	0%	3%	3%	
Double Superphosphate ^a	0.1	0.7	0%	5%	4%	
Triple Superphosphate ^a	0.1	3.6	0%	26%	4%	
Muriate of Potash ^a	0.9	3.9	0%	2%	5%	
Potassium Sulphate ^a	0.6	3.9	0%	15%	8%	
Potassium Nitrate ^a	0.7	3.2	0%	18%	14%	
Mono Ammonium Phosphate ^a	0.2	13.7	0%	4%	1%	
Di Ammonium Phosphate ^a	3.0	19.9	0%	11%	14%	
Other ^a	33.0	56.8	0%	10%	14%	
Total^a	77.0	-	-	-	14%	

(a) Ground truthing has revealed that all irrigated agriculture in 1999 in the Nebo and Herberton Shires and most irrigated agriculture in the Mirani Shire lay outside the Burdekin Dry Tropics NRM region. Data presented here therefore may overestimate soil conditioner use in the region.

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

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Soil conditioner use

Soil conditioners were used in 2000-01 in the Burdekin Dry Tropics NRM region predominantly to correct physical soil problems (73%). This contrasts with the whole of Queensland where a marginally larger area was treated to correct soil acidity rather than to correct physical soil problems. Lime was most commonly used to correct soil acidity and gypsum was most commonly used to correct physical soil problems; there was very minimal use of dolomite in the treatment of both soil acidity and physical soil problems. Use of gypsum in the region in 2000-01 represented almost a quarter of Queensland's total gypsum use.

Table 17: Soil conditioner used – Burdekin Dry Tropics NRM region, 2000-01

Soil conditioner	Quantity		Area	Soil conditioner use as a percentage of Queensland total	
	t '000	ha '000	% of total ag. holdings	Area	Volume
Lime - to correct or stabilise soil acidity ^a	5.2	2	0.01%	6%	7%
Dolomite - to correct or stabilise soil acidity ^a	0.04	0.05	0.00%	1%	0%
Dolomite - to correct physical soil problems ^a	0.2	0.1	0.00%	1%	2%
Gypsum - to correct physical soil problems ^a	16.7	5.6	0.04%	17%	24%

(a) Ground truthing has revealed that all irrigated agriculture in 1999 in the Nebo and Herberton Shires and most irrigated agriculture in the Mirani Shire lay outside the Burdekin Dry Tropics NRM region. Data presented here therefore may overestimate soil conditioner use in the region.

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

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Area irrigated

The total area of agricultural holding for the Burdekin Dry Tropics NRM region in 2001 was 14,078,277.99 ha; of this area 98,906.89 ha were irrigated, this represents 1% of the total area of holding. Again this figure reflects the fact that only a small percentage of total agricultural holdings in the region are used for cropping (see Table 11). The irrigated area in the Burdekin Dry Tropics NRM region represents 18% of all irrigated land in Queensland.

Table 18: Area irrigated – Burdekin Dry Tropics NRM region, 2000-01

Area			Area irrigated as a percentage of Queensland total
	ha '000	% of total ag. holdings in region	Area
Total area of holding ^a	14,078	100%	10%
Irrigated - total area ^a	99	1%	18%
Non-irrigated - total area ^a	13,979	99%	10%

(a) Ground truthing has revealed that all irrigated agriculture in 1999 in the Nebo and Herberton Shires and most irrigated agriculture in the Mirani Shire lay outside the Burdekin Dry Tropics NRM region. Data presented here therefore may overestimate the area irrigated in the region.

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

Natural resource management profile

Fencing to exclude grazing

Reasons for the construction of fencing to exclude grazing in the Burdekin Dry Tropics NRM region in 2000-01 were to protect creeks and rivers (43%), to protect saline areas (3%), to protect remnant native vegetation (2%), to protect planted trees and shrubs (1%), and to protect other degraded areas (5%). Fencing to exclude grazing from all other areas not related to natural resource management represented 46%.

Table 19: Fencing to exclude grazing – Burdekin Dry Tropics 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	17.2	2%	3%
To protect planted trees and shrubs	9.2	1%	2%
To protect creeks and rivers	411.3	43%	20%
To protect saline areas	26.2	3%	16%
To protect other degraded areas	54.1	5%	10%
To protect all other areas	443.4	46%	13%
Total fencing for all reasons	961.28	100%	

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

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Seedlings and trees planted

Seedlings planted in the Burdekin Dry Tropics region in 2000-01 were planted for the following reasons; for nature conservation (20%), for timber and wood pulp (13%), for enhanced production (7%), and for protection of land and water (15%). Seedlings planted in the Burdekin Dry Tropics NRM region accounted for 4.1% of all seedlings planted in Queensland.

Table 20: Seedlings and trees planted – Burdekin Dry Tropics NRM region, 2000-01

Purpose of Planting	Number planted		Area planted		Seedlings and trees planted as a percentage of Queensland total	
	No.	% of seedlings planted in region in 2000-01	ha	% of total ag. holdings in region	No.	Area
Seedlings planted for nature conservation	6,287	20%	27.3	0%	2%	2%
Seedlings planted for timber and wood pulp	4,063	13%	15.6	0%	1%	3%
Seedlings planted for enhanced production	2,299	7%	12.6	0%	2%	1%
Seedlings planted for protection of land and water	4,793	15%	34.9	0%	4%	5%
Seedlings planted for all other purposes	14,161	45%	1.3	0%	11%	0%

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

Conclusion

The Burdekin Dry Tropics NRM region represents 8% of the total area of Queensland and 5% of Queensland's population. The population of the region increased at a rate of 1.6% per year between 1996 and 2004. There has been an increase in all age groups, however, there has been a greater increase in the older age groups than in the younger age groups.

Agriculture, Forestry, and Fishing was the 8th largest employer in the region in 2000-01, employing 5.8% of the labour force in the region. The Queensland percentage of the labour force employed in Agriculture, Forestry, and Fishing was also 5.8%. The largest sectors in Agriculture, Forestry and Fishing both for production and employment are sugar cane growing, beef cattle farming, and vegetable growing.

The fact that sugar cane and vegetable growing are important industries in the area is reflected by the fact that in 2000-01 irrigation in the region represented 18% of the total area of Queensland irrigated. Fertiliser by volume used in the region represented 14% of the Queensland total, and the volume of gypsum used represented 24% of the Queensland total.

The majority of fencing constructed for natural resource purposes in the region in 2000-01 was to protect creeks and rivers (43%). The second most common reason in 2000-01 for constructing fencing for natural resource purposes was to protect other degraded areas (5%). Most seedlings planted in the Burdekin Dry Tropics NRM region in 2000-01 for natural resource purposes were planted for nature conservation.

This report has provided a basic social and agricultural profile of the Burdekin Dry Tropics 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

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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

Australian Bureau of Statistics 2006, *4624.0: Natural Resource Management on Australian Farms 2004-05*, Commonwealth of Australia, Canberra.